

DEFENCE ESTATE ORGANISATION

RAF UPPER HEYFORD LAND QUALITY ASSESSMENT PHASE TWO : INTRUSIVE SURVEY FACTUAL REPORT APPENDICES

PROJECT NO: 07686 - FINAL REPORT

Technical Report
June 1997
by
Aspinwall & Company Ltd

Defence Estate Organisation
Blakemore Drive
Sutton Coldfield
West Midlands
B75 7RL

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Prepared by Aspinwall & Company Limited
for the Ministry of Defence Estate
Organisation
under Commission WS13/1982/2

REPORT RELEASE SHEET
DEFENCE ESTATE ORGANISATION

RAF UPPER HEYFORD
LAND QUALITY ASSESSMENT
PHASE TWO : INTRUSIVE SURVEY
FACTUAL REPORT
APPENDICES

PROJECT NO: 07686 - FINAL REPORT

Task Officer

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Main Contributors

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Details of Groundwater and Surface Water Abstractions

Appendix

1

Licensed Water Abstraction Information Obtained by ERM (Ref 1) from The Environment Agency

Surface Water Abstractions Within a 3 km Radius of the Site

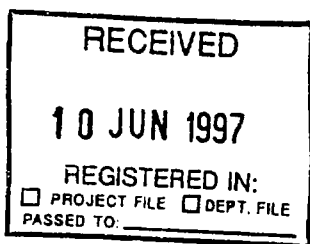
Location	Licensee	Use	Source	Approximate Distance from Site (km)	Annual Volume (1000 m ³)
SP 496 253		domestic and agricultural	springs	2.1	3091

Groundwater Abstractions Within a 3 km Radius of the Site

Location	Licensee	Use	Source	Approximate Distance from Site (km)	Annual Volume (1000 m ³)
SP 527 252		Agricultural	Lower Oolite	2.5	7.319
SP 522 24		Agricultural	Great Oolite	3	6.619
SP 5380 2790		Agricultural	Great Oolite	3	1.659
SP 5270 2780		Domestic	Great Oolite	2	3.18
SP 5194 2790		Domestic, agricultural	Great Oolite	1.2	5.626

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OX15 4AA

Telephone [REDACTED]
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Environmental Health Department

[REDACTED] DMS
[REDACTED] Environmental Health
[REDACTED] Health Manager

Our Ref	Your Ref	Please ask for	Extn	Date
JW/KLG/m6jwhobbs	[REDACTED]	[REDACTED]	4527	2nd June 1997

Dear [REDACTED]

Further to our telephone conversation on 28th May 1997 concerning private water supplies to the surrounding area of Upper Heyford, I now confirm those known to us below:-

Ardley

[REDACTED]

Middle Aston

[REDACTED]

Middleton Stoney

[REDACTED]

Somerton

[REDACTED]



Steeple Aston

[REDACTED]

I cannot guarantee this list to be complete or that the occupiers are the same, as they have no obligation to notify us.

Should an approach have to be made to a dwelling, this is to be done through Cherwell District Council, not the occupiers by virtue of our duties under The Private Water Supplies Regulations 1991.

Yours sincerely

[REDACTED]

[REDACTED]
Food Safety Officer

Appendix

2

Results of the Soil Vapour Survey

Soil Vapour Survey - POL Supply Ring Main

SVS Point Number	Depth (m)	Gas Concentration (ppm)	Area
1	0.4	<1.0	A
2	0.4	<1.0	A
3	0.4	<1.0	A
4	0.4	<1.0	A
5	0.5	<1.0	A
6	0.4	>10,000	A
7	0.4	<1.0	A
8	0.4	<1.0	A
9	0.5	<1.0	A
10	0.5	<1.0	A
11	1	<1.0	A
12	0.4	<1.0	A
13	0.4	<1.0	A
14	0.5	<1.0	A
15	0.5	<1.0	A
16	1	<1.0	A
17	0.6	<1.0	A
18	1	<1.0	A
19	0.4	<1.0	A
20	1	<1.0	A
63	0.6	<1.0	A
64	1.1	<1.0	A
65	1	<1.0	A
66	1	<1.0	A
67	0.3	<1.0	A
68	0.7	<1.0	A
69	0.5	<1.0	A
70	0.6	<1.0	A
71	0.5	<1.0	A
72	0.3	<1.0	A
21	1	<1.0	B
22	1	<1.0	B
23	1	<1.0	B
24	1	<1.0	B
25	1	<1.0	B
26	1	<1.0	B
27	1	<1.0	B
28	1	<1.0	B
29	1	6	B
30	1	6	B
31	1	<1.0	B
32	1	5	B
33	1	<1.0	B
34	1	<1.0	B
35	1	<1.0	B
36	1	<1.0	B
37	0.5	<1.0	B
46	1	<1.0	B
47	0.5	<1.0	B
48	0.6	<1.0	B
49	0.9	<1.0	B
50	1	20	B
51	1	<1.0	B
38	1.2	<1.0	C
39	1.1	<1.0	C
40	0.6	<1.0	C
41	0.9	<1.0	C
42	1	<1.0	C
43	1	<1.0	C
44	0.9	<1.0	C
45	0.7	<1.0	C
52	1.1	<1.0	C
53	1	<1.0	C
54	0.8	<1.0	C
55	1	<1.0	C
56	0.65	<1.0	D
57	0.55	<1.0	D
58	1	<1.0	D
59	0.75	<1.0	D
60	1	<1.0	D
61	1	1000	D
62	0.6	<1.0	D
112	0.9	6000	D
113	1	<1.0	D
94	1	<1.0	E
95	0.4	<1.0	E
96	0.9	<1.0	E

Soil Vapour Survey - POL Supply Ring Main Junction - Area A1

SVS Point Number	Depth (m)	Gas Concentration (ppm)	Area
1	1.1	2	A1
2	1.1	< 1.0	A1
3	1.1	< 1.0	A1
4	1.1	< 1.0	A1
5	1	< 1.0	A1
6	1	< 1.0	A1
7	0.9	< 1.0	A1
8	0.8	< 1.0	A1
9	1.1	8	A1
10	0.7	9	A1
11	1	< 1.0	A1
12	1	< 1.0	A1
13	0.5	< 1.0	A1
14	0.5	< 1.0	A1
15	0.6	< 1.0	A1
16	0.5	< 1.0	A1
17	1.1	< 1.0	A1
18	0.7	< 1.0	A1
19	0.8	< 1.0	A1
20	0.5	< 1.0	A1
21	0.75	10	A1
22	0.5	< 1.0	A1
23	1	< 1.0	A1
24	1	< 1.0	A1
25	0.2	< 1.0	A1
26	0.7	< 1.0	A1
27	0.5	2	A1
28	0.5	< 1.0	A1
29	1	< 1.0	A1
30	1.1	< 1.0	A1
31	1	< 1.0	A1
32	0.75	< 1.0	A1
33	1	< 1.0	A1
34	0.5	< 1.0	A1
35	0.5	< 1.0	A1
36	0.5	< 1.0	A1
37	0.75	< 1.0	A1
38	1	< 1.0	A1
39	0.2	< 1.0	A1
40	1.1	< 1.0	A1
41	0.2	< 1.0	A1
42	0.5	< 1.0	A1
43	0.4	< 1.0	A1
44	1.1	< 1.0	A1
45	1	< 1.0	A1
46	1	< 1.0	A1
47	0.5	< 1.0	A1
48	0.75	< 1.0	A1
49	0.5	< 1.0	A1
50	0.2	< 1.0	A1

Soil Vapour Survey - POL Supply Ring Main Junction - Area A2

SVS Point Number	Depth (m)	Gas Concentration (ppm)	Area
51	0.4	< 1.0	A2
52	0.5	< 1.0	A2
53	1	< 1.0	A2
54	0.75	< 1.0	A2
55	0.5	< 1.0	A2
56	0.5	< 1.0	A2
57	1	< 1.0	A2
58	0.7	< 1.0	A2
59	1.1	< 1.0	A2
60	0.5	< 1.0	A2
61	0.8	< 1.0	A2
62	1.1	< 1.0	A2
63	1	< 1.0	A2
64	0.5	< 1.0	A2
65	0.4	< 1.0	A2
66	0.5	< 1.0	A2
67	0.5	< 1.0	A2
68	0.8	< 1.0	A2
69	1	< 1.0	A2
70	0.5	< 1.0	A2
71	0.5	10	A2
72	0.2	8	A2
73	0.4	< 1.0	A2
74	7.5	< 1.0	A2
75	0.5	< 1.0	A2
76	0.5	< 1.0	A2
77	0.5	< 1.0	A2
78	0.5	< 1.0	A2
79	0.5	< 1.0	A2
80	1.1	< 1.0	A2
81	1	< 1.0	A2
82	0.5	< 1.0	A2
83	0.5	< 1.0	A2
84	0.75	< 1.0	A2
85	0.5	< 1.0	A2
86	1	< 1.0	A2
87	0.4	< 1.0	A2
88	0.5	< 1.0	A2
89	0.5	< 1.0	A2

Soil Vapour Survey - POL Supply Ring Main Junction - Area C1

SVS Point Number	Depth (m)	Gas Concentration (ppm)	Area
1	0.5	< 1.0	C1
2	1.1	< 1.0	C1
3	1.1	< 1.0	C1
4	1	< 1.0	C1
5	0.5	< 1.0	C1
6	1	< 1.0	C1
7	0.75	< 1.0	C1
8	0.5	< 1.0	C1
9	1.1	7	C1
10	1	< 1.0	C1
11	0.75	< 1.0	C1
12	0.75	< 1.0	C1
13	0.5	< 1.0	C1
14	0.2	< 1.0	C1
15	0.2	< 1.0	C1
16	1.1	< 1.0	C1
17	1	< 1.0	C1
18	1	< 1.0	C1
19	0.5	< 1.0	C1
20	0.5	< 1.0	C1
21	0.2	< 1.0	C1
22	0.5	< 1.0	C1
23	0.5	< 1.0	C1
24	1	< 1.0	C1
25	0.75	< 1.0	C1
26	0.5	< 1.0	C1
27	1	< 1.0	C1
28	0.5	< 1.0	C1
29	0.5	< 1.0	C1
30	0.5	< 1.0	C1
31	0.5	< 1.0	C1
32	0.2	< 1.0	C1
33	0.3	< 1.0	C1
34	0.2	< 1.0	C1
35	0.4	< 1.0	C1
36	0.3	< 1.0	C1
37	0.3	< 1.0	C1
38	0.5	< 1.0	C1
39	0.5	< 1.0	C1
40	0.3	< 1.0	C1
41	1	< 1.0	C1
42	0.3	< 1.0	C1
43	0.3	< 1.0	C1
44	0.3	< 1.0	C1
45	0.2	< 1.0	C1
46	0.2	< 1.0	C1
47	0.3	< 1.0	C1
48	0.3	< 1.0	C1
49	0.2	< 1.0	C1
50	0.4	< 1.0	C1
51	0.2	< 1.0	C1
52	0.5	< 1.0	C1
53	0.3	< 1.0	C1
54	0.3	< 1.0	C1
55	0.3	< 1.0	C1
56	0.3	< 1.0	C1
57	0.4	< 1.0	C1
58	0.5	< 1.0	C1

Soil Vapour Survey - POL Supply Ring Main Junction - Area D1

SVS Point Number	Depth (m)	Gas Concentration (ppm)	Area
1	0.2	< 1.0	D1
2	0.3	< 1.0	D1
3	0.2	< 1.0	D1
4	0.4	< 1.0	D1
5	0.4	< 1.0	D1
6	0.5	< 1.0	D1
7	0.4	< 1.0	D1
8	0.4	< 1.0	D1
9	0.4	< 1.0	D1
10	0.5	< 1.0	D1
11	0.5	< 1.0	D1
12	0.4	< 1.0	D1
13	0.4	< 1.0	D1
14	0.4	< 1.0	D1
15	0.5	< 1.0	D1
16	0.4	< 1.0	D1
17	0.3	< 1.0	D1
18	0.3	< 1.0	D1
19	0.2	< 1.0	D1
20	0.5	< 1.0	D1

Soil Vapour Survey - POL Supply Ring Main Junction - Area D2

SVS Point Number	Depth (m)	Gas Concentration (ppm)	Area
1	0.2	< 1.0	D2
2	0.2	< 1.0	D2
3	0.2	< 1.0	D2
4	0.3	< 1.0	D2
5	0.2	< 1.0	D2
6	0.2	< 1.0	D2
7	0.3	< 1.0	D2
8	1	< 1.0	D2
9	0.3	< 1.0	D2
10	0.1	< 1.0	D2
11	0.1	< 1.0	D2
12	0.7	< 1.0	D2
13	1	< 1.0	D2
14	1.1	< 1.0	D2
15	1	< 1.0	D2
16	0.75	< 1.0	D2
17	1.1	< 1.0	D2
18	1	< 1.0	D2
19	1	< 1.0	D2
20	1.1	< 1.0	D2
21	0.8	< 1.0	D2
22	0.7	< 1.0	D2
23	0.8	< 1.0	D2
24	0.5	< 1.0	D2
25	0.5	< 1.0	D2
26	0.5	< 1.0	D2
27	0.5	< 1.0	D2
28	0.5	< 1.0	D2
29	0.5	< 1.0	D2
30	0.5	< 1.0	D2
31	0.2	< 1.0	D2
32	0.5	< 1.0	D2

Soil Vapour Survey - POL Supply Ring Main Junction - Area D3

SVS Point Number	Depth (m)	Gas Concentration (ppm)	Area
1	0.2	< 1.0	D3
2	0.2	< 1.0	D3
3	0.5	< 1.0	D3
4	0.5	< 1.0	D3
5	0.4	< 1.0	D3
6	0.5	< 1.0	D3
7	1	< 1.0	D3
8	0.5	< 1.0	D3
9	0.5	< 1.0	D3
10	0.2	< 1.0	D3
11	0.2	< 1.0	D3
12	0.3	< 1.0	D3
13	0.5	< 1.0	D3
14	0.4	< 1.0	D3
15	0.5	< 1.0	D3
16	0.5	< 1.0	D3
17	0.5	< 1.0	D3
18	0.75	< 1.0	D3
19	1	< 1.0	D3
20	1.1	< 1.0	D3

Soil Vapour Survey - Selected POL Areas

SVS Point Number	Depth (m)	Gas Concentration (ppm)	Area
73	0.5	<1.0	Area B - POL 17
74	0.9	<1.0	Area B - POL 17
75	0.6	<1.0	Area B - POL 17
76	1	<1.0	Area B - POL 17
77	1	<1.0	Area B - POL 17
78	1	2	Area B - POL 17
79	1	1	Area B - POL 17
80	0.3	<1.0	Area B - POL 17
81	1	<1.0	Area A - POL 19
82	1	<1.0	Area A - POL 19
83	1	<1.0	Area A - POL 19
84	0.9	<1.0	Area A - POL 19
85	1	<1.0	Area A - POL 19
86	1	<1.0	Area D - POL 20
87	0.8	<1.0	Area D - POL 20
88	0.7	<1.0	Area D - POL 20
89	0.8	<1.0	Area D - POL 20
90	1	<1.0	Area D - POL 20
91	0.7	<1.0	Area D - POL 20
92	0.7	<1.0	Area D - POL 20
93	0.8	<1.0	Area D - POL 20
97	0.5	<1.0	Area B - POL 23
98	1	<1.0	Area B - POL 23
99	0.6	<1.0	Area B - POL 23
100	0.5	<1.0	Area B - POL 23
101	0.4	<1.0	Area B - POL 23
102	1	<1.0	Area B - POL 23
103	0.5	<1.0	Area B - POL 23
104	1	<1.0	Area B - POL 23
105	0.6	<1.0	Area B - POL 23
106	1	<1.0	Area B - POL 23
107	0.8	<1.0	Area B - POL 23
108	0.7	<1.0	Area B - POL 23
109	0.8	<1.0	Area B - POL 23

See also survey in area A1 for POL 2 & 21, area A2 for POL 3 and area C1 for POL 10 and POL 22.

Soil Vapour Survey -Miscellaneous Locations

SVS Point Number	Depth (m)	Gas Concentration (ppm)	Area
<i>Building 320 AST's</i>			
114	0.3	<1.0	A
115	1	<1.0	A
116	0.9	<1.0	A
117	1	<1.0	A
118	0.7	<1.0	A
119	0.6	<1.0	A
<i>Building 345 AST</i>			
120	0.8	<1.0	A
<i>De-Icing Fluid Storage Tanks</i>			
127	0.4	<1.0	A
128	0.6	<1.0	A
<i>Trial Pit Replacements</i>			
121	0.8	<1.0	A, replaces TP37
122	1	<1.0	A, replaces TP115
123	1	<1.0	A, replaces TP48
124	1	<1.0	A, replaces TP33
125	0.5	<1.0	A, replaces TP114
126	1.1	1	A, replaces TP30
<i>Building 221/255</i>			
110	0.8	<1.0	C
111	1	<1.0	C

Soil Vapour Survey - Fire Practice Area

SVS Point Number	Depth (m)	Gas Concentration (ppm)	Area
1	0.4	< 1.0	FPA
2	0.5	< 1.0	FPA
3	0.4	< 1.0	FPA
4	0.4	< 1.0	FPA
5	0.3	< 1.0	FPA
6	0.4	>10,000	FPA
7	0.5	>10,000	FPA
8	0.4	>10,000	FPA

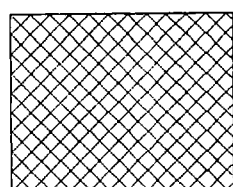
Appendix

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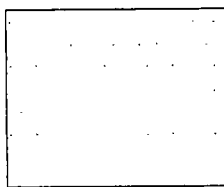
Trial Pit Logs

TRIAL PIT LOGS - Notation

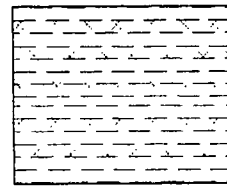
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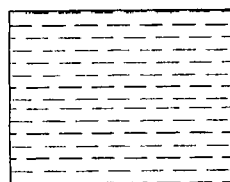
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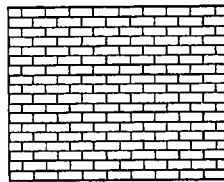
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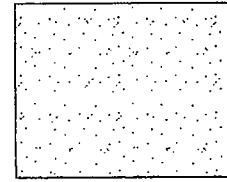
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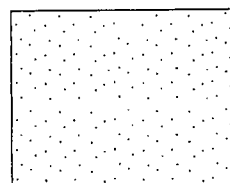
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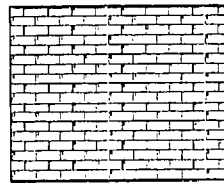
LIMESTONE



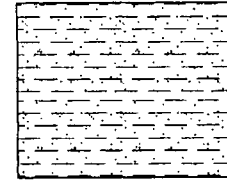
SILT & SAND



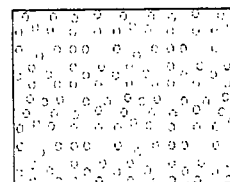
SAND



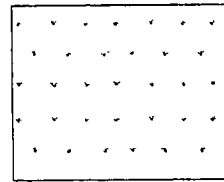
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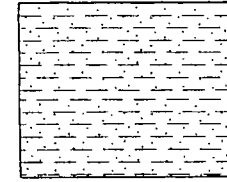
SILT, SAND
& CLAY



GRAVEL



TOPSOIL



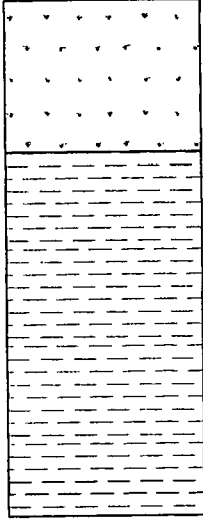
CLAY & SAND

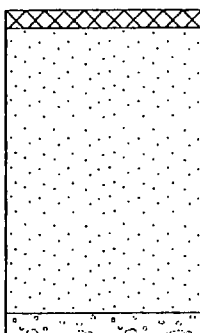
Notes:

Where material encountered was obviously fill it has been labelled as such. In many areas the ground has been re-worked and it is not always possible to distinguish this from natural ground. In these instances the legend used represents the dominant soil material present.

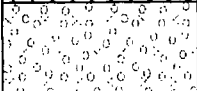
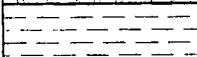
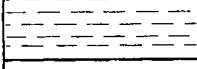
National grid references are quoted to 4 figures, taken from the OS 1:25,000 scale map of the area. Locations are shown on the site plans. All grid references are prefixed by SP.

Aspinwall & company		TRIAL PIT LOG		TP1													
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1													
		Ground Level - m A.O.D. approx.		Grid Ref.: 4989, 2643													
Project: RAF Upper Heyford			Excavation Method: JCB														
Location: Upper Heyford			Weather: Dry/overcast														
Legend <table border="0"> <thead> <tr> <th>Depth (m)</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.1 m</td> <td>Grass over medium brown silty/clayey sand with many fine roots and some fine to coarse gravel of flint and limestone</td> </tr> <tr> <td>0.8 m</td> <td>Soft to firm orange brown sandy silty clay with much fine subangular gravel to cobble sized limestone</td> </tr> <tr> <td></td> <td>Soft to firm red brown silty clay</td> </tr> <tr> <td>1.8 m 1.85 m</td> <td>White sub angular cobbles and boulders of limestone in a brown clayey silty sand matrix</td> </tr> <tr> <td colspan="2" style="text-align: center;">END OF TRIAL PIT 1.85 m</td> </tr> </tbody> </table>						Depth (m)	DESCRIPTION	0.1 m	Grass over medium brown silty/clayey sand with many fine roots and some fine to coarse gravel of flint and limestone	0.8 m	Soft to firm orange brown sandy silty clay with much fine subangular gravel to cobble sized limestone		Soft to firm red brown silty clay	1.8 m 1.85 m	White sub angular cobbles and boulders of limestone in a brown clayey silty sand matrix	END OF TRIAL PIT 1.85 m	
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END OF TRIAL PIT 1.85 m																	
Scale: 1:25																	
Remarks:				Water: None													
				Stability: Fair													
				Time trench open: 30 mins													
Sample	TP1	TP1				Logged by: HHU											
Depth	0.1 m	0.8 m															
Type	Soil	Soil															
Test																	
Date: 22.04.97																	

Aspinwall & company		TRIAL PIT LOG		TP3		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. approx.		Grid Ref.: 4986, 2643		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Dry/overcast			
Legend  Depth (m) DESCRIPTION 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 Grass over loose medium brown clayey silty sand with many fine roots and some fine to coarse gravel of flint and limestone Firm brown mottled grey silty clay with much fine to coarse gravel sized shell fragments END OF TRIAL PIT 1.7 m						
Scale: 1:25						
Remarks:				Water: None		
				Stability: Fair		
				Time trench open: 30 mins		
Sample	TP3	TP3				Logged by: HHU
Depth	0.4 m	0.9 m				
Type	SOIL	SOIL				
Test						
Date: 22.04.97						

Aspinwall & company		TRIAL PIT LOG		TP4	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 4990, 2645	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry/overcast		
Legend  Depth (m) 0.05 m — Tarmac Loose light brown clayey silty sand with much fine sub-angular gravel to cobble size fragments of white limestone 1.0 m — White subangular cobbles to boulder sized limestone in a brown clayey silty sandy matrix 1.1 m — END OF TRIAL PIT 1.1 m Depth below ground level (m) 					
Scale: 1:25					
Remarks:				Water: None	
				Stability: Fair	
				Time trench open: 30 mins	
Sample	TP4	TP4			
Depth	0.3 m	0.8 m			
Type	SOIL	SOIL			
Test					
					Logged by: HHU
					Date: 22.04.97

Aspinwall & company		TRIAL PIT LOG		TP5	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5000, 2648	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry/overcast		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.1 m	Asphalt hardstanding
		0.4 m	Loose mid brown clayey sandy silt with subangular gravel to boulder size limestone
		0.75 m	Firm red-brown silty clay with some sand
		0.85 m	Firm mottled grey-green-orange mottled silty clay with shell fragments and vegetation remains
		1.1 m	Weathered limestone bedrock
END OF TRIAL PIT 1.1 m			

Scale: 1:25

Remarks: Trial pit ended 1.1 m at top of weathered bedrock.						Water: None	
						Stability: Stable	
						Time trench open: 15-20 mins	
Sample	TP5	TP5					Logged by: ABW
Depth	0.4 m	0.85 m					
Type	SOIL	SOIL					Date: 22.04.97
Test							

Aspinwall & company			TRIAL PIT LOG			TP6		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 4992, 2642		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Dry, overcast		

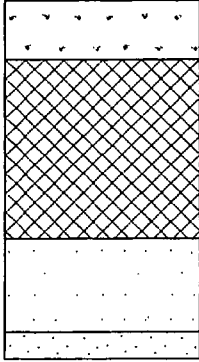
	Legend	Depth (m)	DESCRIPTION
0.0		0.2 m	Loose brown sandy silt with occasional subrounded limestone gravel
0.5		0.65 m	Firm red-brown silty clay with occasional subrounded to subangular gravel to cobble sized limestone
1.0			Soft to firm orange-beige-grey mottled silty weathered clay
1.5		1.7 m	Loose beige medium to coarse sand with angular gravel to cobble sized limestone
1.9 m			
2.0		Top of weathered bedrock	
		END OF TRIAL PIT 1.9 m	
2.5			
3.0			
3.5			

Scale: 1:25

Remarks: End of trial pit at 1.9 m at bedrock surface.							Water: None	
							Stability: Stable	
							Time trench open: 20 mins	

Sample	TP6	TP6	TP6					Logged by: ABW
Depth	0.6 m	1.45 m	1.9 m					
Type	SOIL	SOIL	SOIL					
Test								Date: 22.04.97

Aspinwall & company		TRIAL PIT LOG		TP7				
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1				
		Ground Level - m A.O.D. approx.		Grid Ref.: 5038, 2640				
Project: RAF Upper Heyford			Excavation Method: JCB					
Location: Upper Heyford			Weather: Dry/overcast					
<table border="0"> <tr> <td style="vertical-align: top;"> Legend </td> <td style="vertical-align: top; padding-left: 10px;"> Depth (m) 0.0 0.45 m 0.5 1.0 m 1.0 1.5 1.7 m 1.75 m 2.0 2.5 3.0 3.5 </td> <td style="vertical-align: top; padding-left: 10px;"> DESCRIPTION Grass over loose medium brown silty clayey sand with some fine roots, some subangular fine gravel to cobble sized limestone, occasional fine to coarse gravel sized ash Loose red/brown clayey silty sand with much fine gravel to cobble sized limestone Firm light brown mottled grey silty clay White subangular cobble to boulder sized limestone in a brown clayey silty sandy matrix END OF TRIAL PIT 1.75 m </td> </tr> </table>						Legend 	Depth (m) 0.0 0.45 m 0.5 1.0 m 1.0 1.5 1.7 m 1.75 m 2.0 2.5 3.0 3.5	DESCRIPTION Grass over loose medium brown silty clayey sand with some fine roots, some subangular fine gravel to cobble sized limestone, occasional fine to coarse gravel sized ash Loose red/brown clayey silty sand with much fine gravel to cobble sized limestone Firm light brown mottled grey silty clay White subangular cobble to boulder sized limestone in a brown clayey silty sandy matrix END OF TRIAL PIT 1.75 m
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Scale: 1:25								
Remarks:					Water: None			
					Stability: Fair			
					Time trench open: 30 mins			
Sample	TP7	TP7					Logged by: HHU	
Depth	0.3 m	1.2 m						
Type	SOIL	SOIL					Date: 22.04.97	
Test								

Aspinwall & company		TRIAL PIT LOG		TP8																												
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																												
		Ground Level - m A.O.D. approx.		Grid Ref.: 5018, 2645																												
Project: RAF Upper Heyford			Excavation Method: JCB																													
Location: Upper Heyford			Weather: Dry/overcast																													
Legend  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Depth (m)</th> <th style="width: 5%;"> </th> <th style="width: 85%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td></td> <td>Grass over medium brown silty clayey sand with many fine roots and subangular fine to coarse gravel of limestone</td> </tr> <tr> <td>0.2 m</td> <td></td> <td></td> </tr> <tr> <td>0.5</td> <td></td> <td>Loose light brown very clayey sand with fine gravels to cobble sized limestone and occasional fine to coarse gravel sized ash and clinker. Bundle of wire cable at 0.5 m</td> </tr> <tr> <td>0.8 m</td> <td></td> <td></td> </tr> <tr> <td>1.0</td> <td></td> <td>Soft dark brown sandy and clayey silt with some fine gravel to cobbles of subangular limestone</td> </tr> <tr> <td>1.1 m</td> <td></td> <td></td> </tr> <tr> <td>1.2 m</td> <td></td> <td>Loose red/brown clayey silty sand with much subangular fine gravel to cobbles of white limestone</td> </tr> <tr> <td colspan="3" style="text-align: center;">END OF TRIAL PIT 1.2 m</td> </tr> </tbody> </table>						Depth (m)		DESCRIPTION	0.0		Grass over medium brown silty clayey sand with many fine roots and subangular fine to coarse gravel of limestone	0.2 m			0.5		Loose light brown very clayey sand with fine gravels to cobble sized limestone and occasional fine to coarse gravel sized ash and clinker. Bundle of wire cable at 0.5 m	0.8 m			1.0		Soft dark brown sandy and clayey silt with some fine gravel to cobbles of subangular limestone	1.1 m			1.2 m		Loose red/brown clayey silty sand with much subangular fine gravel to cobbles of white limestone	END OF TRIAL PIT 1.2 m		
Depth (m)		DESCRIPTION																														
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END OF TRIAL PIT 1.2 m																																
Scale: 1:25																																
Remarks: Water: None Stability: Fair Time trench open: 30 mins																																
Sample	TP8	TP8				Logged by: HHU																										
Depth	0.3 m	1.0 m																														
Type	SOIL	SOIL				Date: 22.04.97																										
Test																																

Aspinwall & company		TRIAL PIT LOG		TP9	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5055, 2590	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Loose light brown silty fine sand with roots
0.5			Loose red-brown silty fine sand with some clay and subangular limestone gravel and cobbles
0.75 m			
0.85 m			Firm grey-brown sandy silt with some subangular limestone gravel
1.0			
1.5			Loose orange-brown silty fine sand with some subrounded limestone gravel and cobbles
2.0		2.1 m	Weathered top of bedrock
END OF TRIAL PIT 2.1 m			

Scale: 1:25

Remarks: Trial pit ended at weathered bedrock.						Water: None	
						Stability: Stable	
						Time trench open: 20 mins	
Sample	TP9	TP9					Logged by: ABW
Depth	0.6 m	2.0 m					
Type	SOIL	SOIL					Date: 22.04.97
Test							

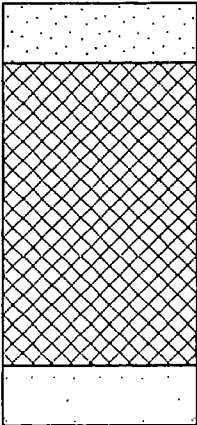
Aspinwall&company		TRIAL PIT LOG		TP10													
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1													
		Ground Level - m A.O.D. approx.		Grid Ref.: 5068, 2602													
Project: RAF Upper Heyford			Excavation Method: JCB														
Location: Upper Heyford			Weather: Dry, sunny														
Legend <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Depth (m)</th> <th style="width: 85%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>Grass over soft brown sandy silt with many fine roots</td> </tr> <tr> <td>0.15 m</td> <td></td> </tr> <tr> <td>0.7 m</td> <td>Soft red brown sandy silt with some fine gravel to cobble sized limestone and occasional fine to coarse gravel sized ash, clinker and brick</td> </tr> <tr> <td>1.3 m</td> <td>Soft light orange/brown sandy silt and fine gravel to cobbles of subangular limestone</td> </tr> <tr> <td colspan="2" style="text-align: center;">END OF TRIAL PIT 1.3 m</td> </tr> </tbody> </table>						Depth (m)	DESCRIPTION	0.0	Grass over soft brown sandy silt with many fine roots	0.15 m		0.7 m	Soft red brown sandy silt with some fine gravel to cobble sized limestone and occasional fine to coarse gravel sized ash, clinker and brick	1.3 m	Soft light orange/brown sandy silt and fine gravel to cobbles of subangular limestone	END OF TRIAL PIT 1.3 m	
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1.3 m	Soft light orange/brown sandy silt and fine gravel to cobbles of subangular limestone																
END OF TRIAL PIT 1.3 m																	
Scale: 1:25																	
Remarks:					Water: None												
					Stability: Good												
					Time trench open: 30 mins												
Sample	TP10	TP10				Logged by: HHU											
Depth	0.3 m	1.2 m															
Type	SOIL	SOIL															
Test						Date: 30.04.97											

Aspinwall & company		TRIAL PIT LOG		TP11	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5068, 2596	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m)	0.0		
		0.15 m	Grass over soft brown sandy silt with many fine roots
		0.4 m	Very stiff grey silt and cobbles of subangular limestone
	0.5	0.5 m	Loose orange sand
		1.0 m	Soft red/brown sandy silt and fine gravel to cobbles sized subangular limestone and occasional fine gravel sized ash
		1.6 m	Soft light brown/orange mottled grey slightly sandy silt with some fine gravel to cobble sized subangular limestone
	END OF TRIAL PIT 1.6 m		

Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP11	TP11					Logged by: HHU	
Depth	0.2 m	0.7 m						
Type	SOIL	SOIL						
Test							Date: 30.04.97	

Aspinwall & company			TRIAL PIT LOG			TP12		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5071, 2599		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Dry, sunny		
Legend  Depth (m) 0.0 0.2 m — Grass over loose silty clayey sand with many fine roots and fine to coarse gravel sized flint and limestone 0.5 1.0 1.2 m — Loose orange/brown sand and gravel and occasional fine gravel sized ash and clinker 1.4 m — Soft light brown/orange mottled grey slightly clayey silt with a little fine to coarse gravel of limestone 1.5 2.0 2.5 3.0 3.5 END OF TRIAL PIT 1.4 m								
Remarks:						Water: None		
						Stability: Poor		
						Time trench open: 30 mins		
Sample	TP12	TP12	TP12					Logged by: HHU
Depth	0.1 m	1.0 m	1.3 m					
Type	SOIL	SOIL	SOIL					Date: 30.04.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP13																																					
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																																					
		Ground Level - m A.O.D. approx.		Grid Ref.: 5071, 2594																																					
Project: RAF Upper Heyford			Excavation Method: JCB																																						
Location: Upper Heyford			Weather: Dry, sunny																																						
Legend <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%; text-align: left;">Depth (m)</th> <th style="width: 10%;"></th> <th style="width: 80%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td></td> <td rowspan="2">Grass over soft brown sandy silt with many roots and a little fine to coarse gravel sized flint, limestone and occasional fine to coarse gravel sized ash and glass</td> </tr> <tr> <td>0.2 m</td> <td></td> </tr> <tr> <td>0.5</td> <td></td> <td rowspan="2">Soft red brown sandy slightly clayey silt with much fine gravel to cobble sized limestone and occasional fine to coarse gravel sized ash and brick</td> </tr> <tr> <td>0.7 m</td> <td></td> </tr> <tr> <td>1.0</td> <td></td> <td rowspan="2">Soft light brown sandy and slightly clayey silt</td> </tr> <tr> <td>1.3 m</td> <td></td> </tr> <tr> <td>1.5</td> <td></td> <td rowspan="2">Soft light brown very sandy silt with some fine to coarse gravel sized limestone</td> </tr> <tr> <td>1.6 m</td> <td></td> </tr> </tbody> </table> END OF TRIAL PIT 1.6 m						Depth (m)		DESCRIPTION	0.0		Grass over soft brown sandy silt with many roots and a little fine to coarse gravel sized flint, limestone and occasional fine to coarse gravel sized ash and glass	0.2 m		0.5		Soft red brown sandy slightly clayey silt with much fine gravel to cobble sized limestone and occasional fine to coarse gravel sized ash and brick	0.7 m		1.0		Soft light brown sandy and slightly clayey silt	1.3 m		1.5		Soft light brown very sandy silt with some fine to coarse gravel sized limestone	1.6 m														
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Scale: 1:25																																									
Remarks: Water: None Stability: Good Time trench open: 30 mins																																									
						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Sample</td> <td style="width: 10%;">TP13</td> <td style="width: 10%;">TP13</td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td rowspan="3" style="width: 20%; text-align: center; vertical-align: middle;">Logged by: HHU</td> </tr> <tr> <td>Depth</td> <td>0.4 m</td> <td>1.0 m</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Type</td> <td>SOIL</td> <td>SOIL</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Test</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">Date: 30.04.97</td> </tr> </table>						Sample	TP13	TP13					Logged by: HHU	Depth	0.4 m	1.0 m					Type	SOIL	SOIL					Test							Date: 30.04.97
						Sample	TP13	TP13					Logged by: HHU																												
Depth	0.4 m	1.0 m																																							
Type	SOIL	SOIL																																							
Test							Date: 30.04.97																																		

Aspinwall & company		TRIAL PIT LOG		TP14	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5072, 2588	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Sunny, dry		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.0	Grass over soft brown sandy silt with some fine to coarse gravel of limestone. Fine roots present
		0.2 m	Soft light brown silt and cobbles of limestone
		0.4 m	Black layer of coal type material
		0.45 m	
		0.6 m	Soft light brown silty sand
		1.0 m	Soft light brown sandy silt with fine to coarse gravel of limestone
END OF TRIAL PIT 1.0 m			

Scale: 1:25

Remarks: Faint smell of hydrocarbons. Bedrock at 1.0 m.						Water: None	
						Stability: Good	
						Time trench open: 30 mins	

Sample	TP14	TP14						Logged by: ERM Date: 30.04.97
Depth	0.4 m	1.0 m						
Type	SOIL	SOIL						
Test								

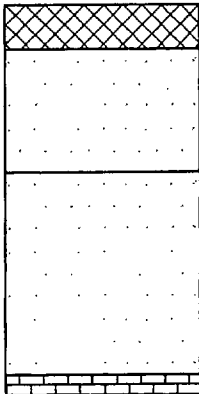
Aspinwall & company		TRIAL PIT LOG		TP15	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5077, 2590	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
0.0		0.2 m	Grass over soft brown sandy silt with much fine roots and occasional fine to coarse gravel of limestone
0.5		0.6 m	Soft light brown sandy clayey silt with fine gravel to cobble sized subangular limestone and occasional fine gravel sized ash
1.0			
1.5			
2.0			
2.2 m			Soft red brown clayey slightly sandy silt with some fine gravel to cobble sized subangular limestone
2.5		2.6 m	Soft light brown orange mottled grey silty sandy clay with much fine gravel to cobbles sized subangular limestone and occasional fine gravel sized ash and a little black staining
3.0		END OF TRIAL PIT 2.6 m	
3.5			

Scale: 1:25

Remarks: Petroleum odour from 2.2 m.							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP15	TP15	TP15					Logged by: HHU
Depth	0.4 m	1.5 m	2.5 m					
Type	SOIL	SOIL	SOIL					Date: 30.04.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP16	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5077, 2595	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m)	0.0		
		0.15 m	Grass over soft brown sandy silt with many fine roots and occasional coarse gravel of black brittle fibrous substance
		0.55 m	Soft red brown sandy silt with much fine gravel to cobble sized subangular limestone and occasional fine gravel sized ash
		1.2 m	Soft light brown/orange mottled grey clayey sandy silt with much fine gravel to cobble sized subangular limestone
		1.3 m	Fine gravel to cobbles of subangular limestone in a sandy silty matrix
END OF TRIAL PIT 1.3 m			

Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP16	TP16					Logged by: HHU	
Depth	0.1 m	1.2 m						
Type	SOIL	SOIL						
Test							Date: 30.04.97	

Aspinwall & company		TRIAL PIT LOG		TP17	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5075, 2600	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		
Legend Depth (m) 0.15 m — Grass over medium brown sandy silt with many fine roots and a little fine to coarse gravel of limestone 0.5 m — Soft red brown very sandy silt with much fine to coarse gravel sized limestone and occasional fine ash 1.0 m — Soft red brown sandy silt and fine gravel to cobble sized subangular limestone 1.6 m — Soft light brown orange sandy and slightly clayey silt and fine gravel to cobbles sized subangular limestone END OF TRIAL PIT 1.6 m					
Scale: 1:25					
Remarks:				Water: None	
				Stability: Good	
				Time trench open: 30 mins	
Sample	TP17	TP17			
Depth	0.45 m	1.5 m			
Type	SOIL	SOIL			
Test					
					Logged by: HHU
					Date: 30.04.97

Aspinwall & company			TRIAL PIT LOG			TP18		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5075, 2635		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Rain		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m)	0.0		
		0.2 m	Grass over loose medium brown silty clayey sand with many roots and some fine to coarse gravel of flint and limestone
		0.4 m	Loose light brown sand and gravel of fine to coarse rounded flint in a sandy matrix
	0.5	0.6 m	Soft to firm red brown sandy silty clay with some fine gravel to cobble sized subangular limestone
		1.0	Soft light brown/orange sandy silt with fine gravel to cobble sized subangular limestone
		1.3 m	Very stiff grey/brown slightly sandy silt with a little black staining and a little fine gravel to cobble sized subangular limestone
		1.5	
		1.7 m	
			2.0
			2.5
			3.0
			3.5

END OF TRIAL PIT 1.7 m

Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP18	TP18	TP18					Logged by: HHU
Depth	0.2 m	0.8 m	1.6 m					
Type	SOIL	SOIL	SOIL					Date: 25.04.97
Test								

Aspinwall&company		TRIAL PIT LOG		TP19	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5098, 2603	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Sunny, dry		

Legend		Depth (m)	DESCRIPTION
			Grass over soft dark brown sandy silt with some fine to coarse gravel of limestone. Fine roots present
		0.2 m	
		0.3 m	
		0.5 m	
		0.5 m	
		0.8 m	
		1.25 m	
			END OF TRIAL PIT 1.25 m

Remarks: Bedrock at 1.25 m.						Water: None	
						Stability: Good	
						Time trench open: 30 mins	
Sample	TP19	TP19					Logged by: ERM
Depth	0.35 m	1.25 m					
Type	SOIL	SOIL					Date: 30.04.97
Test							

Scale: 1:25

Aspinwall&company			TRIAL PIT LOG			TP20		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. _{approx.}			Grid Ref.: 5105, 2597		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Rain		
Legend Depth (m) DESCRIPTION 0.0 — Grass over loose medium brown silty clayey sand with many roots and some fine to coarse gravel of flint and limestone 0.25 m — 0.4 m — Soft dark grey sandy clayey silt with some fine to coarse gravel sized ash, clinker and limestone 0.8 m — Loose cobbles and boulders of white subangular limestone and brick and concrete in a light brown sandy matrix 1.5 m — Soft light brown/orange sandy silt and fine gravel to cobbles of subangular limestone END OF TRIAL PIT 1.5 m								
Scale: 1:25								
Remarks:							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP20	TP20	TP20					Logged by: HHU
Depth	0.35 m	0.5 m	1.2 m					
Type	SOIL	SOIL	SOIL					Date: 25.04.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP21	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5109, 2594	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Raining		

	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Dark brown sandy clay with angular to subangular up to coarse gravel
0.5		0.5 m	Light brown and dark brown sandy clay with brick and stone fill, including a buried brickwall. Pit abandoned due to the presence of services
END OF TRIAL PIT 0.5 m			

Depth below ground level (m)

Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: 20 mins	
Sample	TP21							Logged by: SLH
Depth	0.3 m							
Type	SOIL							
Test								Date: 25.04.97

Aspinwall & company		TRIAL PIT LOG		TP22																
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																
		Ground Level - m A.O.D. approx.		Grid Ref.: 5109, 2589																
Project: RAF Upper Heyford			Excavation Method: JCB																	
Location: Upper Heyford			Weather: Raining																	
Legend <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Depth (m)</th> <th style="width: 10%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td rowspan="2">Dark brown sandy clay with occasional up to medium gravel</td> </tr> <tr> <td>0.1 m</td> </tr> <tr> <td>0.2 m</td> <td rowspan="2">Dark and light brown sandy clayey fine to coarse subangular gravel with flints</td> </tr> <tr> <td>0.5 m</td> </tr> <tr> <td>0.8 m</td> <td>Dark brown slightly sandy firm CLAY</td> </tr> <tr> <td>1.0</td> <td rowspan="2">Light brown sandy silty clay with up to cobble size angular white weathered limestone</td> </tr> <tr> <td>1.6 m</td> </tr> <tr> <td colspan="2" style="text-align: center;">END OF TRIAL PIT 1.6 m</td> </tr> </tbody> </table>						Depth (m)	DESCRIPTION	0.0	Dark brown sandy clay with occasional up to medium gravel	0.1 m	0.2 m	Dark and light brown sandy clayey fine to coarse subangular gravel with flints	0.5 m	0.8 m	Dark brown slightly sandy firm CLAY	1.0	Light brown sandy silty clay with up to cobble size angular white weathered limestone	1.6 m	END OF TRIAL PIT 1.6 m	
Depth (m)	DESCRIPTION																			
0.0	Dark brown sandy clay with occasional up to medium gravel																			
0.1 m																				
0.2 m	Dark and light brown sandy clayey fine to coarse subangular gravel with flints																			
0.5 m																				
0.8 m	Dark brown slightly sandy firm CLAY																			
1.0	Light brown sandy silty clay with up to cobble size angular white weathered limestone																			
1.6 m																				
END OF TRIAL PIT 1.6 m																				
Scale: 1:25																				
Remarks:				Water: None																
				Stability: Good																
				Time trench open: 20 mins																
Sample	TP22	TP22																		
Depth	0.2 m	1.0 m																		
Type	SOIL	SOIL																		
Test																				
					Logged by: SLH															
					Date: 25.04.97															

Aspinwall & company		TRIAL PIT LOG		TP23	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5109, 2610	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Rain		

Legend	Depth (m)	DESCRIPTION
	0.0	
	0.2 m	Grass over loose medium brown silty clayey sand with many roots and some fine to coarse gravel of flint and limestone and occasional fine gravel sized ash
	0.6 m	Soft red/brown sandy and clayey silt with a little to coarse gravel of limestone and occasional fine gravel sized ash
	1.6 m	Soft light brown/orange sandy silt and fine gravel to cobbles of subangular limestone
END OF TRIAL PIT 1.6 m		

Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP23	TP23					Logged by: HHU	
Depth	0.5 m	1.5 m						
Type	SOIL	SOIL						
Test							Date: 25.04.97	

Aspinwall & company		TRIAL PIT LOG		TP24	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5111, 2602	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Damp, overcast		

Legend	Depth (m)	DESCRIPTION
	0.0	
	0.1 m	Loose grey-brown topsoil with roots
	0.5 m	Loose orange-brown sandy silt with gravel to cobble size subangular limestone and occasional roots. Some wood fragments. (0.5 m) Electric cable, pitch pitch paper lined severed (0.5 m) Loose beige-brown clayey silt with cobble-gravel size subangular limestone
END OF TRIAL PIT 0.5 m		

Scale: 1:25

Remarks: Trial pit abandoned after severing electric cable.						Water: None	
						Stability: Stable	
						Time trench open: 20 mins	
Sample	TP24						Logged by: ABW
Depth	0.4 m						
Type	SOIL						Date: 25.04.97
Test							

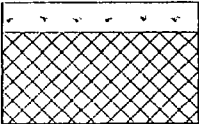
Aspinwall&company		TRIAL PIT LOG		TP25	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5112, 2607	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Wet, cloudy		

Legend		Depth (m)	DESCRIPTION
	0.0	0.1 m	Loose grey-brown silty sand with roots
	0.5	0.5 m	Loose orange-brown clayey silty sand with gravel to cobble size subangular limestone
	1.0	1.4 m	Loose beige-orange mottled clayey sandy silt with gravel-cobble size subrounded to subangular limestone
	1.5		End of trial pit at top of weathered bedrock
			END OF TRIAL PIT 1.4 m

Remarks:								Water: None	
								Stability: Stable	
								Time trench open: 20 mins	
Sample	TP25	TP25						Logged by: ABW	
Depth	0.4 m	1.1 m							
Type	SOIL	SOIL						Date: 25.04.97	
Test									

Scale: 1:25

Aspinwall & company		TRIAL PIT LOG		TP26	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5113, 2602	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Damp, overcast, cool		

	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Loose light brown silty fine sand with roots
0.5		0.4 m	Loose brown silty fine sand with gravel to cobble size subrounded to subangular limestone and occasional brick and ceramic fragments
1.0		END OF TRIAL PIT 0.4 m	
1.5			
2.0			
2.5			
3.0			
3.5			

Scale: 1:25

Remarks:							Water: None	
							Stability: Stable	
							Time trench open: 10 mins	
Sample	TP26							Logged by: ABW
Depth	0.4 m							
Type	SOIL							
Test								Date: 25.04.97

Aspinwall & company		TRIAL PIT LOG		TP27	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5112, 2600	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		

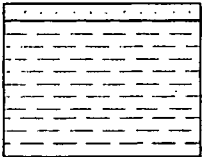
Legend	Depth (m)	DESCRIPTION
	0.0	
	0.1 m	Loose brown silty sand with roots
	0.3 m	Loose brown-orange silty sand with gravel to cobble size limestone
	0.4 m	Band of dense black asphalt
	0.55 m	Soft to firm brown-orange slightly sandy very silty clay with large tree roots and gravel to cobble size subangular limestone
END OF TRIAL PIT 0.55 m		

Depth below ground level (m)

Scale: 1:25

Remarks: Trial pit terminated at top of electric cable tiles.							Water: None	
							Stability: Stable	
							Time trench open: 15 mins	
Sample	TP27							Logged by: ABW
Depth	0.3 m							
Type	SOIL							
Test								Date: 25.04.97

Aspinwall & company		TRIAL PIT LOG		TP28	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5116, 2593	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Raining		

	Legend	Depth (m)	DESCRIPTION
0.0		0.05 m	Dark sandy clay with occasional up to medium, sub-rounded to subangular gravel
0.5		0.5 m	West Side of Pit Light brown sandy clay and fine to medium, subrounded to subangular gravel East Side of Pit Red brown slightly sandy firm CLAY
1.0		Pea gravel encountered around services. Pit terminated. Too many services to re-locate.	
END OF TRIAL PIT 0.5 m			
1.5			
2.0			
2.5			
3.0			
3.5			

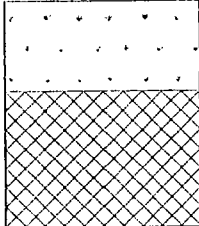
Scale: 1:25

Remarks:						Water: None	
						Stability: Good	
						Time trench open: 20 mins	
Sample	TP28						Logged by: SLH
Depth	0.4 m						
Type	SOIL						Date: 25.04.97
Test							

Aspinwall&company		TRIAL PIT LOG		TP29	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5115, 2590	
Project: RAF Upper Heyford				Excavation Method: JCB	
Location: Upper Heyford				Weather: Raining	
Legend Depth (m) DESCRIPTION Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 END OF TRIAL PIT - m					
Scale: 1:25					
Remarks: Trial pit abandoned because of services detected by CAT. Unable to re-locate close to AST.					Water:
					Stability:
					Time trench open:
Sample					Logged by: SLH
Depth					
Type					Date: 25.04.97
Test					

Aspinwall&company		TRIAL PIT LOG		TP30		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. _{approx.}		Grid Ref.: 5116, 2583		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Sunny, dry			
Legend Depth (m) DESCRIPTION 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 END OF TRIAL PIT - m						
Scale: 1:25						
Remarks: Trial pit abandoned due to presence of services.				Water:		
				Stability:		
				Time trench open:		
Sample						Logged by: ERM
Depth						
Type						Date: 30.04.97
Test						

Aspinwall & company		TRIAL PIT LOG		TP31	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5132, 2582	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Sunny, dry		

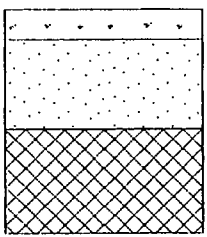
	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.0	
		0.3 m	Loose grey-brown silty fine sand with roots
		0.5	Loose grey/brown silty fine sand with cobble to boulder sized rubble with ceramic drains, concrete, brick, burnt timber, metal, asphalt, steel wire.
		0.75 m	End of trial pit at concrete slab
END OF TRIAL PIT 0.75 m			

Scale: 1:25

Remarks: End of trial pit at 0.75 m due to impenetrable concrete slab.						Water: None	
						Stability: Yes, rubble reduces stability	
						Time trench open: 30-35 mins	

Sample	TP31							Logged by: ABW
Depth	0.75 m							
Type	SOIL							Date: 21.04.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP31A	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5133, 2582	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Loose mid brown silty fine sand with roots
			Loose brown silty fine sand with angular gravel and cobble sized limestone
0.5		0.4 m	Loose brown silty fine sand with cobble and gravel sized rubble and fragments of asphalt, concrete and limestone. Some metal piping, two types
		0.75 m	End of trial pit at concrete slab.
1.0		END OF TRIAL PIT 0.75 m	
1.5			
2.0			
2.5			
3.0			
3.5			

Scale: 1:25

Remarks: End of trial pit at 0.75 m at concrete slab, 2nd attempt.						Water: None	
						Stability: Yes	
						Time trench open: 30 mins	
Sample	TP31A						Logged by: ABW
Depth	0.7 m						
Type	SOIL						
Test							Date: 21.04.97

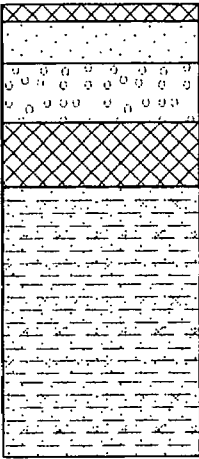
Aspinwall & company			TRIAL PIT LOG			TP32		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5130, 2580		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Sunny, dry		

Legend	Depth (m)	DESCRIPTION
	0.0	
	0.1 m	Loose mid brown silty sand with roots
	0.2 m	Loose grey-beige coarse sand lense at south edge of trial pit
	0.55 m	Soft slightly sandy very silty clay with gravel to cobble sized subangular limestone, some vegetation traces
	1.0 m	Slightly cemented red-brown silty clay with occasional coarse sand particles
	1.1 m	Cobbles of limestone with red-brown silty clay matrix
End of trial pit, weathered top of limestone bedrock END OF TRIAL PIT 1.1 m		

Scale: 1:25							
Remarks: 1.1 m end of trial pit at weathered top of limestone bedrock.							Water: None
							Stability: Stable
							Time trench open: 20 mins
Sample	TP32	TP32					Logged by: ABW
Depth	0.5 m	1.0 m					
Type	SOIL	SOIL					Date: 21.04.97
Test							

Aspinwall&company		TRIAL PIT LOG		TP33		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. approx.		Grid Ref.: 5136, 2603		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Sunny, dry			
Legend Depth (m) DESCRIPTION Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 END OF TRIAL PIT - m Scale: 1:25						
Remarks: Trial pit abandoned due to presence of services, not possible to re-locate.				Water:		
				Stability:		
				Time trench open:		
Sample						Logged by: ABW
Depth						
Type						Date: 21.04.97
Test						

Aspinwall&company		TRIAL PIT LOG		TP34			
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1			
		Ground Level - m A.O.D. approx.		Grid Ref.: 5149, 2590			
Project: RAF Upper Heyford			Excavation Method: JCB				
Location: Upper Heyford			Weather: Dry, sunny				
Legend Depth (m) 0.0 0.2 m 0.5 1.0 1.2 m 1.5 2.0 2.5 3.0 3.5 DESCRIPTION Reinforced Concrete Layer of plastic sheeting at 0.2 m Soft orange/brown sandy and slightly clayey silt and fine gravel to cobbles of subangular limestone END OF TRIAL PIT 1.2 m							
Scale: 1:25							
Remarks:				Water: None			
				Stability: Good			
				Time trench open: 30 mins			
Sample	TP34	TP34					Logged by: HHU
Depth	0.2 m	1.2 m					
Type	SOIL	SOIL					Date: 02.05.97
Test							

Aspinwall&company		TRIAL PIT LOG		TP35	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5155, 2690	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		
Legend  Depth (m) 0.05 m 0.2 m 0.4 m 0.6 m 1.5 m DESCRIPTION Tarmac Loose light brown slightly clayey sand and gravel layer of black staining between 0.15 and 0.2 m slight odour of hydrocarbons Loose fine gravel to cobble sized subangular limestone in a light brown sandy matrix Soft to firm dark brown sandy silty clay with a little fine to coarse gravel sized fragments of limestone, brick and ash, roots present Soft orange brown slightly sandy clayey silt and fine gravel to cobbles of limestone 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 Depth below ground level (m) END OF TRIAL PIT 1.5 m					
Scale: 1:25					
Remarks: Slight odour of hydrocarbons at 0.15 m - 0.6 m.				Water: None	
				Stability: Moderate	
				Time trench open: 30 mins	
Sample	TP35	TP35	TP35		Logged by: ERM
Depth	0.2 m	0.5 m	1.5 m		
Type	SOIL	SOIL	SOIL		
Test					Date: 02.05.97

Aspinwall&company		TRIAL PIT LOG		TP36	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5191, 2591	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

Legend		Depth (m)	DESCRIPTION
		0.5 m	Loose, dark brown silty sand with roots some gravel sized limestone fragments
		1.1 m	Loose dark brown silty fine sand with subangular gravel and cobble sized limestone fragments
			End of trial pit, weathered bedrock
			END OF TRIAL PIT 1.1 m

Scale: 1:25

Remarks: Trial pit finished when dense weathered limestone (top of bedrock) encountered.						Water: None	
						Stability: Stable	
						Time trench open: 15 mins	
Sample	TP36						Logged by: ABW
Depth	0.9 m						
Type	SOIL						Date: 21.04.97
Test							

Aspinwall&company		TRIAL PIT LOG		TP37	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5153, 2610	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Sunny, dry		

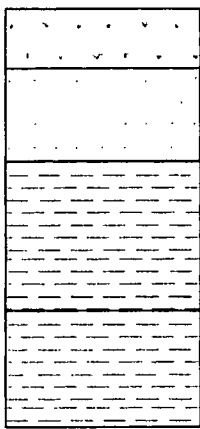
Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		
		END OF TRIAL PIT - m
		Scale: 1:25

Remarks: Trial pit abandoned due to presence of services.							Water:	
							Stability:	
							Time trench open:	
Sample								Logged by: ERM
Depth								
Type								Date: 30.04.97
Test								

Aspinwall&company		TRIAL PIT LOG		TP38	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. _{approx.}		Grid Ref.: 5158, 2615	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		
Legend 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 Depth below ground level (m) 0.2 m 0.5 m 0.7 m 2.1 m Grass over soft brown sandy silt with many fine roots and a little fine to coarse gravel of limestone and occasional coarse gravel sized brick and metal fragments Soft grey/brown silty and sandy clay with a little fine to coarse gravel of flint Soft red brown sandy and clayey silt with a little fine gravel to cobble sized limestone and occasional coarse gravel sized wire and glass Soft light brown orange sandy silt with much fine gravel to cobble sized subangular limestone END OF TRIAL PIT 2.1 m					
Scale: 1:25					
Remarks: Water: Encountered at 2.0 m Stability: Good Time trench open: 30 mins					
Sample	TP38	TP38	TP38	TP38	
Depth	0.3 m	0.6 m	2.0 m	2.0 m	
Type	SOIL	SOIL	SOIL	WATER	
Test					
					Logged by: HHU
					Date: 29.04.97

Aspinwall&company		TRIAL PIT LOG		TP39		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. approx.		Grid Ref.: 5158, 2610		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Dry, overcast			
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5	Legend		Depth (m) 0.2 m 0.6 m 0.9 m 1.7 m		DESCRIPTION Grass over dark brown sandy silt with many fine roots and a little fine gravel to cobbles of limestone and occasional coarse gravel of glass Soft red/brown sandy silt Fine gravel to cobbles of white subangular limestone in a soft red brown sandy silt matrix Soft light brown mottled grey slightly sandy silt with a little fine gravel sized shell fragments	
	END OF TRIAL PIT 1.7 m					

Aspinwall & company		TRIAL PIT LOG		TP40															
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1															
		Ground Level - m A.O.D. _{approx.}		Grid Ref.: 5162, 2615															
Project: RAF Upper Heyford			Excavation Method: JCB																
Location: Upper Heyford			Weather: Sunny, dry																
<table border="1"> <thead> <tr> <th>Legend</th> <th>Depth (m)</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td rowspan="2"> </td> <td>0.0</td> <td>Grass over soft dark brown sandy silt with much fine to coarse gravel of limestone. Fine roots present</td> </tr> <tr> <td>0.2 m</td> <td></td> </tr> <tr> <td></td> <td>0.5 m</td> <td>Soft dark brown sandy silt with much fine gravel to cobbles of limestone</td> </tr> <tr> <td colspan="3" style="text-align: center;">END OF TRIAL PIT 0.5 m</td> </tr> </tbody> </table>						Legend	Depth (m)	DESCRIPTION		0.0	Grass over soft dark brown sandy silt with much fine to coarse gravel of limestone. Fine roots present	0.2 m			0.5 m	Soft dark brown sandy silt with much fine gravel to cobbles of limestone	END OF TRIAL PIT 0.5 m		
Legend	Depth (m)	DESCRIPTION																	
	0.0	Grass over soft dark brown sandy silt with much fine to coarse gravel of limestone. Fine roots present																	
	0.2 m																		
	0.5 m	Soft dark brown sandy silt with much fine gravel to cobbles of limestone																	
END OF TRIAL PIT 0.5 m																			
Scale: 1:25																			
Remarks: Excavation ceased after discovering cable at 0.5 m. Unable to locate other suitable area due to presence of services.				Water: None															
				Stability: Moderate															
				Time trench open: 20 mins															
Sample	TP40																		
Depth	0.35 m																		
Type	SOIL																		
Test																			
					Logged by: ERM														
					Date: 30.04.97														

Aspinwall & company		TRIAL PIT LOG		TP41															
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1															
		Ground Level - m A.O.D. _{approx.}		Grid Ref.: 5162, 2610															
Project: RAF Upper Heyford			Excavation Method: JCB																
Location: Upper Heyford			Weather: Sunny, dry																
Legend  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Depth (m)</th> <th style="width: 10%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>Grass over soft dark brown sandy silt with a little fine to coarse gravel of limestone. Fine roots and a tree roots also present</td> </tr> <tr> <td>0.2 m</td> <td></td> </tr> <tr> <td>0.5 m</td> <td>Soft red brown clayey sandy silt with a little fine to coarse gravel of limestone</td> </tr> <tr> <td>1.0 m</td> <td>Soft red brown silty clay with some fine gravel of cobbles of limestone</td> </tr> <tr> <td>1.4 m</td> <td>Pale brown sandy clay with fine gravel to cobbles of limestone</td> </tr> <tr> <td colspan="2" style="text-align: center;">END OF TRIAL PIT 1.4 m</td> </tr> </tbody> </table>						Depth (m)	DESCRIPTION	0.0	Grass over soft dark brown sandy silt with a little fine to coarse gravel of limestone. Fine roots and a tree roots also present	0.2 m		0.5 m	Soft red brown clayey sandy silt with a little fine to coarse gravel of limestone	1.0 m	Soft red brown silty clay with some fine gravel of cobbles of limestone	1.4 m	Pale brown sandy clay with fine gravel to cobbles of limestone	END OF TRIAL PIT 1.4 m	
Depth (m)	DESCRIPTION																		
0.0	Grass over soft dark brown sandy silt with a little fine to coarse gravel of limestone. Fine roots and a tree roots also present																		
0.2 m																			
0.5 m	Soft red brown clayey sandy silt with a little fine to coarse gravel of limestone																		
1.0 m	Soft red brown silty clay with some fine gravel of cobbles of limestone																		
1.4 m	Pale brown sandy clay with fine gravel to cobbles of limestone																		
END OF TRIAL PIT 1.4 m																			
Scale: 1:25																			
Remarks: Piece of metal pipe found at 0.3 m.				Water: None															
				Stability: Good															
				Time trench open: 30 mins															
Sample	TP41	TP41				Logged by: ERM													
Depth	0.35 m	1.4 m																	
Type	SOIL	SOIL				Date: 30.04.97													
Test																			

Aspinwall & company		TRIAL PIT LOG		TP42	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5163, 2613	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Sunny, dry, windy		

	Legend	Depth (m)	DESCRIPTION	
0.0		0.2 m	Grass over soft dark brown sandy silt with some fine to coarse gravel of limestone. Fine roots present	
0.5		0.5 m	Soft light brown clayey sand with some fine gravel to cobbles of limestone	
1.0				Soft red/brown silty sandy clay with a little fine to coarse gravel of limestone
1.5		1.5 m		Damp black/grey and brown silty sand and fine gravel to cobbles of limestone
1.7		1.7 m		
2.0			END OF TRIAL PIT 1.7 m	
2.5				
3.0				
3.5				

Scale: 1:25

Remarks: Metal bar at 0.2 m. Odour of hydrocarbons at depth. Water entering at base with oily film.						Water: (See Remarks)	
						Stability: Good	
						Time trench open: 30 mins	
Sample	TP42	TP42					Logged by: ERM
Depth	0.4 m	1.7 m					
Type	SOIL	SOIL					Date: 29.04.97
Test							

Aspinwall & company			TRIAL PIT LOG			TP43		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5160, 2617		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Sunny, dry, windy		

	Legend	Depth (m)	DESCRIPTION
0.0			Grass over soft dark brown sandy silt with a little fine to coarse gravel of limestone. Small pieces of glass and fine root present
0.3			
0.5			Soft orange/brown clayey sandy silt with a little fine gravel and cobbles of limestone
0.6			
1.0			Loose light brown silty sand with some cobbles of limestone
1.4			Soft damp pale brown silty clay with some pockets of orange/brown sandy clay with some fine gravel to cobbles of limestone
1.6			
END OF TRIAL PIT 1.6 m			

Depth below ground level (m)

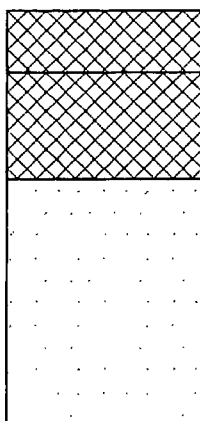
Scale: 1:25

Remarks: Water entering at base.							Water: (See Remarks)	
							Stability: Moderate	
							Time trench open: 30 mins	
Sample	TP43	TP43						Logged by: ERM
Depth	0.4 m	1.6 m						
Type	SOIL	SOIL						
Test								Date: 29.04.97

Aspinwall & company		TRIAL PIT LOG		TP44																	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5158, 2620																	
Project: RAF Upper Heyford			Excavation Method: JCB																		
Location: Upper Heyford			Weather: Dry, overcast																		
Legend <table border="0"> <thead> <tr> <th style="text-align: left;">Depth (m)</th> <th style="text-align: left;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>Grass over brown sandy silt with many fine to coarse roots and some fine to coarse gravel of limestone, occasional coarse gravel sized glass, ash and occasional cobble sized fragments of brick and tile</td> </tr> <tr> <td>0.2 m</td> <td></td> </tr> <tr> <td>0.5 m</td> <td>Soft red brown sandy silt with a little coarse roots</td> </tr> <tr> <td>1.0 m</td> <td>Soft light brown orange sandy silt with much fine gravel to cobble sized limestone</td> </tr> <tr> <td>1.5</td> <td></td> </tr> <tr> <td>2.0 m</td> <td>Soft beige sandy silt with some fine gravel to cobble sized subangular limestone</td> </tr> <tr> <td colspan="2" style="text-align: center;">END OF TRIAL PIT 2.0 m</td> </tr> </tbody> </table>						Depth (m)	DESCRIPTION	0.0	Grass over brown sandy silt with many fine to coarse roots and some fine to coarse gravel of limestone, occasional coarse gravel sized glass, ash and occasional cobble sized fragments of brick and tile	0.2 m		0.5 m	Soft red brown sandy silt with a little coarse roots	1.0 m	Soft light brown orange sandy silt with much fine gravel to cobble sized limestone	1.5		2.0 m	Soft beige sandy silt with some fine gravel to cobble sized subangular limestone	END OF TRIAL PIT 2.0 m	
Depth (m)	DESCRIPTION																				
0.0	Grass over brown sandy silt with many fine to coarse roots and some fine to coarse gravel of limestone, occasional coarse gravel sized glass, ash and occasional cobble sized fragments of brick and tile																				
0.2 m																					
0.5 m	Soft red brown sandy silt with a little coarse roots																				
1.0 m	Soft light brown orange sandy silt with much fine gravel to cobble sized limestone																				
1.5																					
2.0 m	Soft beige sandy silt with some fine gravel to cobble sized subangular limestone																				
END OF TRIAL PIT 2.0 m																					
Scale: 1:25																					
Remarks:					Water: Encountered at 2.0 m																
					Stability: Good																
					Time trench open: 30 mins																
Sample	TP44	TP44																			
Depth	0.1 m	2.0 m																			
Type	SOIL	SOIL																			
Test																					
					Logged by: HHU																
					Date: 29.04.97																

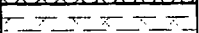
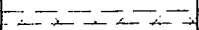
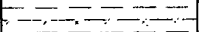
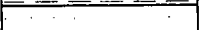
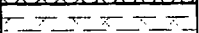
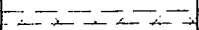
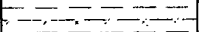
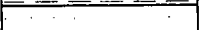
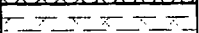
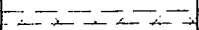
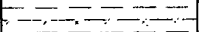
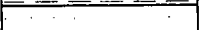
Aspinwall&company		TRIAL PIT LOG		TP45		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. _{approx.}		Grid Ref.: 5112, 2630		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Drizzle			
Legend Depth (m) 0.1 m Grass over loose medium brown silty clayey sand with many fine roots 0.7 m Soft red brown sandy clayey silt with a little fine gravel to cobble sized concrete, subangular limestone and occasional fine gravel sized ash and a fragment of metal 1.6 m Soft light brown sandy clayey silt with much fine gravel to cobble sized subangular limestone END OF TRIAL PIT 1.6 m						
Scale: 1:25						
Remarks:					Water: None	
					Stability: Good	
					Time trench open: 30 mins	
Sample	TP45	TP45				Logged by: HHU
Depth	0.4 m	1.2 m				
Type	SOIL	SOIL				
Test						Date: 25.04.97

Aspinwall&company		TRIAL PIT LOG		TP46				
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1				
		Ground Level - m A.O.D. approx.		Grid Ref.: 5120, 2635				
Project: RAF Upper Heyford			Excavation Method: JCB					
Location: Upper Heyford			Weather: Drizzle					
<table border="0"> <tr> <td style="vertical-align: top;"> Legend </td> <td style="vertical-align: top;"> Depth (m) 0.2 m 0.9 m 1.4 m </td> <td style="vertical-align: top;"> DESCRIPTION Grass over loose medium brown silty, clayey sand with many fine roots and some fine to coarse gravel of limestone Soft red brown sandy clayey silt with much fine gravel to cobbles of subangular limestone and occasional cobble sized fragments of brick and wood and fine gravel sized ash Soft light brown sandy clayey silt with fine gravel to cobble sized subangular limestone END OF TRIAL PIT 1.4 m </td> </tr> </table>						Legend	Depth (m) 0.2 m 0.9 m 1.4 m	DESCRIPTION Grass over loose medium brown silty, clayey sand with many fine roots and some fine to coarse gravel of limestone Soft red brown sandy clayey silt with much fine gravel to cobbles of subangular limestone and occasional cobble sized fragments of brick and wood and fine gravel sized ash Soft light brown sandy clayey silt with fine gravel to cobble sized subangular limestone END OF TRIAL PIT 1.4 m
Legend	Depth (m) 0.2 m 0.9 m 1.4 m	DESCRIPTION Grass over loose medium brown silty, clayey sand with many fine roots and some fine to coarse gravel of limestone Soft red brown sandy clayey silt with much fine gravel to cobbles of subangular limestone and occasional cobble sized fragments of brick and wood and fine gravel sized ash Soft light brown sandy clayey silt with fine gravel to cobble sized subangular limestone END OF TRIAL PIT 1.4 m						
Scale: 1:25								
Remarks:				Water: None				
				Stability: Good				
				Time trench open: 30 mins				
Sample	TP46	TP46						
Depth	0.4 m	1.3 m						
Type	SOIL	SOIL						
Test								
				Logged by: HHU				
				Date: 25.04.97				

Aspinwall&company		TRIAL PIT LOG		TP47		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. _{approx.}		Grid Ref.: 5115, 2635		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Rain			
Legend  Depth (m) 0.0 0.2 m — Grass over loose medium brown silty clayey sand with many roots, a little fine to coarse gravel limestone and flint and occasional plastic 0.55 m — Soft red/brown sandy silt with much fine gravel to cobbles of subangular limestone and occasional fine gravel sized glass fragments 1.0 1.4 m — Soft light brown/orange sandy silt and fine gravel to cobble sized subangular limestone END OF TRIAL PIT 1.4 m						
Scale: 1:25						
Remarks:					Water: None	
					Stability: Good	
					Time trench open: 30 mins	
Sample	TP47	TP47				Logged by: HHU Date: 25.04.97
Depth	0.5 m	1.2 m				
Type	SOIL	SOIL				
Test						

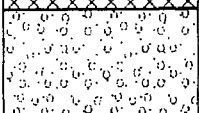
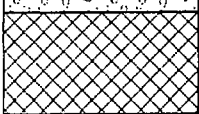
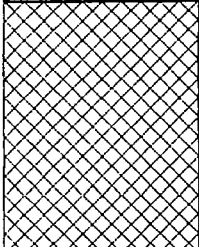
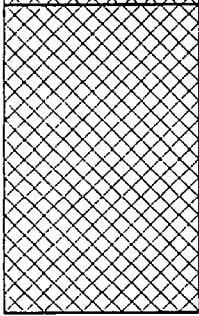
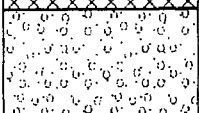
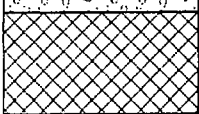
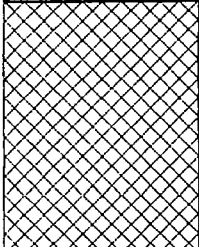
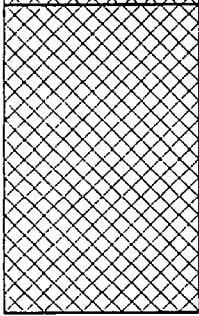
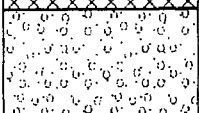
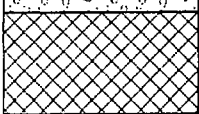
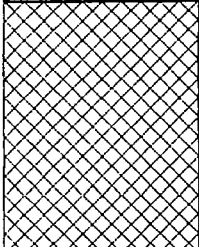
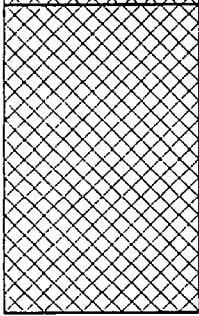
Aspinwall&company		TRIAL PIT LOG		TP48	
Client: Defence.Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5168, 2630	
Project: RAF Upper Heyford				Excavation Method: JCB	
Location: Upper Heyford				Weather: Dry, overcast, windy	
Legend Depth (m) DESCRIPTION Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 END OF TRIAL PIT - m					
Scale: 1:25					
Remarks: Trial pit abandoned due to presence of services.					Water:
					Stability:
					Time trench open:
Sample					Logged by: ERM
Depth					
Type					Date: 29.04.97
Test					

Aspinwall&company		TRIAL PIT LOG		TP49	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5180, 2655	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		
Legend Depth (m) 0.1 m Grass over loose medium brown silty clayey sand with many fine roots and some fine to coarse gravel of flint 0.8 m Soft light orange/brown clayey sandy silt with fine gravel to cobbles of white subangular limestone 1.3 m Soft orange/brown clayey sandy silt with some fine gravel to cobble sized white subangular limestone 1.4 m White subangular cobbles to boulders of limestone in a light brown clayey, silty sand matrix END OF TRIAL PIT 1.4 m					
Scale: 1:25					
Remarks:				Water: None	
				Stability: Good	
				Time trench open: 30 mins	
Sample	TP49	TP49			
Depth	0.1 m	1.0 m			
Type	SOIL	SOIL			
Test					
					Logged by: HHU
					Date: 24.04.97

Aspinwall & company		TRIAL PIT LOG		TP50																								
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																								
		Ground Level - m A.O.D. approx.		Grid Ref.: 5188, 2662																								
Project: RAF Upper Heyford			Excavation Method: JCB																									
Location: Upper Heyford			Weather: Dry, overcast																									
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END OF TRIAL PIT 2.0 m																												
Scale: 1:25																												
Remarks:				Water: None																								
				Stability: Good																								
				Time trench open: 30 mins																								
Sample	TP50	TP50				Logged by: HHU																						
Depth	0.1 m	1.8 m																										
Type	SOIL	SOIL																										
Test																												
Date: 24.04.97																												

Aspinwall & company		TRIAL PIT LOG		TP51														
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1														
		Ground Level - m A.O.D. approx.		Grid Ref.: 5155, 2588														
Project: RAF Upper Heyford			Excavation Method: JCB															
Location: Upper Heyford			Weather: Dry, sunny															
<table border="1"> <thead> <tr> <th>Legend</th> <th>Depth (m)</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td rowspan="3"> </td> <td>0.0</td> <td>Grass over loose medium brown silty clayey sand with many fine roots</td> </tr> <tr> <td>0.25 m</td> <td>Loose medium brown silty clayey sand with some fine subangular gravel to cobbles of limestone and some fine to coarse gravel sized fragments of coal, brick, ash. Some black staining and possible fuel odour at 0.35 m</td> </tr> <tr> <td>0.8 m</td> <td>Loose red-brown silty clayey sand with much subangular fine gravel to cobbles of limestone</td> </tr> <tr> <td colspan="3" style="text-align: center;"> END OF TRIAL PIT 1.05 m </td> </tr> </tbody> </table>						Legend	Depth (m)	DESCRIPTION		0.0	Grass over loose medium brown silty clayey sand with many fine roots	0.25 m	Loose medium brown silty clayey sand with some fine subangular gravel to cobbles of limestone and some fine to coarse gravel sized fragments of coal, brick, ash. Some black staining and possible fuel odour at 0.35 m	0.8 m	Loose red-brown silty clayey sand with much subangular fine gravel to cobbles of limestone	END OF TRIAL PIT 1.05 m		
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END OF TRIAL PIT 1.05 m																		
Scale: 1:25																		
Remarks:					Water: None													
					Stability: Good													
					Time trench open: 30 mins													
Sample	TP51	TP51				Logged by: HHU												
Depth	0.1 m	0.35 m																
Type	SOIL	SOIL				Date: 21.04.97												
Test																		

Aspinwall & company		TRIAL PIT LOG		TP52		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. approx.		Grid Ref.: 5155, 2575		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Dry/overcast			
Legend Depth (m) 0.0 0.2 m 0.5 0.6 m 1.0 1.0 m DESCRIPTION Grass over medium brown silty clayey sand with much fine roots and a little fine to coarse gravel of flint Loose red-brown silty sandy clay with a little fine subangular gravel to cobble sized limestone Loose red-brown silty sandy clay with much fine subangular gravel to cobble sized limestone END OF TRIAL PIT 1.0 m						
Scale: 1:25						
Remarks:				Water: None		
				Stability: Good		
				Time trench open: 30 mins		
Sample	TP52	TP52				Logged by: HHU
Depth	0.1 m	0.5 m				
Type	SOIL	SOIL				Date: 21.04.97
Test						

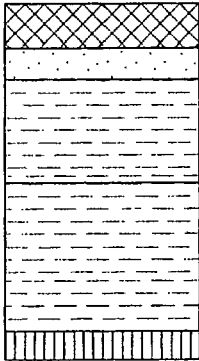
Aspinwall & company		TRIAL PIT LOG		TP53																								
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																								
		Ground Level - m A.O.D. approx.		Grid Ref.: 5130, 2545																								
Project: RAF Upper Heyford			Excavation Method: JCB																									
Location: Upper Heyford			Weather: Sunny, dry																									
<table border="0"> <tr> <td></td> <td>Legend</td> <td>Depth (m)</td> <td>DESCRIPTION</td> </tr> <tr> <td rowspan="6"> Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 </td> <td></td> <td>0.1 m</td> <td>Tarmac</td> </tr> <tr> <td></td> <td>0.5 m</td> <td>Loose orange sand and gravel with some fine gravel to cobbles of limestone</td> </tr> <tr> <td></td> <td>0.8 m</td> <td>Soft to firm dark brown sandy silty clay with a little fine to coarse gravel of limestone and occasional fine gravel sized fragments of ash and brick</td> </tr> <tr> <td></td> <td>1.7 m</td> <td>Soft to firm orange brown subangular silty clay with a little fine to coarse gravel of limestone and occasional fine gravel sized ash</td> </tr> <tr> <td></td> <td>2.7 m</td> <td>Soft to firm dark brown with black patches sandy silty clay with fine to coarse gravel of limestone. Patches of oily residue. Crushed metal container at 2.4 m, piece of wood at 2.7 m</td> </tr> <tr> <td colspan="3" style="text-align: center;">END OF TRIAL PIT 2.7 m</td> </tr> </table>							Legend	Depth (m)	DESCRIPTION	Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.1 m	Tarmac		0.5 m	Loose orange sand and gravel with some fine gravel to cobbles of limestone		0.8 m	Soft to firm dark brown sandy silty clay with a little fine to coarse gravel of limestone and occasional fine gravel sized fragments of ash and brick		1.7 m	Soft to firm orange brown subangular silty clay with a little fine to coarse gravel of limestone and occasional fine gravel sized ash		2.7 m	Soft to firm dark brown with black patches sandy silty clay with fine to coarse gravel of limestone. Patches of oily residue. Crushed metal container at 2.4 m, piece of wood at 2.7 m	END OF TRIAL PIT 2.7 m		
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	END OF TRIAL PIT 2.7 m																											
Scale: 1:25																												
Remarks: Hydrocarbon odour at 1.7 m.				Water: None																								
				Stability: Good																								
				Time trench open: 30 mins																								
Sample	TP53	TP53																										
Depth	0.3 m	1.9 m																										
Type	SOIL	SOIL																										
Test																												
					Logged by: ERM																							
					Date: 01.05.97																							

Aspinwall & company		TRIAL PIT LOG		TP54	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5118, 2578	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry/overcast		

Legend		Depth (m)	DESCRIPTION
			Grass over loose medium brown silty clayey sand with fine roots and a little fine to coarse gravel sized fragments of brick, plastic, ash and limestone
		0.3 m	
		0.7 m	
		1.1 m	
			END OF TRIAL PIT 1.1 m

Remarks:						Water: None	
						Stability: Fair	
						Time trench open: 30 mins	
Sample	TP54	TP54					Logged by: HHU
Depth	0.25 m	0.7 m					
Type	SOIL	SOIL					Date: 22.04.97
Test							

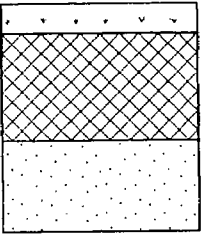
Aspinwall & company		TRIAL PIT LOG		TP55	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5082, 2568	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.15 m 0.25 m 0.6 m 1.1 m 1.2 m	Tarmac/asphalt Loose beige to brown medium to coarse sand with some silt and occasional clay lenses of 1 cm diameter Soft red-brown silty clay with some subangular gravel to cobble sized limestone with occasional half bricks, and sandstone and flint fragments Soft dark grey-brown silty clay with some coarse sand and occasional coal/organic fragments and flint. Old water pipe and large gravel sized bitumen fragments, steel bar, bricks Concrete
	END OF TRIAL PIT 1.2 m		

Scale: 1:25

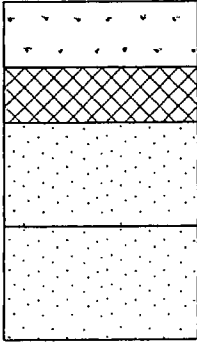
Remarks: Trial pit abandoned at concrete base.						Water: None	
						Stability: Sides collapsed at 1.1 m	
						Time trench open: 30 mins	
Sample	TP55	TP55					Logged by: ABW
Depth	0.2 m	0.8 m					
Type	SOIL	SOIL					
Test							Date: 22.04.97

Aspinwall & company		TRIAL PIT LOG		TP56	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5050, 2569	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Loose light brown sandy silt with roots
0.5		0.45 m	Loose red-brown silty fine sand with cobbles of concrete and breeze block, a road side kerb, tree roots, asphalt and steel wire
1.0		0.75 m	Loose dark red-brown clayey silty sand with gravel to cobble sized angular limestone
1.5		Pit abandoned after hitting 4 cm diameter water pipe - pit flooded	
END OF TRIAL PIT 0.75 m			

Scale: 1:25

Remarks: Pit open but covered overnight for maintenance on 22.04.97.							Water: Yes - pipe at 0.75 m	
							Stability: Stable	
							Time trench open: 12-24 hrs	
Sample	TP56	TP56						Logged by: ABW
Depth	0.25 m	0.75 m						
Type	SOIL	SOIL						Date: 22.04.97
Test								

Aspinwall&company		TRIAL PIT LOG		TP57	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5042, 2570	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		
Legend  Depth (m) 0.0 0.2 m 0.4 m 0.5 0.75 m 1.0 1.1 m 1.5 2.0 2.5 3.0 3.5 DESCRIPTION Loose, light brown silty sand. Loose light brown silty fine sand with gravel and cobble sized limestone and occasional gravel - cobble sized asphalt Loose red-brown-yellow mottled cohesive clayey-silty sand with cobbles of subangular limestone increasing with depth As 0.4 to 0.75 m with darker colour Trial pit abandoned after hitting and breaking drain END OF TRIAL PIT 1.1 m Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5					
Scale: 1:25					
Remarks: Abandoned after damaging surface water drain.				Water: None	
				Stability: Stable	
				Time trench open: 30 mins	
Sample	TP57	TP57			
Depth	0.25 m	1.0 m			
Type	SOIL	SOIL			
Test					
					Logged by: ABW
					Date: 21.04.97

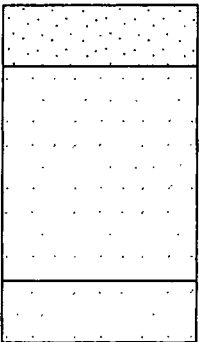
Aspinwall & company		TRIAL PIT LOG		TP58				
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1				
		Ground Level - m A.O.D. approx.		Grid Ref.: 5043, 2579				
Project: RAF Upper Heyford			Excavation Method: JCB					
Location: Upper Heyford			Weather: Dry, overcast					
<table border="0"> <tr> <td style="vertical-align: top;"> Legend </td> <td style="vertical-align: top;"> Depth (m) 0.1 m 0.5 m 1.0 m 1.2 m </td> <td style="vertical-align: top;"> DESCRIPTION Loose light-medium brown silty sand with roots Loose brown silty fine sand with subangular gravel to cobble sized limestone Loose medium to dark brown slightly sandy silt with much subangular gravel to cobble size limestone Soft to firm red-orange-brown slightly sandy silty clay, many gravel to cobble sized pieces of subangular limestone White-grey subangular cobbles of limestone in matrix of red-brown silty clay END OF TRIAL PIT 1.2 m </td> </tr> </table>						Legend 	Depth (m) 0.1 m 0.5 m 1.0 m 1.2 m	DESCRIPTION Loose light-medium brown silty sand with roots Loose brown silty fine sand with subangular gravel to cobble sized limestone Loose medium to dark brown slightly sandy silt with much subangular gravel to cobble size limestone Soft to firm red-orange-brown slightly sandy silty clay, many gravel to cobble sized pieces of subangular limestone White-grey subangular cobbles of limestone in matrix of red-brown silty clay END OF TRIAL PIT 1.2 m
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Scale: 1:25								
Remarks: End of trial pit at weathered bedrock.				Water: None				
				Stability: Yes				
				Time trench open: 20-30 mins				
Sample	TP58	TP58						
Depth	0.4 m	1.0 m						
Type	SOIL	SOIL						
Test								
					Logged by: ABW			
					Date: 22.04.97			

Aspinwall & company		TRIAL PIT LOG		TP59	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5056, 2744	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, cloudy		
Legend Depth (m) 0.1 m Grass over medium brown silty clayey sand with many fine roots and some fine to coarse gravel of flint 0.6 m Soft to firm brown sandy and silty clay with much fine gravel to cobble sized subangular limestone 1.8 m Soft light brown clayey sandy silt with some fine gravel to cobble sized subangular limestone 1.9 m Firm orange brown mottled grey silty sandy clay with a little fine to coarse gravel sized shell fragments END OF TRIAL PIT 1.9 m					
Scale: 1:25					
Remarks:				Water: None	
				Stability: Good	
				Time trench open: 30 mins	
Sample	TP59	TP59			
Depth	0.15 m	0.9 m			
Type	SOIL	SOIL			
Test					
					Logged by: HHU
					Date: 23.04.97

Aspinwall & company		TRIAL PIT LOG		TP60		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. approx.		Grid Ref.: 5049, 2746		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Dry/overcast			
Legend Depth (m) DESCRIPTION Grass over soft red brown sandy silt with a little fine gravel to cobble sized subangular limestone and occasional fine to coarse gravel sized ash and clinker. Sheet of metal 1.0 m Soft to firm orange brown sandy silty clay with much fine to coarse gravel sized shell fragments 1.2 m White subangular cobbles to boulder sized limestone in a brown clayey silty sand matrix 1.25 m END OF TRIAL PIT 1.25 m						
Scale: 1:25						
Remarks:				Water: None		
				Stability: Fair		
				Time trench open: 30 mins		
Sample	TP60	TP60				Logged by: HHU
Depth	0.7 m	1.0 m				
Type	SOIL	SOIL				Date: 22.04.97
Test						

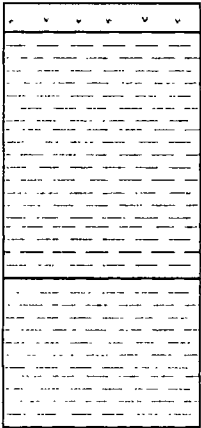
[illegible]

Aspinwall & company			TRIAL PIT LOG			TP63		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5075, 2750		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Dry, overcast, windy		

	Legend	Depth (m)	DESCRIPTION
0.0		0.2 m	Grass over loose medium brown silty clayey sand with much fine roots and some fine to coarse gravel of limestone
0.5		0.9 m	Soft red/brown sandy silt with some fine gravel to cobble sized subangular limestone and a little fine to coarse gravel of flint
1.0		1.1 m	Soft light brown orange sandy silt with some fine gravel to cobble sized subangular limestone
END OF TRIAL PIT 1.1 m			
1.5			
2.0			
2.5			
3.0			
3.5			

Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP63	TP63						Logged by: HHU/ ERM
Depth	0.35 m	1.1 m						
Type	SOIL	SOIL						Date: 28.04.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP64																											
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																											
		Ground Level - m A.O.D. approx.		Grid Ref.: 5089, 2771																											
Project: RAF Upper Heyford			Excavation Method: JCB																												
Location: Upper Heyford			Weather: Dry, sunny																												
Legend  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Depth (m)</th> <th style="width: 90%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td></td> </tr> <tr> <td>0.1 m</td> <td>Loose grey-brown silt with roots</td> </tr> <tr> <td>0.5</td> <td>Soft red-brown silty clay with some subrounded cobbles of limestone</td> </tr> <tr> <td>0.9 m</td> <td></td> </tr> <tr> <td>1.0</td> <td>Soft to firm beige-orange-brown silty clay with some shell fragments, slight laminations and gravel to cobble size subangular limestone</td> </tr> <tr> <td>1.4 m</td> <td>End of trial pit at top of weathered limestone bedrock</td> </tr> <tr> <td colspan="2" style="text-align: center;">END OF TRIAL PIT 1.4 m</td> </tr> <tr> <td>1.5</td> <td></td> </tr> <tr> <td>2.0</td> <td></td> </tr> <tr> <td>2.5</td> <td></td> </tr> <tr> <td>3.0</td> <td></td> </tr> <tr> <td>3.5</td> <td></td> </tr> </tbody> </table>						Depth (m)	DESCRIPTION	0.0		0.1 m	Loose grey-brown silt with roots	0.5	Soft red-brown silty clay with some subrounded cobbles of limestone	0.9 m		1.0	Soft to firm beige-orange-brown silty clay with some shell fragments, slight laminations and gravel to cobble size subangular limestone	1.4 m	End of trial pit at top of weathered limestone bedrock	END OF TRIAL PIT 1.4 m		1.5		2.0		2.5		3.0		3.5	
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2.0																															
2.5																															
3.0																															
3.5																															
Scale: 1:25																															
Remarks:					Water: None																										
					Stability: Stable																										
					Time trench open: 20 mins																										
Sample	TP64	TP64			Logged by: ABW																										
Depth	0.55 m	1.3 m																													
Type	SOIL	SOIL			Date: 24.04.97																										
Test																															

Aspinwall & company		TRIAL PIT LOG		TP65	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5090, 2760	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast, windy		

	Legend	Depth (m)	DESCRIPTION
0.0		0.2 m	Grass over soft brown sandy silt with some fine roots and a little fine to coarse gravel of limestone
0.5		0.7 m	Soft red/brown clayey silt with a little fine to coarse gravel of limestone
1.0		1.3 m	Soft light brown sandy silt and cobbles of subangular limestone
1.5		END OF TRIAL PIT 1.3 m	
2.0			
2.5			
3.0			
3.5			

Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP65	TP65					Logged by: HHU/ ERM	
Depth	0.4 m	1.3 m						
Type	SOIL	SOIL					Date: 28.04.97	
Test								

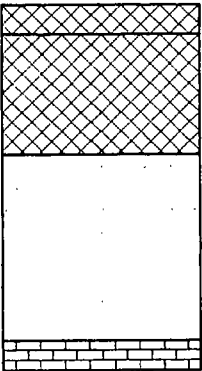
Aspinwall & company		TRIAL PIT LOG		TP66	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5060, 2712	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		
Legend Depth (m) 0.0 0.1 m 0.2 m 0.5 1.0 1.3 m 1.4 m 1.5 m 2.0 2.5 3.0 3.5 DESCRIPTION Loose brown silty sand with roots Concrete slab Firm to loose mottled red-grey-brown silty sandy clay inter mixed with sandy gravel, with some gravel to cobble size subangular limestone and occasional pieces of steel, brick, breeze block, concrete, wood and asphalt Firm black organic rich silty clay - much vegetation traces Soft to firm beige-orange silty sandy clay with much sub-rounded limestone cobbles Top of weathered limestone bedrock END OF TRIAL PIT 1.5 m					
Scale: 1:25					
Remarks:				Water: None	
				Stability: Stable	
				Time trench open: 20 mins	
Sample	TP66	TP66	TP66		
Depth	0.6 m	1.4 m	1.45 m		
Type	SOIL	SOIL	SOIL		
Test					
					Logged by: ABW
					Date: 23.04.97

Aspinwall&company		TRIAL PIT LOG		TP67		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. _{approx.}		Grid Ref.: 5068, 2731		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Dry, sunny			
Depth below ground level (m)	Legend		Depth (m)	DESCRIPTION		
			0.0	Loose grey-brown silty sand with roots		
			0.1 m	Loose beige gravelly sandy silt with cobbles of subangular limestone		
			0.3 m			
			0.5	Firm beige-brown silty clay with gravel to cobble size subangular limestone and some traces of vegetation		
			0.8 m			
			1.0	Firm mottled red-grey-brown sandy clay with subangular gravel to cobble size limestone, some traces of shell and vegetation		
			1.4 m			
			1.5	Top of weathered limestone bedrock		
				END OF TRIAL PIT 1.4 m		
		2.0				
		2.5				
		3.0				
		3.5				
Scale: 1:25						
Remarks:				Water: None		
				Stability: Stable		
				Time trench open: 20 mins		
Sample	TP67	TP67				Logged by: ABW
Depth	0.35 m	1.3 m				
Type	SOIL	SOIL				Date: 23.04.97
Test						

Aspinwall & company		TRIAL PIT LOG		TP68															
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1															
		Ground Level - m A.O.D. _{approx.}		Grid Ref.: 5075, 2730															
Project: RAF Upper Heyford			Excavation Method: JCB																
Location: Upper Heyford			Weather: Dry, cloudy																
Legend <table border="0"> <thead> <tr> <th style="text-align: left;">Depth (m)</th> <th style="text-align: left;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>Grass over medium brown silty clayey sand with many fine roots and some fine gravel to cobbles of subangular limestone</td> </tr> <tr> <td>0.2 m</td> <td></td> </tr> <tr> <td>0.5</td> <td>Soft light brown clayey and sandy silt with much fine gravel to cobbles of subangular limestone</td> </tr> <tr> <td>0.8 m</td> <td>Soft to firm orange/brown mottled grey silty sandy clay</td> </tr> <tr> <td>1.0 m</td> <td>White subangular cobbles to boulders of limestone in a brown clayey silty sandy matrix</td> </tr> <tr> <td>1.1 m</td> <td></td> </tr> </tbody> </table> END OF TRIAL PIT 1.1 m						Depth (m)	DESCRIPTION	0.0	Grass over medium brown silty clayey sand with many fine roots and some fine gravel to cobbles of subangular limestone	0.2 m		0.5	Soft light brown clayey and sandy silt with much fine gravel to cobbles of subangular limestone	0.8 m	Soft to firm orange/brown mottled grey silty sandy clay	1.0 m	White subangular cobbles to boulders of limestone in a brown clayey silty sandy matrix	1.1 m	
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1.1 m																			
Scale: 1:25																			
Remarks:					Water: None														
					Stability: Good														
					Time trench open: 30 mins														
Sample	TP68	TP68																	
Depth	0.1 m	0.8 m																	
Type	SOIL	SOIL																	
Test																			
					Logged by: HHU														
					Date: 23.04.97														

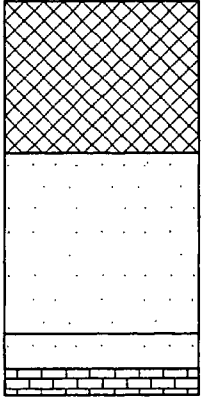
Aspinwall&company		TRIAL PIT LOG		TP69																	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5080, 2722																	
Project: RAF Upper Heyford			Excavation Method: JCB																		
Location: Upper Heyford			Weather: Dry, cloudy																		
Legend <table border="1"> <thead> <tr> <th>Depth (m)</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>Grass over medium brown silty, clayey sand with many fine roots</td> </tr> <tr> <td>0.2 m</td> <td></td> </tr> <tr> <td>0.5</td> <td>Soft red brown clayey sandy silt with a little fine to coarse gravel of subangular limestone</td> </tr> <tr> <td>0.6 m</td> <td></td> </tr> <tr> <td>1.0</td> <td>Soft light brown clayey and sandy silt with much fine gravel to cobbles of limestone</td> </tr> <tr> <td>1.0 m</td> <td></td> </tr> <tr> <td>1.1 m</td> <td>White subangular cobbles to boulders of limestone in a brown clayey silty sandy matrix</td> </tr> </tbody> </table>						Depth (m)	DESCRIPTION	0.0	Grass over medium brown silty, clayey sand with many fine roots	0.2 m		0.5	Soft red brown clayey sandy silt with a little fine to coarse gravel of subangular limestone	0.6 m		1.0	Soft light brown clayey and sandy silt with much fine gravel to cobbles of limestone	1.0 m		1.1 m	White subangular cobbles to boulders of limestone in a brown clayey silty sandy matrix
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END OF TRIAL PIT 1.1 m																					
Scale: 1:25																					
Remarks:					Water: None																
					Stability: Fair																
					Time trench open: 30 mins																
Sample	TP69	TP69				Logged by: HHU															
Depth	0.4 m	0.95 m																			
Type	SOIL	SOIL																			
Test						Date: 23.04.97															

Aspinwall & company		TRIAL PIT LOG		TP70	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5073, 2718	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, cloudy		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.1 m	Grass over medium brown silty clayey sand with many fine roots, some fine to coarse gravel of flint and occasional fragments of metal
		0.5 m	Soft red brown clayey sandy silt with some fine gravel to cobbles of subangular limestone occasional fine to coarse gravel sized fragments of brick, flint
			Soft light brown clayey and sandy silt with much fine gravel to cobbles of subangular limestone
		1.1 m	White subangular cobbles of boulders of limestone in a brown clayey silty sandy matrix
		1.2 m	
END OF TRIAL PIT 1.2 m			

Scale: 1:25

Remarks:						Water: None	
						Stability: Fair	
						Time trench open: 30 mins	
Sample	TP70	TP70					Logged by: HHU
Depth	0.2 m	1.0 m					
Type	SOIL	SOIL					
Test							Date: 23.04.97

Aspinwall & company		TRIAL PIT LOG		TP71	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5075, 2715	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, cloudy		
Legend  Depth (m) 0.0 0.5 1.0 1.1 1.2 1.3 1.5 2.0 2.5 3.0 3.5 DESCRIPTION Grass over medium brown clayey silty sand with much fine gravel to cobbles of subangular limestone, fine roots, a little fine to coarse gravel sized ash and clinker Soft red/brown clayey sandy silt with a little coarse gravel of subangular limestone Soft light brown clayey sandy silt with much fine gravel to cobbles of subangular limestone White subangular cobbles to boulders of limestone in a brown clayey silty sandy matrix END OF TRIAL PIT 1.3 m					
Scale: 1:25					
Remarks:					Water: None
					Stability: Good
					Time trench open: 30 mins
Sample	TP71	TP71	TP71		Logged by: HHU
Depth	0.1 m	0.4 m	1.1 m		
Type	SOIL	SOIL	SOIL		Date: 23.04.97
Test					

Aspinwall & company		TRIAL PIT LOG		TP72	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5085, 2720	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Loose medium brown gravelly silty sand
0.5			Loose brown-red clayey silt with some sand and gravel to cobble size subangular limestone
1.0		0.9 m	Soft red-brown silty clay with occasional subangular limestone cobbles
1.5		1.7 m	Top of weathered limestone bedrock
2.0		END OF TRIAL PIT 1.7 m	
2.5			
3.0			
3.5			

Scale: 1:25

Remarks:							Water: None	
							Stability: Stable	
							Time trench open: 20-30 mins	
Sample	TP72	TP72						Logged by: ABW
Depth	0.35 m	1.2 m						
Type	SOIL	SOIL						Date: 23.04.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP73	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5091, 2712	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		

	Legend	Depth (m)	DESCRIPTION
0.0			Loose red-brown silty gravelly sand with gravel to cobble sized subrounded limestone
0.5		0.5 m	
1.0		1.2 m	Loose red-brown slightly clayey sandy silt with some gravel to cobble sized subangular limestone and occasional bitumen covered cobbles
1.5			Soft beige-brown very sandy clay with gravel to cobble size subrounded limestone, and some shell fragments
2.0		2.0 m	Top of weathered limestone bedrock
2.5		END OF TRIAL PIT 2.0 m	
3.0			
3.5			

Scale: 1:25

Remarks:							Water: None	
							Stability: Stable	
							Time trench open: 20-30 mins	

Sample	TP73	TP73	TP73					Logged by: ABW
Depth	0.3 m	0.6 m	1.7 m					
Type	SOIL	SOIL	SOIL					Date: 23.04.97
Test								

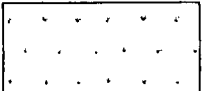
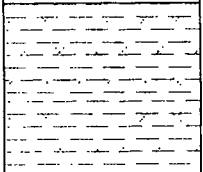
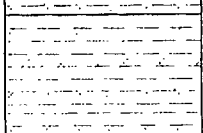
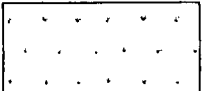
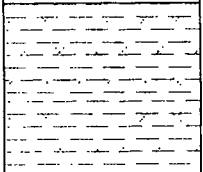
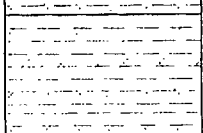
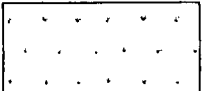
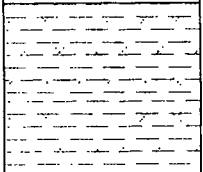
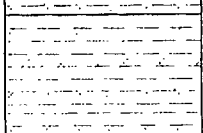
Aspinwall & company		TRIAL PIT LOG		TP74																
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																
		Ground Level - m A.O.D. approx.		Grid Ref.: 5081, 2711																
Project: RAF Upper Heyford			Excavation Method: JCB																	
Location: Upper Heyford			Weather: Dry, sunny																	
Legend <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Depth (m)</th> <th style="width: 90%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>Loose brown silty sand with roots</td> </tr> <tr> <td>0.1 m</td> <td rowspan="2">Loose beige-red sandy silt with gravel to cobble size sub-angular limestone</td> </tr> <tr> <td>0.3 m</td> </tr> <tr> <td>0.5</td> <td rowspan="3">Firm red-brown silty clay with some gravel to cobble size subrounded limestone and traces of vegetation</td> </tr> <tr> <td>1.0</td> </tr> <tr> <td>1.4 m</td> </tr> <tr> <td>1.5</td> <td>Top of weathered limestone bedrock</td> </tr> <tr> <td colspan="2" style="text-align: center;">END OF TRIAL PIT 1.4 m</td> </tr> </tbody> </table>						Depth (m)	DESCRIPTION	0.0	Loose brown silty sand with roots	0.1 m	Loose beige-red sandy silt with gravel to cobble size sub-angular limestone	0.3 m	0.5	Firm red-brown silty clay with some gravel to cobble size subrounded limestone and traces of vegetation	1.0	1.4 m	1.5	Top of weathered limestone bedrock	END OF TRIAL PIT 1.4 m	
Depth (m)	DESCRIPTION																			
0.0	Loose brown silty sand with roots																			
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1.4 m																				
1.5	Top of weathered limestone bedrock																			
END OF TRIAL PIT 1.4 m																				
Scale: 1:25																				
Remarks:					Water: None															
					Stability: Stable															
					Time trench open: 20 mins															
Sample	TP74	TP74																		
Depth	0.5 m	1.3 m																		
Type	SOIL	SOIL																		
Test																				
					Logged by: ABW															
					Date: 23.04.97															

Aspinwall & company			TRIAL PIT LOG			TP75		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5084, 2710		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Dry sunny		

	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Loose brown silty sand with roots
0.5			
1.0			
1.3 m			Loose brown-orange sandy silt with some clay and some gravel to cobble size subangular limestone
1.5			
1.9 m			Soft orange-beige mottled silty clay with some gravel to cobble size subangular limestone. Some purple mottling and hydrocarbon odour above layer of soft blue-black silty clay with limestone cobbles as above. Very strong hydrocarbon odour to base
2.0		2.0 m	Soft beige/grey/blue mottled silty clay matrix supporting gravel to boulder size subangular limestone with black staining Weathered top of limestone bedrock
2.5			
3.0			
3.5			
END OF TRIAL PIT 2.0 m			

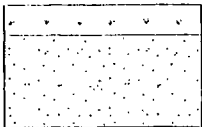
Scale: 1:25

Remarks: Strong hydrocarbon odour from 1.4 m to top of weathered bedrock and end of trial pit.							Water: None	
							Stability: Stable	
							Time trench open: 25 mins	
Sample	TP75	TP75	TP75					Logged by: ABW
Depth	0.5 m	1.4 m	1.9 m					
Type	SOIL	SOIL	SOIL					Date: 23.04.97
Test								

Aspinwall & company			TRIAL PIT LOG			TP76																							
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1																							
			Ground Level - m A.O.D. _{approx.}			Grid Ref.: 5081, 2708																							
Project: RAF Upper Heyford						Excavation Method: JCB																							
Location: Upper Heyford						Weather: Dry, sunny																							
<table border="0"> <tr> <td></td> <td>Legend</td> <td>Depth (m)</td> <td>DESCRIPTION</td> </tr> <tr> <td rowspan="4"> Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 </td> <td></td> <td>0.3 m</td> <td>Loose brown sandy silt with roots</td> </tr> <tr> <td></td> <td>0.9 m</td> <td>Soft to firm red-brown silty clay with gravel to cobble size subangular limestone</td> </tr> <tr> <td></td> <td>1.3 m</td> <td>Soft to firm beige-grey-orange slightly sandy silty clay with traces of vegetation and shell and some cobble sized subrounded limestone</td> </tr> <tr> <td></td> <td></td> <td>Top of weathered bedrock</td> </tr> <tr> <td colspan="4" style="text-align: center;">END OF TRIAL PIT 1.3 m</td> </tr> </table>										Legend	Depth (m)	DESCRIPTION	Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.3 m	Loose brown sandy silt with roots		0.9 m	Soft to firm red-brown silty clay with gravel to cobble size subangular limestone		1.3 m	Soft to firm beige-grey-orange slightly sandy silty clay with traces of vegetation and shell and some cobble sized subrounded limestone			Top of weathered bedrock	END OF TRIAL PIT 1.3 m			
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END OF TRIAL PIT 1.3 m																													
Scale: 1:25																													
Remarks:						Water: None																							
						Stability: Stable																							
						Time trench open: 20 mins																							
Sample	TP76	TP76						Logged by: ABW																					
Depth	0.45 m	1.25 m																											
Type	SOIL	SOIL						Date: 23.04.97																					
Test																													

Aspinwall & company		TRIAL PIT LOG		TP77																		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																		
		Ground Level - m A.O.D. approx.		Grid Ref.: 5118, 2738																		
Project: RAF Upper Heyford			Excavation Method: JCB																			
Location: Upper Heyford			Weather: Drizzle																			
<table border="0"> <tr> <td style="text-align: center;">Legend</td> <td style="text-align: center;">Depth (m)</td> <td style="text-align: center;">DESCRIPTION</td> </tr> <tr> <td rowspan="5"> </td> <td>0.0</td> <td>Grass over medium brown silty clayey sand with many fine roots and some fine gravel to cobbles of subangular limestone</td> </tr> <tr> <td>0.3 m</td> <td>Loose red brown clayey and silty sand</td> </tr> <tr> <td>0.9 m</td> <td>Soft to firm orange brown mottled grey silty sandy clay with some fine gravel to cobbles of limestone</td> </tr> <tr> <td>1.0 m</td> <td>Soft light brown clayey sandy silt with a little fine gravel to cobbles of limestone</td> </tr> <tr> <td>1.5 m</td> <td>White subangular cobbles to boulders of limestone in a brown clayey silty sandy matrix</td> </tr> <tr> <td></td> <td>1.6 m</td> <td></td> </tr> </table>						Legend	Depth (m)	DESCRIPTION		0.0	Grass over medium brown silty clayey sand with many fine roots and some fine gravel to cobbles of subangular limestone	0.3 m	Loose red brown clayey and silty sand	0.9 m	Soft to firm orange brown mottled grey silty sandy clay with some fine gravel to cobbles of limestone	1.0 m	Soft light brown clayey sandy silt with a little fine gravel to cobbles of limestone	1.5 m	White subangular cobbles to boulders of limestone in a brown clayey silty sandy matrix		1.6 m	
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	1.6 m																					
END OF TRIAL PIT 1.6 m																						
Scale: 1:25																						
Remarks:					Water: None																	
					Stability: Good																	
					Time trench open: 30 mins																	
Sample	TP77	TP77																				
Depth	0.5 m	1.5 m																				
Type	SOIL	SOIL																				
Test																						
					Logged by: HHU																	
					Date: 23.04.97																	

Aspinwall & company		TRIAL PIT LOG		TP78	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5093, 2731	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast, breezy		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.1 m	Loose red-brown silty fine sand with roots
		0.4 m	Loose red-brown silty fine sand with gravel to cobble sized subangular limestone
			Electric cable tile covers, abandoned trial pit.
		END OF TRIAL PIT 0.4 m	

Scale: 1:25

Remarks: Trial pit 78 abandoned at 0.4 m, 78A completed directly adjacent.						Water: None	
						Stability: Stable	
						Time trench open: 10 mins	
Sample	TP78						Logged by: ABW
Depth	0.2 m						
Type	SOIL						
Test							Date: 23.04.97

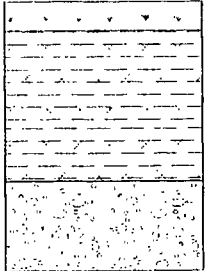
Aspinwall & company		TRIAL PIT LOG		TP78A	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5092, 2730	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Loose red-brown silty fine sand with roots
0.5			Loose red-orange-brown silty fine sand with many gravel to cobble sized subangular limestone
		0.75 m	Loose red-orange sand with one electric cable tile at 0.6 m
1.0			Stiff beige-orange-brown silty clay with some coarse sand, vegetation traces and with gravel to cobble size subangular limestone
1.5			Soft to firm mottled orange-grey-brown sandy clay with much fine gravel to cobble sized subrounded to subangular limestone
1.6		1.6 m	
1.7		1.7 m	End of trial pit - steel pipe beginning to be undermine
END OF TRIAL PIT 1.7 m			
2.0			
2.5			
3.0			
3.5			

Scale: 1:25

Remarks: 0.95 m steel large diameter pipe runs along western edge of trial pit.						Water: None	
						Stability: Stable	
						Time trench open: 20 mins	
Sample	TP78A	TP78A	TP78A				Logged by: ABW
Depth	0.35 m	0.9 m	1.7 m				
Type	SOIL	SOIL	SOIL				Date: 23.04.97
Test							

Aspinwall & company		TRIAL PIT LOG		TP79	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 4998, 2650	
Project: RAF Upper Heyford				Excavation Method: JCB	
Location: Upper Heyford				Weather: Dry, overcast	

	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Loose mid brown silty sand with roots
0.5			Soft mid brown very silty clay with occasional subrounded limestone gravel
		0.6 m	Loose angular cobble to boulders of limestone with a soft beige-brown silty clay matrix
		0.9 m	Top of bedrock
END OF TRIAL PIT 0.9 m			

Depth below ground level (m)

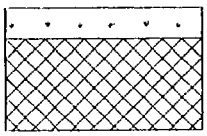
1.0
1.5
2.0
2.5
3.0
3.5

Scale: 1:25

Remarks:							Water: None	
							Stability: Stable	
							Time trench open: 20 mins	
Sample	TP79	TP79					Logged by: ABW	
Depth	0.5 m	0.9 m						
Type	SOIL	SOIL					Date: 22.04.97	
Test								

Aspinwall & company		TRIAL PIT LOG		TP80																		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																		
		Ground Level - m A.O.D. approx.		Grid Ref.: 4993, 2650																		
Project: RAF Upper Heyford			Excavation Method: JCB																			
Location: Upper Heyford			Weather: Dry, overcast																			
<table border="1"> <thead> <tr> <th>Legend</th> <th>Depth (m)</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td rowspan="5"> </td> <td>0.0</td> <td>Grass over medium brown clayey silty sand with some fine to coarse gravel of limestone and occasional fine to coarse ash/clinker</td> </tr> <tr> <td>0.3 m</td> <td></td> </tr> <tr> <td>0.5 m</td> <td>Soft to firm medium brown sandy silty clay with some fine to coarse gravel of limestone</td> </tr> <tr> <td>0.9 m</td> <td>Soft to firm brown mottled grey silty sandy clay with a little fine to coarse gravel sized shell and limestone</td> </tr> <tr> <td>1.2 m</td> <td>Soft grey/brown sandy silt with some fine to coarse gravel sized limestone and shell</td> </tr> <tr> <td colspan="3" style="text-align: center;">END OF TRIAL PIT 1.2 m</td> </tr> </tbody> </table>						Legend	Depth (m)	DESCRIPTION		0.0	Grass over medium brown clayey silty sand with some fine to coarse gravel of limestone and occasional fine to coarse ash/clinker	0.3 m		0.5 m	Soft to firm medium brown sandy silty clay with some fine to coarse gravel of limestone	0.9 m	Soft to firm brown mottled grey silty sandy clay with a little fine to coarse gravel sized shell and limestone	1.2 m	Soft grey/brown sandy silt with some fine to coarse gravel sized limestone and shell	END OF TRIAL PIT 1.2 m		
Legend	Depth (m)	DESCRIPTION																				
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	1.2 m	Soft grey/brown sandy silt with some fine to coarse gravel sized limestone and shell																				
END OF TRIAL PIT 1.2 m																						
Scale: 1:25																						
Remarks:				Water: None																		
				Stability: Fair																		
				Time trench open: 30 mins																		
Sample	TP80	TP80				Logged by: HHU																
Depth	0.1 m	0.55 m																				
Type	SOIL	SOIL																				
Test						Date: 22.04.97																

Aspinwall & company		TRIAL PIT LOG		TP81	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5121, 2730	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		

Legend	Depth (m)	DESCRIPTION
	0.0	
	0.1 m	Loose brown-grey silty sand with roots
	0.4 m	Firm brown-red silty clay with gravel to cobble size sub-rounded to subangular limestone with occasional roots
		Trial pit abandoned at line of electric cable tiles
END OF TRIAL PIT 0.4 m		

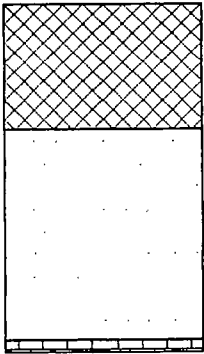
Depth below ground level (m)



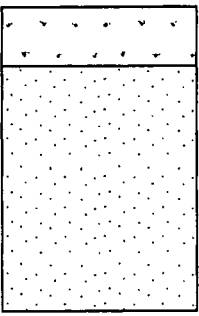
Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: 20 mins	
Sample	TP81							Logged by: ABW
Depth	0.35 m							
Type	SOIL							
Test								Date: 24.04.97

Aspinwall & company		TRIAL PIT LOG		TP81A																					
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																					
		Ground Level - m A.O.D. approx.		Grid Ref.: 5121, 2730																					
Project: RAF Upper Heyford			Excavation Method: JCB																						
Location: Upper Heyford			Weather: Dry, overcast																						
<table border="1"> <thead> <tr> <th>Legend</th> <th>Depth (m)</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td rowspan="5"> </td> <td>0.0</td> <td></td> </tr> <tr> <td>0.1</td> <td>Loose brown-grey silty sand with roots</td> </tr> <tr> <td>0.4</td> <td>Firm brown-red silty clay with gravel to cobble size subrounded to subangular limestone</td> </tr> <tr> <td>1.0</td> <td>Stiff orange-brown silty clay</td> </tr> <tr> <td>1.8</td> <td>Loose beige-brown gravelly sandy silt with subangular cobbles of limestone and occasional small (1 cm diameter) clay lenses</td> </tr> <tr> <td></td> <td></td> <td>End of trial pit at top of weathered bedrock</td> </tr> <tr> <td colspan="3">END OF TRIAL PIT 1.8 m</td> </tr> </tbody> </table>						Legend	Depth (m)	DESCRIPTION		0.0		0.1	Loose brown-grey silty sand with roots	0.4	Firm brown-red silty clay with gravel to cobble size subrounded to subangular limestone	1.0	Stiff orange-brown silty clay	1.8	Loose beige-brown gravelly sandy silt with subangular cobbles of limestone and occasional small (1 cm diameter) clay lenses			End of trial pit at top of weathered bedrock	END OF TRIAL PIT 1.8 m		
Legend	Depth (m)	DESCRIPTION																							
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		End of trial pit at top of weathered bedrock																							
END OF TRIAL PIT 1.8 m																									
Scale: 1:25																									
Remarks:				Water: None																					
				Stability: Stable																					
				Time trench open: 20 mins																					
Sample	TP81A	TP81A					Logged by: ABW																		
Depth	0.55 m	1.4 m																							
Type	SOIL	SOIL					Date: 24.04.97																		
Test																									

Aspinwall & company		TRIAL PIT LOG		TP82		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. _{approx.}		Grid Ref.: 5138, 2738		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Dry, cloudy			
Legend  Depth (m) 0.0 0.4 m 0.5 1.0 1.1 m 1.15 m 1.5 2.0 2.5 3.0 3.5 DESCRIPTION Grass over medium brown silty clayey sand with a little fine gravel to cobble of subangular limestone and occasional fine to coarse gravel sized fragments of plastic, ash, brick Soft orange/brown slightly clayey sandy silt with much fine gravel to cobbles of subangular limestone White subangular cobbles to boulders of limestone in a brown clayey silty sandy matrix END OF TRIAL PIT 1.15 m						
Scale: 1:25						
Remarks:				Water: None		
				Stability: Fair		
				Time trench open: 30 mins		
Sample	TP82	TP82				Logged by: HHU
Depth	0.3 m	0.8 m				
Type	SOIL	SOIL				Date: 23.04.97
Test						

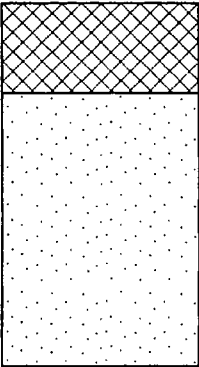
Aspinwall & company		TRIAL PIT LOG		TP83	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5140, 2735	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, cloudy		

	Legend	Depth (m)	DESCRIPTION
0.0		0.2 m	Grass over medium brown silty clayey sand with many fine roots and much fine to coarse gravel of subangular limestone
0.5		1.0 m	Loose orange brown silty clayey sand and fine gravel to cobbles of white subangular limestone
1.0		END OF TRIAL PIT 1.0 m	
1.5			
2.0			
2.5			
3.0			
3.5			

Scale: 1:25

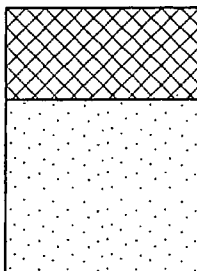
Remarks:							Water: None	
							Stability: Fair	
							Time trench open: 30 mins	
Sample	TP83	TP83						Logged by: HHU
Depth	0.1 m	0.9 m						
Type	SOIL	SOIL						Date: 23.04.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP84	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5143, 2732	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

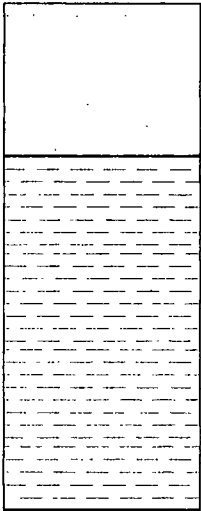
	Legend	Depth (m)	DESCRIPTION
0.0		0.3 m	Grass over medium brown silty clayey sand with a little fine gravel to cobbles of subangular limestone, many roots, and occasional fine gravel sized ash and flint
0.5		1.2 m	Loose orange brown silty and clayey sand and fine gravel to cobbles of white subangular limestone
1.0			
1.5			END OF TRIAL PIT 1.2 m
2.0			
2.5			
3.0			
3.5			

Scale: 1:25

Remarks:						Water: None	
						Stability: Fair	
						Time trench open: 30 mins	
Sample	TP84	TP84					Logged by: HHU
Depth	0.2 m	0.8 m					
Type	SOIL	SOIL					Date: 23.04.97
Test							

Aspinwall & company		TRIAL PIT LOG		TP85		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. approx.		Grid Ref.: 5145, 2735		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Dry, sunny			
Legend  Depth (m) 0.0 0.3 m 0.5 0.9 m 1.0 1.5 2.0 2.5 3.0 3.5 DESCRIPTION Grass over medium brown silty clayey sand with many roots and much fine to coarse gravel of subangular limestone and occasional fine gravel sized ash Loose orange brown silty clayey sand and fine gravel to cobble sized white subangular limestone END OF TRIAL PIT 0.9 m						
Scale: 1:25						
Remarks:				Water: None		
				Stability: Fair		
				Time trench open: 30 mins		
Sample	TP85	TP85				Logged by: HHU
Depth	0.1 m	0.7 m				
Type	SOIL	SOIL				Date: 23.04.97
Test						

Aspinwall & company		TRIAL PIT LOG		TP86	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5160, 2759	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, windy, overcast		

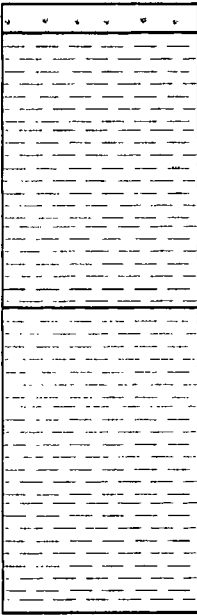
	Legend	Depth (m)	DESCRIPTION
0.0			Loose red-brown gravelly sandy silt with roots and occasional well rounded cobbles of limestone and occasional flint
0.5		0.5 m	
1.0			Soft beige-red-brown matrix of silty sandy clay with gravel to cobble sized subangular limestone
1.5			End of trial pit at top of weathered bedrock
1.7		1.7 m	
END OF TRIAL PIT 1.7 m			
2.0			
2.5			
3.0			
3.5			

Scale: 1:25

Remarks:						Water: None	
						Stability: Stable	
						Time trench open: 20 mins	
Sample	TP86	TP86					Logged by: ABW
Depth	0.45 m	1.2 m					
Type	SOIL	SOIL					
Test							Date: 24.04.97

Aspinwall&company		TRIAL PIT LOG		TP87																			
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																			
		Ground Level - m A.O.D. approx.		Grid Ref.: 5187, 2755																			
Project: RAF Upper Heyford			Excavation Method: JCB																				
Location: Upper Heyford			Weather: Dry, sunny																				
Legend <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%; text-align: center;">Depth (m)</th> <th style="text-align: center;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0.0</td> <td></td> </tr> <tr> <td style="text-align: center;">0.1 m</td> <td>Loose light brown-grey gravelly sandy silt</td> </tr> <tr> <td style="text-align: center;">0.2 m</td> <td>Layer of dense grey concrete</td> </tr> <tr> <td style="text-align: center;">0.35 m</td> <td>Loose biege gravelly cobbley sandy silt with fragments of wood and textile</td> </tr> <tr> <td style="text-align: center;">1.0 m</td> <td>Soft-firm dark grey-red-brown silty clay with vegetation and shell fragments and occasional flint</td> </tr> <tr> <td style="text-align: center;">1.9 m</td> <td>Soft orange-brown sandy silty clay with subangular cobble-gravel size limestone</td> </tr> <tr> <td colspan="2" style="text-align: center;">End of trial pit at top of weathered bedrock</td> </tr> <tr> <td colspan="2" style="text-align: center;">END OF TRIAL PIT 1.9 m</td> </tr> </tbody> </table>						Depth (m)	DESCRIPTION	0.0		0.1 m	Loose light brown-grey gravelly sandy silt	0.2 m	Layer of dense grey concrete	0.35 m	Loose biege gravelly cobbley sandy silt with fragments of wood and textile	1.0 m	Soft-firm dark grey-red-brown silty clay with vegetation and shell fragments and occasional flint	1.9 m	Soft orange-brown sandy silty clay with subangular cobble-gravel size limestone	End of trial pit at top of weathered bedrock		END OF TRIAL PIT 1.9 m	
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END OF TRIAL PIT 1.9 m																							
Scale: 1:25																							
Remarks:					Water: None																		
					Stability: Stable																		
					Time trench open: 20 mins																		
Sample	TP87	TP87																					
Depth	0.4 m	1.55 m																					
Type	SOIL	SOIL																					
Test																							
					Logged by: ABW																		
					Date: 24.04.97																		

Aspinwall & company		TRIAL PIT LOG		TP88	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5171, 2708	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny, windy		

	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Loose red-brown sandy silt with roots
0.5			Soft-firm red-brown slightly sandy silty clay with some gravel and a few cobbles of subangular limestone
1.0		1.0 m	
1.5			Soft orange-brown silty clay with some gravel sized subangular limestone becoming more beige-brown with depth, and including cobble sized subangular limestone with depth
2.0		2.0 m	End of trial pit at top of weathered bedrock
2.5		END OF TRIAL PIT 2.0 m	
3.0			
3.5			

Remarks:

Scale: 1:25

Remarks:							Water: None	
							Stability: Stable	
							Time trench open: 20 mins	
Sample	TP88	TP88					Logged by: ABW	
Depth	0.4 m	1.4 m						
Type	SOIL	SOIL					Date: 24.04.97	
Test								

Aspinwall & company		TRIAL PIT LOG		TP89	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5155, 2725	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
0.0			Grass over medium brown silty clayey sand with some fine gravel to cobbles of limestone, many roots, occasional fine to coarse gravel sized ash and clinker
0.5		0.45 m	
1.0			
1.5			Soft light brown clayey sandy silt and fine gravel to boulders of white subangular limestone
2.0		2.0 m	
END OF TRIAL PIT 2.0 m			
2.5			
3.0			
3.5			

Depth below ground level (m)

Scale: 1:25

Remarks:							Water: None	
							Stability: Fair	
							Time trench open: 30 mins	
Sample	TP89	TP89						Logged by: HHU
Depth	0.4 m	2.0 m						
Type	SOIL	SOIL						
Test								Date: 23.04.97

Aspinwall & company		TRIAL PIT LOG		TP90	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5198, 2647	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Overcast, dry, windy		

Legend	Depth (m)	DESCRIPTION
	0.0	
	0.2 m	Soft brown sandy clayey silt with a little fine to coarse gravel of limestone. Fine roots present
	0.4 m	Loose light brown sand with much fine gravel to cobbles of limestone
	1.0 m	Soft red/brown sandy clayey silt with some fine gravel to cobbles of limestone.
	1.1 m	Soft dark brown clay with a little fine to coarse gravel of limestone
END OF TRIAL PIT 1.1 m		

Scale: 1:25

Remarks: Wire cable at 0.9 m.						Water: None	
						Stability: Moderate	
						Time trench open: 30 mins	
Sample	TP90	TP90					Logged by: ERM
Depth	0.4 m	1.1 m					
Type	SOIL	SOIL					Date: 29.04.97
Test							

Aspinwall & company		TRIAL PIT LOG		TP91	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5205, 2638	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		

	Legend	Depth (m)	DESCRIPTION
0.0		0.3 m	Grass over medium brown silty, clayey sand with many fine roots and some fine to coarse gravel of flint and limestone
0.5		0.9 m	Soft light brown sandy silt and fine gravel to cobble sized subangular limestone and occasional cobbles sized ash and clinker
1.0			
1.5			
2.0			
2.2 m		2.2 m	Soft wet dark grey/black sandy silt with some fine gravel to cobbles of subangular limestone
2.35 m		2.35 m	Soft grey sandy silt with a little fine to coarse gravel of subangular limestone
END OF TRIAL PIT 2.35 m			
Scale: 1:25			

Remarks: Cable severed at 0.1 m. Petroleum odour from 0.6 m. Electric cable at 2.35 m.						Water: Encountered at 1.8 m	
						Stability: Good	
						Time trench open: 30 mins	
Sample	TP91	TP91	TP91	TP91	TP91W		Logged by: HHU
Depth	0.1 m	0.75 m	1.2 m	2.3 m	1.8 m		
Type	SOIL	SOIL	SOIL	SOIL	WATER		Date: 29.04.97
Test							

Aspinwall & company		TRIAL PIT LOG		TP92	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5220, 2620	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Overcast, windy, dry		

	Legend	Depth (m)	DESCRIPTION
0.0		0.2 m	Grass over soft brown sandy silt with some fine to coarse gravel of limestone. Fine roots present
0.5		0.6 m	Soft brown clayey silt with some fine to coarse gravel of limestone
1.0		1.4 m	Soft brown clayey silt with many subangular cobbles of limestone
END OF TRIAL PIT 1.4 m			
1.5			
2.0			
2.5			
3.0			
3.5			

Scale: 1:25

Remarks:							Water: None	
							Stability: Moderate	
							Time trench open: 30 mins	
Sample	TP92	TP92						Logged by: ERM
Depth	0.4 m	1.4 m						
Type	SOIL	SOIL						
Test								Date: 28.04.97

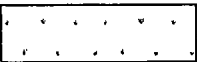
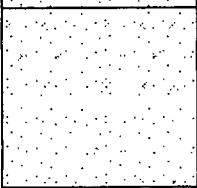
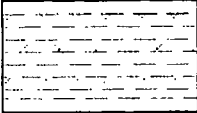
Aspinwall&company		TRIAL PIT LOG		TP93	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5220, 2612	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Overcast, dry, windy		

Legend		Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.2 m	Grass over soft brown sandy silt with much fine to coarse gravel of limestone. Fine roots present
			Loose sand and fine gravel to subangular boulders of limestone.
		0.9 m	Black clayey silt with some cobbles of limestone. Strong hydrocarbon smell
		0.95 m	
		1.1 m	Soft brown clayey silt with many cobbles of limestone
		1.6 m	Soft brown grey clayey silt with many fine gravel to cobbles sized limestone with the few small pockets of clay
END OF TRIAL PIT 1.6 m			

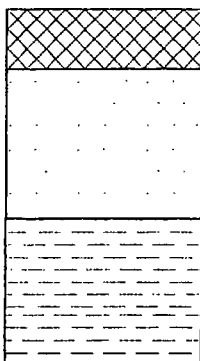
Remarks: Steel wire cable found at 0.25 m. Leached iron stains surrounding soil. Very strong hydrocarbon odour.						Water: None	
						Stability: Poor	
						Time trench open: 30 mins	
Sample	TP93	TP93	TP93				Logged by: ERM
Depth	0.35 m	0.9 m	1.6 m				
Type	SOIL	SOIL	SOIL				
Test							Date: 29.04.97

Scale: 1:25

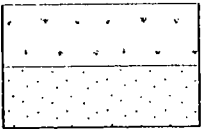
Aspinwall & company		TRIAL PIT LOG		TP94	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5222, 2615	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Overcast, raining, windy		

Legend		Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.2 m	Grass over soft red/brown sandy silt. Fine roots present
		0.4 m	Soft brown sandy silt with some fine to coarse gravel of limestone and coal
		1.0 m	Soft brown sandy silt with much fine to coarse gravel of limestone and coal with some subangular boulders of limestone
		1.4 m	Soft brown clayey silt with much fine to coarse gravel of limestone and coal with some subangular boulders of limestone
	END OF TRIAL PIT 1.4 m		

Remarks:							Water: None	
							Stability: Moderate	
							Time trench open: 30 mins	
Sample	TP94	TP94						Logged by: ERM
Depth	0.4 m	1.4 m						
Type	SOIL	SOIL						Date: 28.04.97
Test								

Aspinwall&company		TRIAL PIT LOG		TP95		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. approx.		Grid Ref.: 5223, 2612		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Overcast, dry, windy			
Legend  Depth (m) 0.0 0.2 m 0.5 0.7 m 1.0 1.2 m 1.5 2.0 2.5 3.0 3.5 DESCRIPTION Grass over soft brown sandy silt with some fine to coarse gravel of limestone. A small pocket of orange sand, a brick and fine roots present Soft pale brown sandy silt and loose subangular cobbles and boulders of limestone Soft red/brown sandy clay with much fine gravel to cobbles of limestone plus occasional boulder END OF TRIAL PIT 1.2 m						
Scale: 1:25						
Remarks:				Water: None		
				Stability: Moderate		
				Time trench open: 30 mins		
Sample	TP95	TP95				Logged by: ERM
Depth	0.35 m	1.2 m				
Type	SOIL	SOIL				
Test						
Date: 29.04.97						

Aspinwall&company		TRIAL PIT LOG		TP96	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5225, 2620	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Overcast, windy, dry		

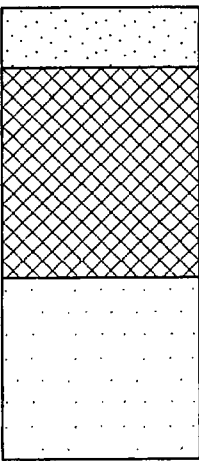
	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.0 m	Grass over soft brown sandy silt with a little fine to coarse gravel of limestone
		0.2 m	Loose light brown sand with much fine gravel to cobble
		0.4 m	sized subangular to angular limestone and sandstone
END OF TRIAL PIT 0.4 m			

Scale: 1:25

Remarks: Base obstructed at 0.4 m possibly concrete.							Water: None	
							Stability: Poor	
							Time trench open: 20 mins	

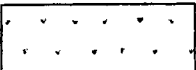
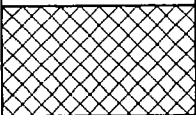
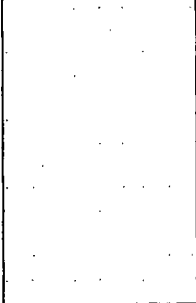
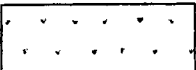
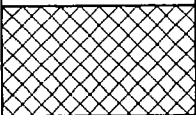
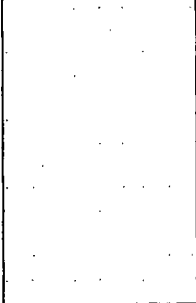
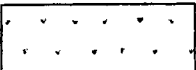
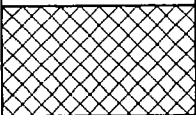
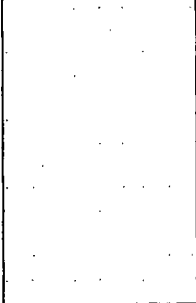
Sample	TP96							Logged by: ERM
Depth	0.4 m							
Type	SOIL							Date: 28.04.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP97	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5225, 2628	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		

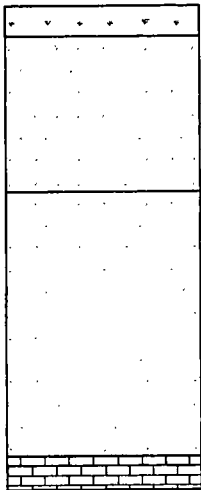
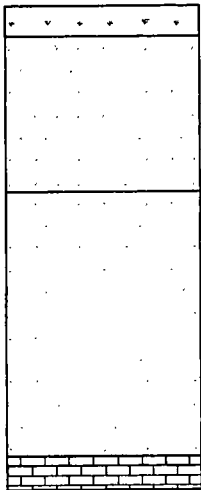
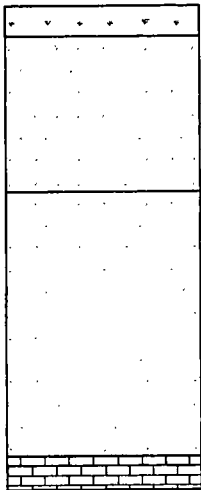
	Legend	Depth (m)	DESCRIPTION
0.0		0.2 m	Grass over loose medium clayey silty sand with many fine roots and a little fine to coarse gravel of flint
0.5		0.9 m	Soft red brown sandy and clayey silt with much fine gravel to cobble sized limestone, occasional fine to coarse gravel sized fragments of concrete, brick, flint, ash and clinker
1.0		1.5 m	Soft light brown orange very sandy clayey silt with fine gravel to cobbles of subangular limestone
1.5		END OF TRIAL PIT 1.5 m	
2.0			
2.5			
3.0			
3.5			

Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP97	TP97						Logged by: HHU
Depth	0.4 m	1.5 m						
Type	SOIL	SOIL						Date: 29.04.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP98																		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																		
		Ground Level - m A.O.D. approx.		Grid Ref.: 5231, 2628																		
Project: RAF Upper Heyford			Excavation Method: JCB																			
Location: Upper Heyford			Weather: Dry, overcast																			
<table border="0"> <tr> <td></td> <td>Legend</td> <td>Depth (m)</td> <td>DESCRIPTION</td> </tr> <tr> <td rowspan="4"> Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 </td> <td></td> <td>0.25 m</td> <td>Grass over soft red/brown sandy silt with many fine roots and a little fine to coarse gravel of limestone</td> </tr> <tr> <td></td> <td>0.6 m</td> <td>Soft to firm red/brown sandy silt with a little fine to coarse gravel of limestone and occasional fine to coarse gravel sized fragments of brick, glass, metal, ash and plastic</td> </tr> <tr> <td></td> <td>1.6 m</td> <td>Soft light brown/orange sandy silt with fine gravel to cobbles of white subangular limestone</td> </tr> <tr> <td colspan="3" style="text-align: center;">END OF TRIAL PIT 1.6 m</td> </tr> </table>							Legend	Depth (m)	DESCRIPTION	Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.25 m	Grass over soft red/brown sandy silt with many fine roots and a little fine to coarse gravel of limestone		0.6 m	Soft to firm red/brown sandy silt with a little fine to coarse gravel of limestone and occasional fine to coarse gravel sized fragments of brick, glass, metal, ash and plastic		1.6 m	Soft light brown/orange sandy silt with fine gravel to cobbles of white subangular limestone	END OF TRIAL PIT 1.6 m		
	Legend	Depth (m)	DESCRIPTION																			
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.25 m	Grass over soft red/brown sandy silt with many fine roots and a little fine to coarse gravel of limestone																			
		0.6 m	Soft to firm red/brown sandy silt with a little fine to coarse gravel of limestone and occasional fine to coarse gravel sized fragments of brick, glass, metal, ash and plastic																			
		1.6 m	Soft light brown/orange sandy silt with fine gravel to cobbles of white subangular limestone																			
	END OF TRIAL PIT 1.6 m																					
Scale: 1:25																						
Remarks:					Water: None																	
					Stability: Good																	
					Time trench open: 30 mins																	
Sample	TP98	TP98					Logged by: HHU															
Depth	0.4 m	1.6 m																				
Type	SOIL	SOIL					Date: 29.04.97															
Test																						

Aspinwall&company		TRIAL PIT LOG		TP99				
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1				
		Ground Level - m A.O.D. approx.		Grid Ref.: 5235, 2635				
Project: RAF Upper Heyford			Excavation Method: JCB					
Location: Upper Heyford			Weather: Dry, overcast					
<table border="0"> <tr> <td style="vertical-align: top;"> Legend </td> <td style="vertical-align: top;"> Depth (m) 0.0 0.2 m 0.5 0.8 m 1.0 m 1.5 1.9 m 2.0 2.5 3.0 3.5 </td> <td style="vertical-align: top;"> DESCRIPTION Grass over loose medium brown very silty sand with much fine roots and a little fine to coarse gravel of limestone Soft to firm red/brown slightly sandy silt with much fine gravel to cobble sized limestone and occasional fine to coarse gravel sized fragments of ash, brick, wood and glass Fine gravel to cobble sized white subangular limestone in an orange brown sandy and silty matrix Soft light brown slightly sandy silt and fine gravel to cobbles of white subangular limestone END OF TRIAL PIT 1.9 m </td> </tr> </table>						Legend 	Depth (m) 0.0 0.2 m 0.5 0.8 m 1.0 m 1.5 1.9 m 2.0 2.5 3.0 3.5	DESCRIPTION Grass over loose medium brown very silty sand with much fine roots and a little fine to coarse gravel of limestone Soft to firm red/brown slightly sandy silt with much fine gravel to cobble sized limestone and occasional fine to coarse gravel sized fragments of ash, brick, wood and glass Fine gravel to cobble sized white subangular limestone in an orange brown sandy and silty matrix Soft light brown slightly sandy silt and fine gravel to cobbles of white subangular limestone END OF TRIAL PIT 1.9 m
Legend 	Depth (m) 0.0 0.2 m 0.5 0.8 m 1.0 m 1.5 1.9 m 2.0 2.5 3.0 3.5	DESCRIPTION Grass over loose medium brown very silty sand with much fine roots and a little fine to coarse gravel of limestone Soft to firm red/brown slightly sandy silt with much fine gravel to cobble sized limestone and occasional fine to coarse gravel sized fragments of ash, brick, wood and glass Fine gravel to cobble sized white subangular limestone in an orange brown sandy and silty matrix Soft light brown slightly sandy silt and fine gravel to cobbles of white subangular limestone END OF TRIAL PIT 1.9 m						
Scale: 1:25								
Remarks:					Water: None			
					Stability: Good			
					Time trench open: 30 mins			
Sample	TP99	TP99					Logged by: HHU	
Depth	0.3 m	1.9 m						
Type	SOIL	SOIL					Date: 29.04.97	
Test								

Aspinwall&company		TRIAL PIT LOG		TP100																													
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																													
		Ground Level - m A.O.D. approx.		Grid Ref.: 5225, 2640																													
Project: RAF Upper Heyford			Excavation Method: JCB																														
Location: Upper Heyford			Weather: Windy, overcast, dry																														
<table><tr><td colspan="2">Legend</td><td colspan="2">Depth (m)</td><td colspan="2">DESCRIPTION</td></tr><tr><td rowspan="5"> Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 </td><td colspan="2" rowspan="5"></td><td>0.1 m</td><td colspan="2">Grass over loose medium brown silty, clayey sand with many fine roots and some fine gravel of flint</td></tr><tr><td>0.6 m</td><td colspan="2">Soft red/brown sandy silt with much fine gravel to boulders sized subangular limestone and occasional small pockets of stiff grey clayey silt</td></tr><tr><td></td><td colspan="2">Soft light brown/orange sandy silt and fine gravel to cobbles of subangular limestone</td></tr><tr><td>1.5 m</td><td colspan="2" rowspan="2">Subangular black stained limestone in a loose grey silty sand matrix</td></tr><tr><td>1.6 m</td></tr><tr><td colspan="6">END OF TRIAL PIT 1.6 m</td></tr></table>						Legend		Depth (m)		DESCRIPTION		Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5			0.1 m	Grass over loose medium brown silty, clayey sand with many fine roots and some fine gravel of flint		0.6 m	Soft red/brown sandy silt with much fine gravel to boulders sized subangular limestone and occasional small pockets of stiff grey clayey silt			Soft light brown/orange sandy silt and fine gravel to cobbles of subangular limestone		1.5 m	Subangular black stained limestone in a loose grey silty sand matrix		1.6 m	END OF TRIAL PIT 1.6 m					
Legend		Depth (m)		DESCRIPTION																													
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5			0.1 m	Grass over loose medium brown silty, clayey sand with many fine roots and some fine gravel of flint																													
			0.6 m	Soft red/brown sandy silt with much fine gravel to boulders sized subangular limestone and occasional small pockets of stiff grey clayey silt																													
				Soft light brown/orange sandy silt and fine gravel to cobbles of subangular limestone																													
			1.5 m	Subangular black stained limestone in a loose grey silty sand matrix																													
			1.6 m																														
END OF TRIAL PIT 1.6 m																																	
Scale: 1:25																																	
Remarks: Petroleum odour below 1.3 m.				Water: None																													
				Stability: Good																													
				Time trench open: 30 mins																													
Sample	TP100	TP100	TP100																														
Depth	0.4 m	1.4 m	1.6 m																														
Type	SOIL	SOIL	SOIL																														
Test																																	
					Logged by: HHU																												
					Date: 28.04.97																												

Aspinwall & company		TRIAL PIT LOG		TP101				
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1				
		Ground Level - m A.O.D. approx.		Grid Ref.: 5235, 2640				
Project: RAF Upper Heyford			Excavation Method: JCB					
Location: Upper Heyford			Weather: Dry, overcast					
<table border="0"> <tr> <td style="vertical-align: top;"> Legend </td> <td style="vertical-align: top;"> Depth (m) 0.0 0.2 m 0.7 m 1.8 m </td> <td style="vertical-align: top;"> DESCRIPTION Grass over loose medium brown silty sand with many fine roots and a little fine to coarse gravel sized flint and limestone Soft to firm red/brown sandy silt with much fine gravel to cobble sized limestone and occasional fine to coarse gravel sized fragments of ash, clinker, wood and brick Soft light brown/orange sandy silt and fine gravel to cobble sized subangular limestone END OF TRIAL PIT 1.8 m </td> </tr> </table>						Legend 	Depth (m) 0.0 0.2 m 0.7 m 1.8 m	DESCRIPTION Grass over loose medium brown silty sand with many fine roots and a little fine to coarse gravel sized flint and limestone Soft to firm red/brown sandy silt with much fine gravel to cobble sized limestone and occasional fine to coarse gravel sized fragments of ash, clinker, wood and brick Soft light brown/orange sandy silt and fine gravel to cobble sized subangular limestone END OF TRIAL PIT 1.8 m
Legend 	Depth (m) 0.0 0.2 m 0.7 m 1.8 m	DESCRIPTION Grass over loose medium brown silty sand with many fine roots and a little fine to coarse gravel sized flint and limestone Soft to firm red/brown sandy silt with much fine gravel to cobble sized limestone and occasional fine to coarse gravel sized fragments of ash, clinker, wood and brick Soft light brown/orange sandy silt and fine gravel to cobble sized subangular limestone END OF TRIAL PIT 1.8 m						
Scale: 1:25								
Remarks:						Water: None		
						Stability: Good		
						Time trench open: 30 mins		
Sample	TP101	TP101				Logged by: HHU		
Depth	0.5 m	1.6 m						
Type	SOIL	SOIL						
Test								
						Date: 29.04.97		

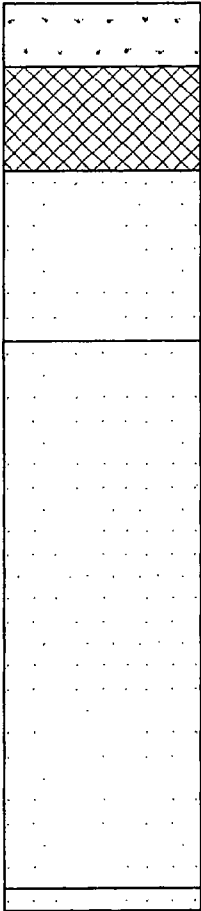
Aspinwall & company			TRIAL PIT LOG			TP102		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5228, 2647		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Windy, overcast, dry		

	Legend	Depth (m)	DESCRIPTION
0.0			Grass over loose brown silty clayey sand with much fine roots and some fine to coarse gravel of limestone
0.2 m			Soft to firm red/brown sandy silt with some fine gravel to cobbles of limestone and occasional cobble sized fragments of wood, metal, brick
0.5 m			
1.0			Soft light brown/orange slightly sandy silt and fine gravel to boulders of subangular limestone
1.5 m			
END OF TRIAL PIT 1.5 m			

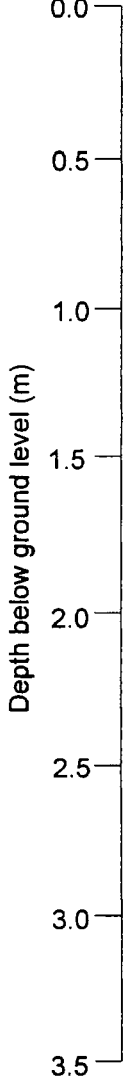
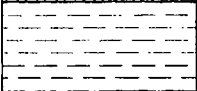
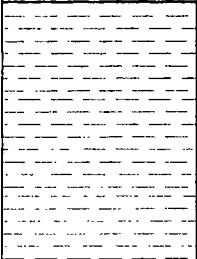
Scale: 1:25

Remarks: Cable severed at 0.2 m.							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP102	TP102	TP102					Logged by: HHU
Depth	0.1 m	0.5 m	1.5 m					
Type	SOIL	SOIL	SOIL					Date: 28.04.97
Test								

Aspinwall & company			TRIAL PIT LOG			TP104																			
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1																			
			Ground Level - m A.O.D. approx.			Grid Ref.: 5235, 2657																			
Project: RAF Upper Heyford						Excavation Method: JCB																			
Location: Upper Heyford						Weather: Overcast, windy, dry																			
<table border="0"> <thead> <tr> <th colspan="2">Legend</th> <th>Depth (m)</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td rowspan="5"> Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 <!-- Soil Profile Representation --> </td> <td>0.2 m</td> <td>Grass over soft brown sandy silt with some fine to coarse gravel of limestone. Fine roots present</td> </tr> <tr> <td>0.6 m</td> <td>Soft red/brown clayey silt with some fine to coarse gravel of limestone</td> </tr> <tr> <td>0.9 m</td> <td>Soft orange/brown silty sand with many subangular cobbles of limestone</td> </tr> <tr> <td>1.3 m</td> <td>Soft orange/brown sandy silt with fine gravel to boulder sized limestone</td> </tr> <tr> <td colspan="4" style="text-align: center;">END OF TRIAL PIT 1.3 m</td> </tr> </tbody> </table>									Legend		Depth (m)	DESCRIPTION	Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 <!-- Soil Profile Representation -->	0.2 m	Grass over soft brown sandy silt with some fine to coarse gravel of limestone. Fine roots present	0.6 m	Soft red/brown clayey silt with some fine to coarse gravel of limestone	0.9 m	Soft orange/brown silty sand with many subangular cobbles of limestone	1.3 m	Soft orange/brown sandy silt with fine gravel to boulder sized limestone	END OF TRIAL PIT 1.3 m			
Legend		Depth (m)	DESCRIPTION																						
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 <!-- Soil Profile Representation -->	0.2 m	Grass over soft brown sandy silt with some fine to coarse gravel of limestone. Fine roots present																							
	0.6 m	Soft red/brown clayey silt with some fine to coarse gravel of limestone																							
	0.9 m	Soft orange/brown silty sand with many subangular cobbles of limestone																							
	1.3 m	Soft orange/brown sandy silt with fine gravel to boulder sized limestone																							
	END OF TRIAL PIT 1.3 m																								
Remarks:						Water: None																			
						Stability: Good																			
						Time trench open: 30 mins																			
Sample	TP104	TP104						Logged by: ERM																	
Depth	0.4 m	1.3 m																							
Type	SOIL	SOIL						Date: 28.04.97																	
Test																									

Aspinwall&company			TRIAL PIT LOG			TP105		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5247, 2660		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Dry, overcast, windy		
Legend  Depth (m) 0.0 0.2 m 0.55 m 1.1 m 1.5 2.0 2.5 2.9 m 3.0 m 3.5 DESCRIPTION Grass over loose medium brown silty sand with much fine roots and a little fine to coarse gravel of flint Soft red brown sandy silt with some fine gravel to cobble sized limestone and occasional fine to coarse gravel sized ash, clinker, brick and tile Soft to firm red/brown slightly sandy clayey silt Soft to firm grey very sandy silt Soft wet dark grey sandy silt with fine to coarse gravel sized limestone END OF TRIAL PIT 3.0 m								
Scale: 1:25								
Remarks: Liquid seepage up from bottom of Trial Pit. Petroleum odour from 1.2 m.						Water: None		
						Stability: Good		
						Time trench open: 30 mins		
Sample	TP105	TP105	TP105					Logged by: HHU
Depth	0.4 m	1.2 m	3.0 m					
Type	SOIL	SOIL	SOIL					Date: 28.04.97
Test								

Aspinwall&company		TRIAL PIT LOG		TP106	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5252, 2647	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Sunny, dry		

Legend		Depth (m)	DESCRIPTION
		0.15 m	Tarmac
		0.45 m	Soft grey sandy clay and fine gravel to cobbles of limestone and other rock
		1.3 m	Soft pale brown silty clay with much fine to coarse gravel of limestone
	END OF TRIAL PIT 1.3 m		

Remarks: Water entering pit at base.						Scale: 1:25	
						Water: (See remarks)	
						Stability: Good	
						Time trench open: 30 mins	

Sample	TP106	TP106	TP106	TP106				Logged by: ERM
Depth	0.3 m	1.0 m	1.2 m					
Type	SOIL	SOIL	SOIL	WATER				Date: 02.05.97
Test								

Aspinwall&company		TRIAL PIT LOG		TP107	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5257, 2647	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

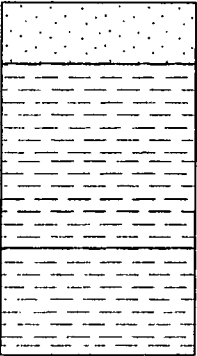
Legend		Depth (m)	DESCRIPTION
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 Depth below ground level (m)		0.15 m	Tarmac
		0.25 m	Loose white fine gravel to cobbles sized subangular limestone in a grey clayey and sandy silt matrix
		0.4 m	Soft red/brown sandy clay and fine gravel to cobbles of subangular limestone
		0.5 m	Soft grey sandy clay and fine gravel to cobbles sized subangular limestone with a little fine to coarse gravel sized ash
		0.9 m	Soft red/brown sandy clay and fine gravel to cobbles sized subangular limestone
END OF TRIAL PIT 0.9 m			

Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample								Logged by: HHU
Depth								
Type								Date: 02.05.97
Test								

[illegible]

Aspinwall & company		TRIAL PIT LOG		TP108	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5041, 2635	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry/overcast		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.2 m	Grass over medium brown silty clayey sand with much fine roots, a little fine to coarse gravel of flint, limestone and occasional ash
		0.8 m	Firm red brown sandy and silty clay with much fine gravel to cobbles of subangular limestone and occasional fragments of brick, wood, glass
		1.15 m	Soft to firm light brown mottled grey silty clay with much fine gravel to cobbles of subangular limestone cable severed by JCB at 1.0 m
		END OF TRIAL PIT 1.15 m	

Scale: 1:25

Remarks:							Water: None	
							Stability: Fair	
							Time trench open: 30 mins	
Sample	TP108	TP108						Logged by: HHU
Depth	0.2 m	1.1m						
Type	SOIL	SOIL						
Test								Date: 22.04.97

Aspinwall & company		TRIAL PIT LOG		TP109	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5148, 2642	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		

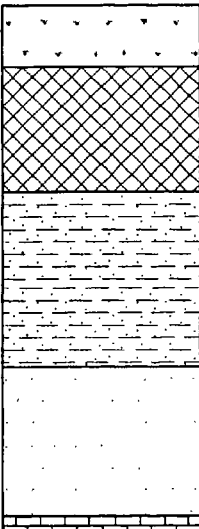
	Legend	Depth (m)	DESCRIPTION
0.0		0.2 m	Grass over loose medium brown silty clayey sand with many fine roots and much fine to coarse gravel of flint
0.5		0.9 m	Soft red brown clayey and sandy silt with some fine gravel to cobble sized subangular limestone
1.0		1.35 m	Soft light brown mottled grey clayey sandy silt with some fine to coarse gravel of subangular limestone and a little fine gravel sized ash (petroleum odour)
1.5			
2.0		2.2 m	Soft dark grey/brown very sandy silt with a little fine gravel, wood and organic remains
2.5		2.3 m	Soft light brown silty sand and fine to coarse gravel of limestone
3.0	END OF TRIAL PIT 2.3 m		
3.5			

Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP109	TP109	TP109					Logged by: HHU
Depth	0.4 m	1.2 m	1.65 m					
Type	SOIL	SOIL	SOIL					
Test								Date: 24.04.97

Aspinwall&company			TRIAL PIT LOG			TP110		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5159, 2649		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Dry, overcast		
Legend Depth (m) 0.0 m Grass over loose medium brown silty clayey sand with many fine roots 0.15 m - 0.2 m Very firm light brown clayey silt with some fine to coarse subangular gravel of limestone 0.5 m Soft red brown clayey sandy silt with much fine gravel to cobble sized subangular limestone and occasional cobble sized brick 1.0 m Loose light brown silty sand and fine gravel to cobble sized white subangular limestone 1.4 m Soft light brown/grey clayey sandy silt with a little fine gravel to cobble sized subangular limestone END OF TRIAL PIT 1.4 m								
Scale: 1:25								
Remarks:						Water: None		
						Stability: Good		
						Time trench open: 30 mins		
Sample	TP110	TP110	TP110					Logged by: HHU
Depth	0.2 m	0.5 m	1.4 m					
Type	SOIL	SOIL	SOIL					Date: 242.04.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP111	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5169, 2650	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.2 m 0.6 m 1.2 m 1.7 m 1.75 m	Grass over loose medium brown silty clayey sand with many fine roots and some fine to coarse gravel of flint and limestone Soft orange brown mottled grey sandy clayey silt with much fine gravel to cobble sized subangular limestone and occasional fragments of wood and fine gravel sized ash Soft red brown sandy clay with some fine gravel to cobble sized subangular limestone Soft orange brown mottled grey sandy silt with some fine gravel to cobble sized subangular limestone White subangular cobbles to boulders sized limestone in a light brown clayey, silty sand matrix
	END OF TRIAL PIT 1.75 m		

Scale: 1:25

Remarks:						Water: None	
						Stability: Good	
						Time trench open: 30 mins	
Sample	TP111	TP111					Logged by: HHU
Depth	0.15 m	0.7 m					
Type	SOIL	SOIL					
Test							Date: 24.04.97

Aspinwall & company			TRIAL PIT LOG			TP112		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5153, 2607		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
0.0			Reinforced concrete
0.2			
0.5			Loose fine gravel to boulders of subangular and rounded limestone in a light orange/brown sand and silty matrix with a little metal rod and wire
1.0			Soft orange/brown sandy clayey silt and fine gravel to cobbles of subangular limestone
1.5		1.6	
END OF TRIAL PIT 1.6 m			

Depth below ground level (m)

Scale: 1:25

Remarks:							Water: None	
							Stability: Fair	
							Time trench open: 30 mins	
Sample	TP112	TP112						Logged by: HHU
Depth	0.5 m	1.6 m						
Type	SOIL	SOIL						Date: 02.05.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP113/113A	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5171, 2759	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

Legend	Depth (m)	DESCRIPTION
	0.0	Loose brown-red sandy silt with gravel-boulder size sub-angular limestone and patches of blue-white material of a powdery, fibrous, and metaliferous texture Trial pit abandoned due to dry/airbourne nature of unknown blue/white substance
	0.4 m	
END OF TRIAL PIT 0.4 m		

Depth below ground level (m)

Scale: 1:25

Remarks: White/blue material tested for asbestos content.						Water: None	
						Stability: Stable	
						Time trench open: 20 mins	
Sample	TP113	TP113A					Logged by: ABW
Depth	0.4 m	0.4 m					
Type	SOIL	SOIL					Date: 24.04.97
Test							

Aspinwall&company		TRIAL PIT LOG		TP114		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. approx.		Grid Ref.: 5127, 2607		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Dry, sunny, windy			
Legend Depth (m) DESCRIPTION 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 END OF TRIAL PIT - m Scale: 1:25						
Remarks: Trial pit abandoned due to presence of services. Not possible to re-locate.				Water:		
				Stability:		
				Time trench open:		
Sample						Logged by: ABW
Depth						
Type						Date: 24.04.97
Test						

Aspinwall&company		TRIAL PIT LOG		TP115	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5158, 2632	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast, windy		
Legend Depth (m) DESCRIPTION Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 END OF TRIAL PIT - m					
Scale: 1:25					
Remarks: Trial pit abandoned due to presence of services.					Water:
					Stability:
					Time trench open:
Sample					Logged by: ERM
Depth					
Type					Date: 29.04.97
Test					

Aspinwall&company		TRIAL PIT LOG		TP116		
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1		
		Ground Level - m A.O.D. approx.		Grid Ref.: 5137, 2580		
Project: RAF Upper Heyford			Excavation Method: JCB			
Location: Upper Heyford			Weather: Sunny, dry			
Legend Depth (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 Depth below ground level (m) DESCRIPTION END OF TRIAL PIT - m						
Scale: 1:25						
Remarks: Trial pit location not accessible with JCB.					Water:	
					Stability:	
					Time trench open:	
Sample						Logged by: ABW
Depth						
Type						Date: 21.04.97
Test						

Aspinwall & company		TRIAL PIT LOG		TP117	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5135, 2588	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry/sunny		

Legend	Depth (m)	DESCRIPTION
	0.0	Grass over loose medium brown silty/clayey sand with much fine roots
	0.05 m	Loose red/brown silty clayey sand with some subangular fine gravel to cobbles of limestone and a little fine to coarse gravel sized metal, ash, clinker.
	0.5 m	Electricity cable 0.5 m
END OF TRIAL PIT 0.5 m		

Depth below ground level (m)

Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: Left open	
Sample	TP117							Logged by: HHU
Depth	0.1 m							
Type	SOIL							
Test								Date: 21.04.97

Aspinwall & company		TRIAL PIT LOG		TP118	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5041, 2601	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		

	Legend	Depth (m)	DESCRIPTION
0.0			Loose medium brown silty sand with roots
0.3 m			
0.5			Loose red-brown silty fine sand with some clay lenses (1 cm dia) and occasional subangular cobble to gravel sized limestone and occasional wood and brick fragments
0.95 m			Dense black bitumenous type material with some cobble sized subangular doleritic or 'roadstone' material
1.0 m			
1.2 m			Loose beige-brown slightly sandy clayey silt with angular limestone cobbles
1.3 m			Dense black bitumenous type material with some cobble sized subangular doleritic material
1.5			
2.0			Loose beige-brown clayey fine sand with gravel to cobble subangular limestone
2.25 m			
END OF TRIAL PIT 2.25 m			

Scale: 1:25

Remarks: End of trial pit 2.25 m at top of weathered bedrock.							Water: None	
							Stability: Stable	
							Time trench open: 30 mins	
Sample	TP118	TP118	TP118					Logged by: ABW
Depth	0.5 m	0.95 m	1.4 m					
Type	SOIL	SOIL	SOIL					
Test								Date: 22.04.97

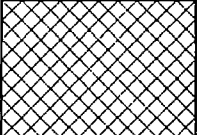
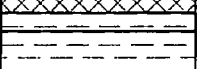
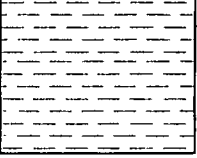
Aspinwall&company		TRIAL PIT LOG		TP119	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5106, 2590	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Raining		

Legend	Depth (m)	DESCRIPTION
	0.1 m	Dark brown sandy clay with occasional fine to medium gravel
	0.2 m	Light brown slightly clayey fine to coarse sand and fine to coarse, subangular to subrounded gravel with occasional pieces of white limestone
		Concrete pit at 0.2 m. Pit abandoned. Too many services to re-locate
END OF TRIAL PIT 0.2 m		

Scale: 1:25

Remarks:						Water: Dry	
						Stability: Good	
						Time trench open: 5 mins	
Sample	TP119						Logged by: SLH
Depth	0.2 m						
Type	SOIL						Date: 25.04.97
Test							

Aspinwall&company			TRIAL PIT LOG			TP120		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5094, 2595		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Sunny, dry		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.0	Grass over soft brown sandy silt with a little fine to coarse gravel of limestone. Fine roots present
		0.2 m	Loose silty sand with much fine gravel to subangular boulders of limestone. Pocket of sand present. A brick, some plastic sheeting, bits of wood, a piece of cloth and a few lumps of coal present at 0.5 m.
		0.7 m 0.75 m	Layer of brown and grey sandy clay
		1.0	Soft brown sandy clay with fine gravel to subangular boulders of limestone
		1.4 m	END OF TRIAL PIT 1.4 m

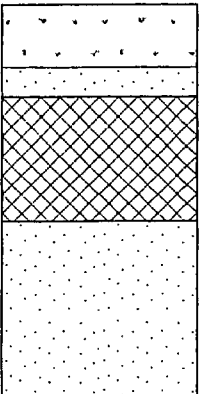
Scale: 1:25

Remarks: Base obstructed by large block of red stone - may be old foundation or cover.							Water: None	
							Stability: Moderate	
							Time trench open: 30 mins	

Sample	TP120	TP120	TP120				Logged by: ERM Date: 30.04.97
Depth	0.35 m	0.75 m	1.4 m				
Type	SOIL	SOIL	SOIL				
Test							

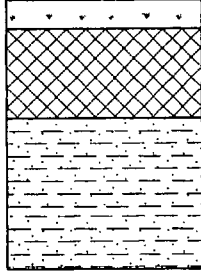
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Aspinwall & company		TRIAL PIT LOG		TP122	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5128, 2535	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.2 m 0.3 m 0.7 m 1.3 m	Grass over loose medium brown silty clayey sand with much fine roots and a little fine to coarse gravel of ash, clinker, subangular limestone Loose grey slightly clayey sand with some fine gravel to cobbles of subangular limestone Soft to firm medium brown sandy silty clay with some subangular fine gravel to cobbles sized limestone and occasional fine to coarse gravel sized fragments ash, brick, glass, metal Loose light brown clayey silty sand with much subangular fine gravel to cobbles of limestone
	END OF TRIAL PIT 1.3 m		

Scale: 1:25

Remarks:							Water: None	
							Stability: Fair	
							Time trench open: 30 mins	
Sample	TP122	TP122						Logged by: HHU
Depth	0.4 m	1.0 m						
Type	SOIL	SOIL						
Test								Date: 22.04.97

Aspinwall & company		TRIAL PIT LOG		TP123										
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1										
		Ground Level - m A.O.D. approx.		Grid Ref.: 5165, 2570										
Project: RAF Upper Heyford			Excavation Method: JCB											
Location: Upper Heyford			Weather: Dry/sunny											
Legend  <table border="0"> <thead> <tr> <th style="text-align: left;">Depth (m)</th> <th style="text-align: left;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>Grass over loose medium brown silty clayey sand with fine roots</td> </tr> <tr> <td>0.1 m</td> <td rowspan="2">Loose medium brown silty clayey sand with some sub-angular fine gravel to cobbles sized limestone and a little fine to coarse gravel size flint, brick, glass, plastic and concrete fragments</td> </tr> <tr> <td>0.4 m</td> </tr> <tr> <td>0.9 m</td> <td>Loose red/brown silty clayey sand with much subangular fine gravel to cobbles of limestone</td> </tr> </tbody> </table> END OF TRIAL PIT 0.9 m						Depth (m)	DESCRIPTION	0.0	Grass over loose medium brown silty clayey sand with fine roots	0.1 m	Loose medium brown silty clayey sand with some sub-angular fine gravel to cobbles sized limestone and a little fine to coarse gravel size flint, brick, glass, plastic and concrete fragments	0.4 m	0.9 m	Loose red/brown silty clayey sand with much subangular fine gravel to cobbles of limestone
Depth (m)	DESCRIPTION													
0.0	Grass over loose medium brown silty clayey sand with fine roots													
0.1 m	Loose medium brown silty clayey sand with some sub-angular fine gravel to cobbles sized limestone and a little fine to coarse gravel size flint, brick, glass, plastic and concrete fragments													
0.4 m														
0.9 m	Loose red/brown silty clayey sand with much subangular fine gravel to cobbles of limestone													
Scale: 1:25														
Remarks:				Water: None										
				Stability: Good										
				Time trench open: 30 mins										
Sample	TP123	TP123				Logged by: HHU								
Depth	0.1 m	0.35 m												
Type	SOIL	SOIL												
Test						Date: 21.04.97								

Aspinwall & company		TRIAL PIT LOG		TP124	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. _{approx.}		Grid Ref.: 5202, 2726	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Cool, overcast		

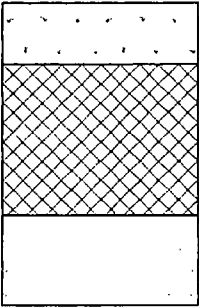
	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.2 m	Loose orange-brown sandy silt with roots
			Loose brown-orange gravelly sandy silt with many cobbles of subangular limestone (0.4 m) piece of steel
	1.0 m		
	1.7 m		Matrix of soft orange-brown silty clay with subangular gravel to cobble size subangular limestone
	2.0 m		Strong hydrocarbon odour from cobble sized subangular limestone with soft black silty clay matrix End of trial pit at top of weathered bedrock
		END OF TRIAL PIT 2.0 m	

Scale: 1:25

Remarks: Strong hydrocarbon odour and visible staining from 1.7 - 2.0 metres.						Water: None	
						Stability: Stable	
						Time trench open: 20 mins	

Sample	TP124	TP124	TP124	TP124				Logged by: ABW Date: 24.04.97
Depth	0.2 m	1.2 m	1.7 m	1.9 m				
Type	SOIL	SOIL	SOIL	SOIL				
Test								

Aspinwall & company		TRIAL PIT LOG		TP125	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5095, 2615	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Rain		

	Legend	Depth (m)	DESCRIPTION
0.0		0.2 m	Grass over loose medium brown silty sand with many roots and some fine to coarse gravel of flint and limestone
0.5		0.7 m	Soft red/brown sandy silt with much fine gravel to cobble sized fragments of limestone, concrete and occasional fine gravel sized ash and clinker fragments
1.0		1.0 m	Soft light brown/orange sandy silt and fine gravel to cobbles of subangular limestone
END OF TRIAL PIT 1.0 m			
1.5			
2.0			
2.5			
3.0			
3.5			

Depth below ground level (m)

Scale: 1:25

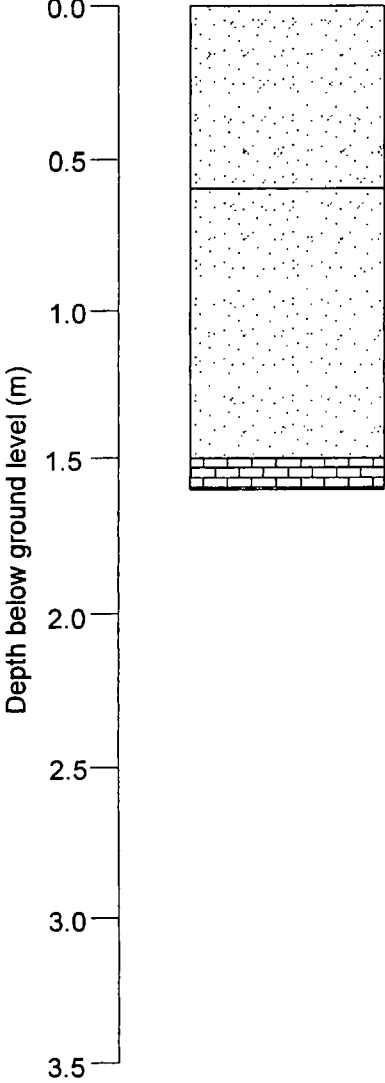
Remarks:							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP125	TP125						Logged by: HHU
Depth	0.1 m	0.6 m						
Type	SOIL	SOIL						
Test								Date: 25.04.97

Aspinwall&company		TRIAL PIT LOG		TP126	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5039, 2617	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		

Legend		Depth (m)	DESCRIPTION	
Depth below ground level (m)	0.0		Loose beige well rounded gravel. Polythene sheet underlay to gravel	
		0.1 m		
		0.2 m		
		0.3 m		Loose red-brown medium sand
				Soft to firm dark grey very silty clay with some medium sand, 2 pieces of wood 0.75 m length, 5cm wide
		0.7 m		Soft red-brown very silty clay
				Loose beige-light brown clayey silt with occasional coarse sand and gravel of subrounded limestone
	1.2 m			
	1.4 m		Loose subangular cobbles of grey limestone bedrock	
END OF TRIAL PIT 1.4 m				

Scale: 1:25

Remarks: 1.4 m depth = weathered bedrock, trial pit abandoned.							Water: None	
							Stability: Stable	
							Time trench open: 30 mins	
Sample	TP126	TP126						Logged by: ABW
Depth	0.25 m	1.0 m						
Type	SOIL	SOIL						Date: 22.04.97
Test								

Aspinwall&company		TRIAL PIT LOG		TP127			
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1			
		Ground Level - m A.O.D. approx.		Grid Ref.: 5068, 2731			
Project: RAF Upper Heyford			Excavation Method: JCB				
Location: Upper Heyford			Weather: Dry, overcast				
Legend  Depth (m) 0.0 0.5 1.0 1.5 1.6 2.0 2.5 3.0 3.5 DESCRIPTION Loose red-brown silty fine sand with gravel to cobble size angular to subrounded limestone 0.6 m Loose beige fine sandy silt with much gravel to boulder size subangular to subrounded limestone 1.5 m Firm beige-orange mottled slightly sandy clay with some rounded limestone gravel and vegetation and shell traces 1.6 m Weathered top of bedrock END OF TRIAL PIT 1.6 m							
Remarks:				Water: None			
				Stability: Stable			
				Time trench open: 20 mins			
Sample	TP127	TP127					Logged by: ABW
Depth	0.25 m	0.9 m					
Type	SOIL	SOIL					Date: 23.04.97
Test							

Aspinwall&company		TRIAL PIT LOG		TP128	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5189, 2647	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Overcast, dry, windy		
Legend Depth (m) 0.0 0.2 m 0.5 0.65 m 1.0 1.45 m 1.5 m DESCRIPTION Grass over soft dark brown sandy silt with a little fine to coarse gravel of sandstone. Fine roots present Soft red/brown sandy silt with a little fine to coarse gravel of limestone and sandstone Soft pale brown clayey silt with much fine gravel to cobbles of limestone. A few pockets of orange/brown sandy silt present Firm pale brown and grey clay END OF TRIAL PIT 1.5 m					
Scale: 1:25					
Remarks:				Water: None	
				Stability: Good	
				Time trench open: 30 mins	
Sample	TP128	TP128			
Depth	0.35 m	1.5 m			
Type	SOIL	SOIL			
Test					
					Logged by: ERM
					Date: 29.04.97

Aspinwall & company		TRIAL PIT LOG		TP129	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5130, 2563	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Reinforced concrete
0.5			
1.0		1.1 m	Soft to firm orange brown silty clay with fine gravel to cobble sized limestone
1.5		1.4 m	Soft pale orange and grey sandy clayey silt and fine gravel to boulder sized limestone
2.0		END OF TRIAL PIT 1.4 m	
2.5			
3.0			
3.5			

Scale: 1:25

Remarks:						Water: None	
						Stability: Good	
						Time trench open: 30 mins	
Sample	TP129	TP129					Logged by: ERM
Depth	0.35 m	1.3 m					
Type	SOIL	SOIL					
Test							Date: 02.05.97

Aspinwall&company		TRIAL PIT LOG		TP130	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5060, 2703	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Cool, breezy		

Legend		Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.1 m	Loose grey-brown sandy silt with roots
		0.5 m	Loose angular gravelly sandy silt with some wood fragments, and cobble to boulder size limestone, asphalt, concrete and occasional plastic and metal fragments
		0.85 m	Soft-firm brown-red silty clay with some sand and gravel, occasional cobble size subangular limestone and concrete with vegetation traces
		1.2 m	Soft orange-brown silty clay with gravel to cobble sized subangular to subrounded limestone
		End of trial pit at top of weathered bedrock END OF TRIAL PIT 1.2 m	

Scale: 1:25

Remarks:							Water: None	
							Stability: Stable	
							Time trench open: 20 mins	
Sample	TP130	TP130						Logged by: ABW
Depth	0.45 m	1.1 m						
Type	SOIL	SOIL						Date: 24.04.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP131														
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1														
		Ground Level - m A.O.D. _{approx.}		Grid Ref.: 5155, 2571														
Project: RAF Upper Heyford			Excavation Method: JCB															
Location: Upper Heyford			Weather: Sunny, dry															
Legend <table border="1"> <thead> <tr> <th>Depth (m)</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td rowspan="2">Loose, mid brown - light brown silty fine sand with roots and some limestone gravel</td> </tr> <tr> <td>0.2 m</td> </tr> <tr> <td>0.3 m</td> <td>Loose black silt with roots</td> </tr> <tr> <td>0.5 m</td> <td>Loose red-brown clayey silty sand with gravel to cobble sized limestone</td> </tr> <tr> <td>1.0</td> <td>Loose red-brown clayey sand with cobble sized limestone fragments (weathered bedrock). Boulder of limestone</td> </tr> <tr> <td>1.2 m</td> <td>Weathered limestone bedrock end of trial pit</td> </tr> </tbody> </table> END OF TRIAL PIT 1.2 m						Depth (m)	DESCRIPTION	0.0	Loose, mid brown - light brown silty fine sand with roots and some limestone gravel	0.2 m	0.3 m	Loose black silt with roots	0.5 m	Loose red-brown clayey silty sand with gravel to cobble sized limestone	1.0	Loose red-brown clayey sand with cobble sized limestone fragments (weathered bedrock). Boulder of limestone	1.2 m	Weathered limestone bedrock end of trial pit
Depth (m)	DESCRIPTION																	
0.0	Loose, mid brown - light brown silty fine sand with roots and some limestone gravel																	
0.2 m																		
0.3 m	Loose black silt with roots																	
0.5 m	Loose red-brown clayey silty sand with gravel to cobble sized limestone																	
1.0	Loose red-brown clayey sand with cobble sized limestone fragments (weathered bedrock). Boulder of limestone																	
1.2 m	Weathered limestone bedrock end of trial pit																	
Scale: 1:25																		
Remarks: Trial pit ended at 1.2 m with weathered top of bedrock.				Water: None														
				Stability: Stable														
				Time trench open: 20 mins														
Sample	TP131	TP131																
Depth	0.2 m	0.5 m																
Type	SOIL	SOIL																
Test																		
					Logged by: ABW													
					Date: 21.04.97													

Aspinwall & company		TRIAL PIT LOG		TP132	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5103, 2628	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, overcast		

	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Grass over loose medium silty clayey sand with much fine roots and some fine to coarse gravel of flint
0.5		0.5 m	Loose orange brown silty sand and fine gravel to cobbles of white subangular limestone
1.0		0.95 m	Soft orange brown clayey sandy silt with much fine gravel to cobbles of subangular limestone
END OF TRIAL PIT 0.95 m			
1.5			
2.0			
2.5			
3.0			
3.5			

Scale: 1:25

Remarks: Severed gas connector pipe at 0.9 m.						Water: None	
						Stability: Good	
						Time trench open: 30 mins	
Sample	TP132	TP132					Logged by: HHU
Depth	0.1 m	0.7 m					
Type	SOIL	SOIL					
Test							Date: 24.04.97

Aspinwall & company		TRIAL PIT LOG		TP133	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5177, 2565	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m) 		0.0	
		0.2 m	Tarmac
		0.5	Soft yellow/brown silty sandy clay with much subangular fine gravel to boulders sized limestone fragments
		0.8 m	
		END OF TRIAL PIT 0.8 m	
		1.0	
		1.5	
		2.0	
		2.5	
		3.0	
		3.5	

Scale: 1:25

Remarks: Possible asbestos sheet cement fragments found on surface near TP133.							Water: None	
							Stability: Poor	
							Time trench open: 30 mins	

Sample	TP133							Logged by: HHU
Depth	0.25 m							
Type	SOIL							Date: 21.04.97
Test								

Aspinwall&company		TRIAL PIT LOG		TP134	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5200, 2627	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
0.0		0.15 m	Grass over loose medium brown silty/clayey sand with much fine roots and a little fine to coarse gravel of flint and limestone
0.5			Soft to firm red/brown sandy silty clay with many fine gravel to cobble sized limestone and flint
1.0		0.9 m	Soft dark grey/brown sandy clayey silt with a little fine gravel to cobble sized limestone
1.5		1.3 m	Soft orange/grey slightly clayey silt with a little fine gravel to cobbles of limestone
1.7		1.7 m	
END OF TRIAL PIT 1.7 m			

Depth below ground level (m)

Scale: 1:25

Remarks: Petroleum odour from 0.9 m.							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP134	TP134	TP134					Logged by: HHU
Depth	0.5 m	1.0 m	1.6 m					
Type	SOIL	SOIL	SOIL					
Test								Date: 01.05.97

Aspinwall & company		TRIAL PIT LOG		TP135	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5325, 2713	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

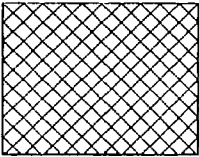
	Legend	Depth (m)	DESCRIPTION
0.0		0.25 m	Thin broken weathered layer of tarmac with grass and weeds over soft pale brown sandy silt with fine to coarse gravel sized limestone and tarmac
0.5			Soft light brown sandy silt with much fine gravel to cobbles of limestone
1.0		0.95 m	
1.5		1.7 m	Soft pale brown sandy clay and fine gravel to cobbles of limestone
2.0		END OF TRIAL PIT 1.7 m	
2.5			
3.0			
3.5			

Remarks:

Scale: 1:25

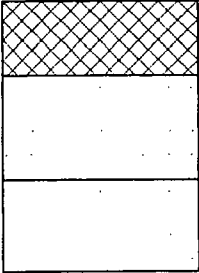
							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP135	TP135	TP135					Logged by: ERM
Depth	0.2 m	0.5 m	1.7 m					
Type	SOIL	SOIL	SOIL					Date: 01.05.97
Test								

Aspinwall&company		TRIAL PIT LOG		TP136	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5063, 2737	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
0.0			Grass and moss showing phytotoxic effects over brown sandy silt
0.5		0.5 m	Tarmac and concrete road uncovered (15-20 cm thick)
END OF TRIAL PIT 0.5 m			
1.0			
1.5			
2.0			
2.5			
3.0			
3.5			

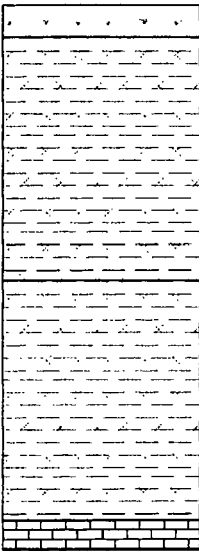
Scale: 1:25

Remarks: Trial pit abandoned due to presence of road.							Water:	
							Stability:	
							Time trench open:	
Sample								Logged by: ERM
Depth								
Type								Date: 01.05.97
Test								

Aspinwall&company		TRIAL PIT LOG		TP137	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5099, 2612	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		
Legend  Depth (m) 0.0 0.25 m — Grass over loose medium brown silty clayey sand with much roots and a little fine to coarse gravel sized limestone and occasional fine gravel sized ash 0.6 m — Soft red/brown sandy silt and fine gravel to cobble sized subangular limestone 0.9 m — Soft light brown/orange sandy silt and fine gravel to cobbles of subangular limestone END OF TRIAL PIT 0.9 m					
Scale: 1:25					
Remarks:					Water: None
					Stability: Good
					Time trench open: 30 mins
Sample	TP137	TP137			
Depth	0.2 m	0.9 m			
Type	SOIL	SOIL			
Test					
					Logged by: HHU
					Date: 01.05.97

Aspinwall & company		TRIAL PIT LOG		TP138															
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1															
		Ground Level - m A.O.D. approx.		Grid Ref.: 5058, 2610															
Project: RAF Upper Heyford			Excavation Method: JCB																
Location: Upper Heyford			Weather: Dry, sunny																
Legend <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Depth (m)</th> <th style="width: 85%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.15 m</td> <td>Grass over brown sandy silt with many fine roots</td> </tr> <tr> <td>0.4 m</td> <td>Loose fine gravel to cobble sized white subangular limestone in a brown silty clayey sand matrix</td> </tr> <tr> <td>0.5 m</td> <td>Tarmac</td> </tr> <tr> <td>0.85 m</td> <td>Soft orange brown mottled grey sandy clay and fine gravel to cobble sized subangular limestone and occasional fine gravel sized ash, clinker and brick</td> </tr> <tr> <td>2.2 m</td> <td>Soft grey slightly sandy and clayey silt with occasional fine to coarse gravel of limestone</td> </tr> <tr> <td colspan="2" style="text-align: center;">END OF TRIAL PIT 2.2 m</td> </tr> </tbody> </table>						Depth (m)	DESCRIPTION	0.15 m	Grass over brown sandy silt with many fine roots	0.4 m	Loose fine gravel to cobble sized white subangular limestone in a brown silty clayey sand matrix	0.5 m	Tarmac	0.85 m	Soft orange brown mottled grey sandy clay and fine gravel to cobble sized subangular limestone and occasional fine gravel sized ash, clinker and brick	2.2 m	Soft grey slightly sandy and clayey silt with occasional fine to coarse gravel of limestone	END OF TRIAL PIT 2.2 m	
Depth (m)	DESCRIPTION																		
0.15 m	Grass over brown sandy silt with many fine roots																		
0.4 m	Loose fine gravel to cobble sized white subangular limestone in a brown silty clayey sand matrix																		
0.5 m	Tarmac																		
0.85 m	Soft orange brown mottled grey sandy clay and fine gravel to cobble sized subangular limestone and occasional fine gravel sized ash, clinker and brick																		
2.2 m	Soft grey slightly sandy and clayey silt with occasional fine to coarse gravel of limestone																		
END OF TRIAL PIT 2.2 m																			
Scale: 1:25																			
Remarks: Petroleum odour from 0.85 m.						Water: Encountered at 1.9 m													
						Stability: Good													
						Time trench open: Overnight													
Sample	TP138	TP138	TP138	TP138			Logged by: HHU Date: 30.04.97												
Depth	0.3 m	0.7 m	1.5 m	-															
Type	SOIL	SOIL	SOIL	WATER															
Test																			

Aspinwall & company			TRIAL PIT LOG			TP139		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5009, 2651		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Dry, overcast		

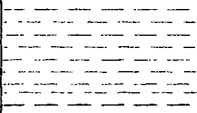
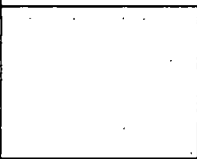
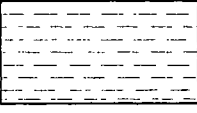
	Legend	Depth (m)	DESCRIPTION
0.0		0.1 m	Loose light grey gravelly sandy silt
0.5			Loose beige-orange-brown matrix of silty clay with loose angular limestone of gravel to boulder size
1.0		0.9 m	Firm green-dark grey mottled silty clay with some rounded limestone gravel and traces of vegetation
1.5			Loose beige-grey very sandy silt with some subangular limestone gravel
1.7 m 1.8 m			Top of weathered bedrock
END OF TRIAL PIT 1.8 m			
2.0			
2.5			
3.0			
3.5			

Scale: 1:25

Remarks:							Water: None	
							Stability: Stable	
							Time trench open: 20 mins	
Sample	TP139	TP139	TP139					Logged by: ABW
Depth	0.5 m	1.1 m	1.7 m					
Type	SOIL	SOIL	SOIL					
Test								Date: 22.04.97

Aspinwall & company		TRIAL PIT LOG		TP140																			
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1																			
		Ground Level - m A.O.D. approx.		Grid Ref.: 5114, 2607																			
Project: RAF Upper Heyford			Excavation Method: JCB																				
Location: Upper Heyford			Weather: Raining																				
Legend <table border="1"> <thead> <tr> <th>Depth (m)</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>Dark brown sandy silty clay with occasional fine to coarse, subrounded gravel</td> </tr> <tr> <td>0.2 m</td> <td></td> </tr> <tr> <td>0.3 m</td> <td>Light brown, fine to coarse sand and fine to coarse gravel</td> </tr> <tr> <td>0.5</td> <td></td> </tr> <tr> <td>1.0</td> <td>White light brown angular to subrounded cobbles of weathered limestone in a light brown sandy, silty clay matrix</td> </tr> <tr> <td>1.1 m</td> <td>Light brown and occasionally dark brown slightly sandy firm clay with cobbles of angular weathered limestone</td> </tr> <tr> <td>1.5 m</td> <td>White and light brown angular cobbles of weathered limestone with light and dark brown sandy, silty clay matrix</td> </tr> <tr> <td>1.6 m</td> <td></td> </tr> </tbody> </table> END OF TRIAL PIT 1.6 m						Depth (m)	DESCRIPTION	0.0	Dark brown sandy silty clay with occasional fine to coarse, subrounded gravel	0.2 m		0.3 m	Light brown, fine to coarse sand and fine to coarse gravel	0.5		1.0	White light brown angular to subrounded cobbles of weathered limestone in a light brown sandy, silty clay matrix	1.1 m	Light brown and occasionally dark brown slightly sandy firm clay with cobbles of angular weathered limestone	1.5 m	White and light brown angular cobbles of weathered limestone with light and dark brown sandy, silty clay matrix	1.6 m	
Depth (m)	DESCRIPTION																						
0.0	Dark brown sandy silty clay with occasional fine to coarse, subrounded gravel																						
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0.3 m	Light brown, fine to coarse sand and fine to coarse gravel																						
0.5																							
1.0	White light brown angular to subrounded cobbles of weathered limestone in a light brown sandy, silty clay matrix																						
1.1 m	Light brown and occasionally dark brown slightly sandy firm clay with cobbles of angular weathered limestone																						
1.5 m	White and light brown angular cobbles of weathered limestone with light and dark brown sandy, silty clay matrix																						
1.6 m																							
Scale: 1:25																							
Remarks:				Water: None																			
				Stability: Good																			
				Time trench open: 15 mins																			
Sample	TP140	TP140																					
Depth	0.3 m	1.3 m																					
Type	SOIL	SOIL																					
Test																							
					Logged by: SLH																		
					Date: 25.04.97																		

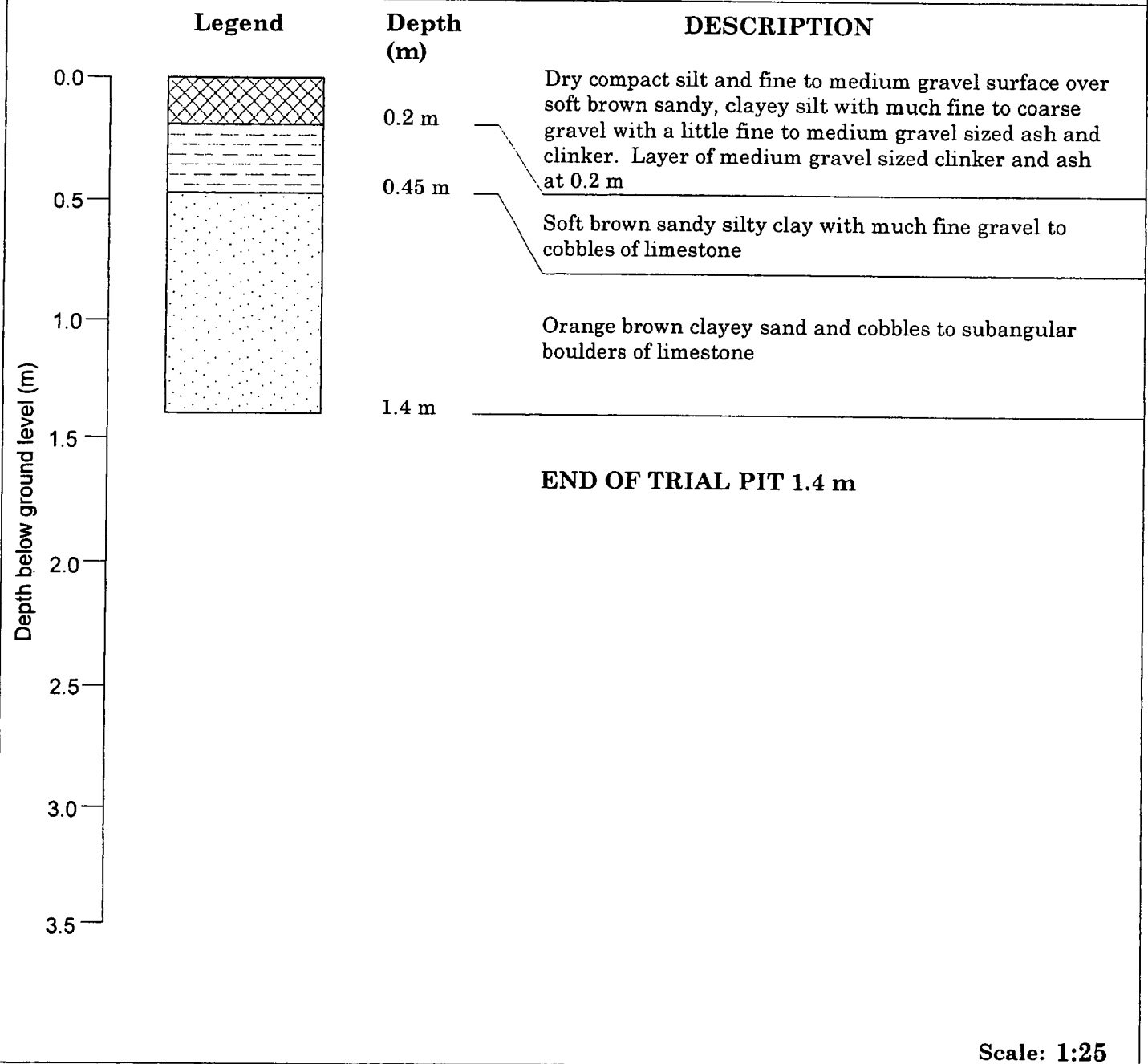
Aspinwall&company		TRIAL PIT LOG		TP141	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5134, 2608	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Sunny, dry		

Legend		Depth (m)	DESCRIPTION
Depth below ground level (m) 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5		0.2 m	Grass over soft brown slightly sandy silt with some fine to coarse gravel of limestone. Fine roots present
		0.6 m	Soft brown silty sandy clay with a little fine to coarse gravel of limestone
		1.1 m	Soft pale brown sandy silt with many cobbles of limestone
		1.45 m	Soft grey and brown sandy clay with much fine gravel to boulders of limestone
	END OF TRIAL PIT 1.45 m		

Remarks: Bedrock at 1.45 m.			Water: None		
			Stability: Good		
			Time trench open: 30 mins		

Sample	TP141	TP141					Logged by: ERM
Depth	0.4 m	1.45 m					
Type	SOIL	SOIL					Date: 30.04.97
Test							

Aspinwall&company		TRIAL PIT LOG	TP142
Client: Defence Estate Organisation		CAN No: MD3333A	Sheet 1 of 1
		Ground Level - m A.O.D. approx.	Grid Ref.: 5108, 2645
Project: RAF Upper Heyford		Excavation Method: JCB	
Location: Upper Heyford		Weather: Sunny, dry	

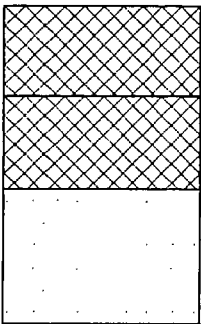


Remarks: Slight odour of hydrocarbons.							Water: None	
							Stability: Moderate	
							Time trench open: 30 mins	
Sample	TP142	TP142						Logged by: ERM
Depth	0.2 m	1.4 m						
Type	SOIL	SOIL						Date: 01.05.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP143	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5105, 2645	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Sunny, dry		
Legend Depth (m) DESCRIPTION 0.3 m Dry compact silt and fine to medium gravel surface over soft light brown silty sand with many pockets of loose orange sand and with some fine to coarse gravel of limestone 0.35 m 0.5 m Layer of medium gravel sized black ash, clinker Soft dark brown sandy clay with much fine to coarse gravel of limestone 1.2 m Clayey sandy silt with fine gravel to subangular boulders of limestone END OF TRIAL PIT 1.2 m					
Scale: 1:25					
Remarks:				Water: None	
				Stability: Moderate	
				Time trench open: 30 mins	
Sample	TP143	TP143	TP143		
Depth	0.3 m	0.45 m	1.2 m		
Type	SOIL	SOIL	SOIL		
Test					
					Logged by: ERM
					Date: 01.05.97

Aspinwall & company			TRIAL PIT LOG			TP144																
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1																
			Ground Level - m A.O.D. approx.			Grid Ref.: 5106, 2640																
Project: RAF Upper Heyford					Excavation Method: JCB																	
Location: Upper Heyford					Weather: Dry, sunny																	
Legend <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Depth (m)</th> <th style="width: 85%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>0.0</td> <td>Soft light brown sandy silt with much fine gravel to cobbles of subangular limestone</td> </tr> <tr> <td>0.25 m</td> <td></td> </tr> <tr> <td>0.55 m</td> <td>Loose black sand to gravel sized ash and clinker</td> </tr> <tr> <td>1.0</td> <td></td> </tr> <tr> <td>1.2 m</td> <td>Soft red/brown sandy and clayey silt and fine gravel to cobbles sized subangular limestone</td> </tr> <tr> <td colspan="2" style="text-align: center;">END OF TRIAL PIT 1.2 m</td> </tr> </tbody> </table>									Depth (m)	DESCRIPTION	0.0	Soft light brown sandy silt with much fine gravel to cobbles of subangular limestone	0.25 m		0.55 m	Loose black sand to gravel sized ash and clinker	1.0		1.2 m	Soft red/brown sandy and clayey silt and fine gravel to cobbles sized subangular limestone	END OF TRIAL PIT 1.2 m	
Depth (m)	DESCRIPTION																					
0.0	Soft light brown sandy silt with much fine gravel to cobbles of subangular limestone																					
0.25 m																						
0.55 m	Loose black sand to gravel sized ash and clinker																					
1.0																						
1.2 m	Soft red/brown sandy and clayey silt and fine gravel to cobbles sized subangular limestone																					
END OF TRIAL PIT 1.2 m																						
Scale: 1:25																						
Remarks: Slight petroleum odour from 0.55 m.							Water: None															
							Stability: Good															
							Time trench open: 30 mins															
Sample	TP144	TP144	TP144					Logged by: HHU														
Depth	0.4 m	0.5 m	1.1 m																			
Type	SOIL	SOIL	SOIL					Date: 01.05.97														
Test																						

Aspinwall & company		TRIAL PIT LOG		TP145	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5109, 2640	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

	Legend	Depth (m)	DESCRIPTION
0.0			Soft light brown sandy silt with much fine gravel to cobbles sized subangular limestone and a little loose sand and gravel sized ash and clinker
0.3		0.3 m	
0.5		0.6 m	Soft to firm red/brown sandy and clayey silt with a little fine gravel sized limestone and ash
1.0		1.05 m	Soft orange brown sandy clayey silt with fine gravel to cobbles sized subangular limestone
END OF TRIAL PIT 1.05 m			

Depth below ground level (m)

0.0

0.5

1.0

1.5

2.0

2.5

3.0

3.5

Scale: 1:25

Remarks:							Water: None	
							Stability: Good	
							Time trench open: 30 mins	
Sample	TP145	TP145	TP145					Logged by: HHU
Depth	0-0.3 m	0.45 m	1.0 m					
Type	SOIL	SOIL	SOIL					Date: 01.05.97
Test								

Aspinwall & company		TRIAL PIT LOG		TP147	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5103, 2641	
Project: RAF Upper Heyford				Excavation Method: JCB	
Location: Upper Heyford				Weather: Sunny, dry	

	Legend	Depth (m)	DESCRIPTION
Depth below ground level (m)		0.3 m 1.2 m	Dry compact silt with much medium gravel surface over dry loose pale brown sandy silt and fine to coarse gravel of limestone Soft red/brown sandy clay and fine gravel to cobbles of limestone. Piece of plastic (bag) at 0.6 m END OF TRIAL PIT 1.2 m

Scale: 1:25

Remarks:							Water: None	
							Stability: Moderate - Poor	
							Time trench open: 30 mins	
Sample	TP147	TP147						Logged by: ERM
Depth	0.35 m	1.2 m						
Type	SOIL	SOIL						
Test								Date: 01.05.97

Aspinwall & company		TRIAL PIT LOG		TP148	
Client: Defence Estate Organisation		CAN No: MD3333A		Sheet 1 of 1	
		Ground Level - m A.O.D. approx.		Grid Ref.: 5110, 2650	
Project: RAF Upper Heyford			Excavation Method: JCB		
Location: Upper Heyford			Weather: Dry, sunny		

Legend	Depth (m)	DESCRIPTION
	0.0	
	0.1 m	Soft light brown sandy silt with much fine gravel to cobble sized subangular limestone and occasional fine to coarse gravel sized ash and clinker
	0.5	South West Side of Trial Pit Soft red/brown silty sandy clay with much fine gravel to cobbles sized ash and clinker, some black staining
	1.0	North East Side of Trial Pit Soft red/brown sandy silt and fine gravel to cobbles of subangular limestone
	1.1 m	END OF TRIAL PIT 1.1 m
	1.5	
	2.0	
	2.5	
	3.0	
	3.5	

Scale: 1:25

Remarks: Slight petroleum odour from 0.7 m on south west side.						Water: None	
						Stability: Good	
						Time trench open: 30 mins	
Sample	TP148	TP148					Logged by: HHU
Depth	0.2 m	0.8 m					
Type	SOIL	SOIL					Date: 01.05.97
Test							

Aspinwall & company			TRIAL PIT LOG			TP149		
Client: Defence Estate Organisation			CAN No: MD3333A			Sheet 1 of 1		
			Ground Level - m A.O.D. approx.			Grid Ref.: 5105, 2650		
Project: RAF Upper Heyford						Excavation Method: JCB		
Location: Upper Heyford						Weather: Sunny, dry		

Legend	Depth (m)	DESCRIPTION
	0.0	
	0.2 m	Dry compact silt with much gravel surface over dry loose brown sandy silt with much fine to coarse gravel of limestone
	0.5 m 0.6 m	Soft brown and black sandy clay with much fine gravel to cobbles sized limestone and clinker, some roots also present
	1.15 m	Moist black sandy clay and fine gravel to cobbles of limestone
		Dark brown and orange sandy clay with much fine gravel to subangular boulders of limestone
END OF TRIAL PIT 1.15 m		

Scale: 1:25

Remarks: Strong hydrocarbon odour.							Water: None	
							Stability: Moderate	
							Time trench open: 30 mins	
Sample	TP149	TP149	TP149					Logged by: ERM
Depth	0.3 m	0.5 m	1.15 m					
Type	SOIL	SOIL	SOIL					Date: 01.05.97
Test								

Appendix

4

Results of Chemical Testing - Trial Pits



GEOCHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated

☐ NAMES Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Detection Method		ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	
Detection Limits		<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	
Depth (m)		Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
	0.3	10	-	<1	<1	-	17	-	8	-	<1	-	17	-	10	-	<1
	1.2	8	-	1	<1	-	9	-	4	-	<1	-	7	-	2	-	<1
	0.3	20	-	2	<1	-	17	-	14	-	<1	-	21	-	8	-	<1
	1	19	-	2	<1	-	41	-	8	-	<1	-	13	-	13	-	<1
	0.6	27	-	1	<1	-	27	-	10	-	<1	-	18	-	14	-	<1
	2	6	-	<1	<1	-	17	-	5	-	<1	-	7	-	3	-	<1
	0.7	17	-	1	<1	-	17	-	8	-	<1	-	11	-	16	-	<1
	0.75	18	-	1	<1	-	15	-	11	-	<1	-	13	-	32	-	2
	0.5	31	-	1	<1	-	30	-	12	-	<1	-	21	-	22	-	1
	1	66	-	1	<1	-	60	-	21	-	<1	-	46	-	13	-	<1
	0.9	26	-	1	<1	-	22	-	9	-	<1	-	17	-	12	-	<1
	0.1	7	-	<1	<1	-	40	-	7	-	<1	-	10	-	45	-	<1
	0.35	22	-	<1	<1	-	35	-	9	-	<1	-	12	-	81	-	<1
	0.1	32	-	<1	<1	-	34	-	18	-	<1	-	21	-	143	-	<1
	0.5	35	-	<1	<1	-	38	-	11	-	<1	-	24	-	10	-	<1
	0.25	30	-	<1	<1	-	33	-	14	-	<1	-	19	-	28	-	<1
	0.7	15	-	<1	<1	-	14	-	6	-	<1	-	10	-	6	-	<1
	0.2	11	-	<1	<1	-	10	-	5	-	<1	-	5	-	4	-	<1
0.8	29	-	2	<1	-	23	-	15	-	<1	-	17	-	18	-	<1	
0.25	19	-	2	<1	-	25	-	13	-	<1	-	16	-	22	-	<1	



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : XXXXXXXXXX
Client Ref. No. : MD3333A



☐ Preliminary
☐ Validated
☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
Detection Limits	<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
21	TP 56	0.75	17	-	>	<1	-	24	-	10	-	<1	-	13	-	10	-	<1
22	TP 57	0.25	24	-	>	<1	-	20	-	11	-	>	-	17	-	16	-	2
23	TP 57	1	15	-	>	<1	-	20	-	8	-	>	-	13	-	4	-	2
24	TP 58	0.4	22	-	>	<1	-	26	-	10	-	>	-	17	-	12	-	2
25	TP 58	1	34	-	>	<1	-	22	-	15	-	>	-	27	-	5	-	<1
26	TP108	0.2	13	-	>	<1	-	12	-	17	-	>	-	11	-	14	-	<1
27	TP 108	1.1	14	-	>	<1	-	16	-	7	-	<1	-	10	-	10	-	<1
28	TP 117	0.1	31	-	>	<1	-	36	-	16	-	<1	-	19	-	82	-	<1
29	TP 118	0.5	16	-	<1	<1	-	16	-	8	-	<1	-	11	-	13	-	<1
30	TP 118	0.95	23	-	<1	<1	-	20	-	11	-	<1	-	12	-	25	-	<1
31	TP 118	1.5	21	-	<1	<1	-	30	-	12	-	<1	-	21	-	9	-	<1
32	TP 122	0.4	19	-	<1	<1	-	23	-	12	-	<1	-	13	-	15	-	2
33	TP 122	1	12	-	<1	<1	-	8	-	4	-	<1	-	6	-	3	-	<1
34	TP 123	0.1	25	-	<1	<1	-	31	-	12	-	1	-	13	-	71	-	<1
35	TP 123	0.35	28	-	>	<1	-	29	-	11	-	<1	-	18	-	16	-	<1
36	TP 126	0.25	17	-	<1	<1	-	27	-	10	-	<1	-	15	-	12	-	<1
37	TP 126	1	6	-	<1	<1	-	6	-	3	-	<1	-	4	-	2	-	<1
38	TP 131	0.2	27	-	<1	<1	-	26	-	25	-	<1	-	19	-	60	-	<1
39	TP 131	0.5	31	-	<1	<1	-	36	-	13	-	<1	-	27	-	12	-	1
40	TP 133	0.25	11	-	<1	<1	-	9	-	4	-	<1	-	6	-	5	-	<1



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



☐ Preliminary
☐ Validated

☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
Detection Limits	<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
41	TP 133 (A)	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	TP 1	0.1	17	-	<1	<1	-	25	-	12	-	<1	-	15	-	11	-	1
43	TP 1	0.8	23	-	<1	<1	-	27	-	18	-	<1	-	16	-	12	-	2
44	TP 2	0.4	17	-	<1	<1	-	9	-	6	-	<1	-	10	-	3	-	<1
45	TP 2	1.1	12	-	<1	<1	-	14	-	9	-	<1	-	13	-	4	-	<1
46	TP 2	2	11	-	<1	<1	-	7	-	9	-	<1	-	9	-	2	-	2
47	TP 3	0.4	18	-	<1	<1	-	19	-	13	-	<1	-	13	-	13	-	<1
48	TP 3	0.9	13	-	<1	<1	-	15	-	12	-	<1	-	13	-	3	-	<1
49	TP 4	0.3	15	-	<1	<1	-	9	-	6	-	<1	-	9	-	4	-	1
50	TP 4	0.8	18	-	<1	<1	-	12	-	7	-	<1	-	11	-	3	-	<1
51	TP 5	0.4	16	-	<1	<1	-	10	-	6	-	<1	-	10	-	4	-	<1
52	TP 5	0.85	12	-	<1	<1	-	14	-	9	-	<1	-	14	-	4	-	<1
53	TP 6	0.6	16	-	<1	<1	-	21	-	13	-	<1	-	17	-	12	-	<1
54	TP 6	1.45	8	-	<1	<1	-	14	-	14	-	<1	-	11	-	3	-	2
55	TP 6	1.9	6	-	<1	<1	-	5	-	6	-	<1	-	8	-	4	-	<1
56	TP 59	0.9	1	-	<1	<1	-	5	-	4	-	<1	-	6	-	1	-	<1
57	TP 59	0.15	22	-	<1	<1	-	17	-	7	-	<1	-	12	-	8	-	<1
58	TP 60	0.7	26	-	<1	<1	-	26	-	14	-	<1	-	20	-	30	-	2
59	TP 60	1	20	-	2	<1	-	12	-	7	-	<1	-	14	-	6	-	2
60	TP 61	0.7	18	-	<1	<1	-	16	-	21	-	<1	-	18	-	10	-	<1

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GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated
☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
Detection Limits	<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
61	TP 61	1.1	10	-	<1	<1	-	10	-	7	-	<1	-	11	-	5	-	<1
62	TP 62	0.4	22	-	1	<1	-	25	-	12	-	<1	-	15	-	17	-	<1
63	TP 62	0.8	6	-	1	<1	-	4	-	3	-	<1	-	5	-	<1	-	<1
64	TP 62	1.4	7	-	5	<1	-	8	-	6	-	<1	-	8	-	5	-	<1
65	TP 67	0.35	21	-	<1	<1	-	13	-	6	-	<1	-	10	-	8	-	<1
66	TP 67	1.3	15	-	2	<1	-	16	-	8	-	<1	-	14	-	6	-	<1
67	TP 68	0.1	15	-	<1	<1	-	26	-	11	-	<1	-	15	-	73	-	<1
68	TP 68	0.8	15	-	2	<1	-	6	-	4	-	<1	-	9	-	4	-	<1
69	TP 69	0.4	34	-	<1	<1	-	36	-	13	-	<1	-	28	-	13	-	<1
70	TP 69	0.95	17	-	<1	<1	-	12	-	7	-	<1	-	12	-	6	-	<1
71	TP 70	0.2	23	-	<1	<1	-	20	-	11	-	<1	-	16	-	24	-	<1
72	TP 70	1	15	-	<1	<1	-	8	-	5	-	<1	-	9	-	4	-	<1
73	TP 71	0.1	16	-	<1	<1	-	14	-	9	-	<1	-	13	-	12	-	<1
74	TP 71	0.4	21	-	<1	12	-	10	-	140	-	<1	-	31	-	43	-	<1
75	TP 71	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76	TP 73	0.3	16	-	<1	<1	-	16	-	8	-	<1	-	12	-	13	-	<1
77	TP 73	0.6	25	-	<1	<1	-	22	-	11	-	<1	-	15	-	18	-	<1
78	TP 73	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79	TP 78	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80	TP 78 A	0.35	22	-	<1	<1	-	13	-	7	-	<1	-	11	-	7	-	<1



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : XXXXXXXXXX
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated

 NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
Detection Limits	<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
81	TP 78 A	0.9	8	-	>1	>1	-	9	-	6	-	<1	-	9	-	4	-	<1
82	TP 78 A	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83	TP 79	0.5	<1	-	>1	>1	-	21	-	13	-	<1	-	17	-	14	-	<1
84	TP 79	0.9	8	-	3	<1	-	10	-	4	-	<1	-	6	-	4	-	<1
85	TP 80	0.1	22	-	1	<1	-	23	-	15	-	<1	-	18	-	18	-	<1
86	TP 80	0.55	20	-	1	<1	-	19	-	13	-	<1	-	15	-	13	-	<1
87	TP 139	0.5	13	-	1	<1	-	7	-	4	-	<1	-	8	-	8	-	<1
88	TP 139	1.1	12	-	2	<1	-	16	-	10	-	<1	-	12	-	12	-	<1
89	TP 139	1.7	6	-	<1	<1	-	8	-	6	-	<1	-	7	-	3	-	<1
105	TP 50	0.1	30	-	<1	<1	-	21	-	12	-	<1	-	14	-	13	-	<1
106	TP 50	1.8	14	-	<1	<1	-	4	-	<1	-	<1	-	4	-	2	-	<1
107	TP 49	0.1	18	-	<1	<1	-	21	-	7	-	<1	-	10	-	29	-	<1
108	TP 49	1	1	-	<1	<1	-	6	-	3	-	<1	-	4	-	1	-	<1
109	TP 66	0.6	13	-	<1	<1	-	13	-	4	-	<1	-	8	-	2	-	1
110	TP 66	1.4	15	-	2	1	-	15	-	33	-	<1	-	6	-	5	-	<1
111	TP 66	1.45	12	-	4	<1	-	8	-	2	-	<1	-	5	-	1	-	<1
112	TP 72	0.35	18	-	2	<1	-	20	-	1	-	<1	-	3	-	<1	-	<1
113	TP 72	1.2	29	-	<1	<1	-	28	-	9	-	<1	-	18	-	11	-	<1
114	TP 74	0.5	16	-	<1	<1	-	20	-	8	-	<1	-	12	-	7	-	<1
115	TP 74	1.3	18	-	<1	<1	-	19	-	11	-	<1	-	20	-	9	-	<1



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : XXXXXXXXXX
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated
☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
Detection Limits	<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on leachate	Chromium	Chromium on leachate	Copper	Copper on leachate	Mercury	Mercury On leachate	Nickel	Nickel On leachate	Lead	Lead Leachate	Selenium
116	TP 75	0.5	15	-	1	<1	-	17	-	8	-	>1	-	11	-	9	-	<1
117	TP 75	1.4	9	-	>1	<1	-	11	-	4	-	>1	-	6	-	2	-	<1
118	TP 75	1.9	2	-	2	<1	-	5	-	3	-	>1	-	4	-	2	-	<1
119	TP 76	0.45	24	-	>1	<1	-	25	-	12	-	<1	-	18	-	12	-	<1
120	TP 76	1.25	9	-	2	<1	-	13	-	5	-	>1	-	8	-	2	-	2
121	TP 77	0.5	28	-	>1	<1	-	36	-	12	-	<1	-	24	-	5	-	<1
122	TP 77	1.5	11	-	>1	<1	-	12	-	8	-	<1	-	17	-	4	-	<1
123	TP 82	0.3	22	-	<1	<1	-	24	-	12	-	<1	-	19	-	23	-	<1
124	TP 82	0.8	13	-	4	<1	-	9	-	22	-	<1	-	9	-	<1	-	<1
125	TP 83	0.1	18	-	<1	<1	-	21	-	10	-	<1	-	15	-	10	-	2
126	TP 83	0.9	15	-	2	<1	-	10	-	6	-	<1	-	9	-	3	-	<1
127	TP 84	0.2	21	-	1	<1	-	24	-	10	-	<1	-	17	-	14	-	<1
128	TP 84	0.8	16	-	<1	<1	-	12	-	6	-	<1	-	11	-	3	-	1
129	TP 85	0.1	28	-	<1	<1	-	28	-	11	-	<1	-	18	-	31	-	<1
130	TP 85	0.7	11	-	<1	<1	-	9	-	4	-	<1	-	7	-	1	-	<1
131	TP 87	0.4	29	-	>1	<1	-	32	-	11	-	<1	-	20	-	79	-	<1
132	TP 87	1.55	9	-	<1	<1	-	14	-	6	-	<1	-	10	-	2	-	2
133	TP 88	0.4	28	-	<1	<1	-	27	-	10	-	<1	-	18	-	16	-	<1
134	TP 88	1.4	4	-	<1	<1	-	4	-	3	-	<1	-	5	-	1	-	<1
135	TP 89	0.4	13	-	<1	<1	-	13	-	7	-	<1	-	10	-	7	-	<1



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



☐ Preliminary

☐ Validated

☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
Detection Limits	<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
136	TP 89	1.9	9	-	<1	<1	-	5	-	5	-	<1	-	6	-	3	-	<1
137	TP 109	0.4	25	-	<1	<1	-	21	-	9	-	<1	-	14	-	15	-	1
138	TP 109	1.2	7	-	<1	<1	-	7	-	4	-	<1	-	7	-	5	-	<1
139	TP 109	1.65	20	-	<1	<1	-	25	-	9	-	<1	-	15	-	11	-	<1
140	TP 110	0.2	10	-	<1	<1	-	9	-	4	-	<1	-	6	-	5	-	<1
141	TP 110	0.5	8	-	<1	<1	-	9	-	4	-	<1	-	6	-	4	-	<1
142	TP 110	1.4	5	-	3	<1	-	4	-	3	-	<1	-	5	-	2	-	1
143	TP 111	0.15	22	-	<1	<1	-	20	-	14	-	<1	-	15	-	18	-	<1
144	TP 111	0.7	20	-	<1	<1	-	24	-	11	-	<1	-	16	-	11	-	<1
145	TP 113	0.4	49	<0.05	<1	4	<0.05	72	<0.05	1338	<0.05	<1	<0.05	16	<0.05	70	<0.05	<1
146	TP 113A	0.4	76	<0.05	<1	4	<0.05	187	<0.05	1799	0.44	<1	<0.05	15	<0.05	38	0.21	<1
147	TP 124	0.2	22	-	<1	<1	-	27	-	11	-	<1	-	20	-	12	-	<1
148	TP 124	1.2	11	-	1	<1	-	11	-	6	-	<1	-	9	-	3	-	1
149	TP 124	1.9	4	-	<1	<1	-	3	-	4	-	<1	-	4	-	<1	-	<1
150	TP 124	1.7	8	-	<1	<1	-	4	-	5	-	<1	-	6	-	<1	-	1
151	TP 127	0.25	21	-	1	<1	-	22	-	15	-	<1	-	18	-	14	-	<1
152	TP 127	0.9	6	-	1	<1	-	4	-	3	-	<1	-	5	-	<1	-	<1
153	TP 127	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
179	TP 18	0.2	23	-	<1	<1	-	21	-	10	-	<1	-	13	-	16	-	<1
180	TP 18	0.8	6	-	<1	<1	-	8	-	4	-	<1	-	7	-	1	-	<1

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GEOCHEM ANALYTICAL SERVICES

TABLE OF RESULTS

Job Number : 97/01023/02/01

Client : ASPINWALL & COMPANY

Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL

Location : RAF Upper Heyford

Client Contact : [REDACTED]

Client Ref. No. : MD3333A

☐ Preliminary☐ Validated☒ NAMAS Accredited

Preliminary

Validated

NAMAS Accredited

Units

Detection Method

Detection Limits

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ppm

ICP

ICP

ICP

ICP

ICP

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ICP

ICP

ICP

ICP

ICP

ICP

ICP

ICP

ICP

ICP

<1

<0.05

<1

<1

<0.05

<1

<0.05

<1

<0.05

<1

<0.05

<1

<0.05

<1

<0.05

<1

<0.05

<1

Arsenic

Arsenic On Leachate

Boron (Water Soluble)

Cadmium

Cadmium on Leachate

Chromium

Chromium on Leachate

Copper

Copper on Leachate

Mercury

Mercury On Leachate

Nickel

Nickel On Leachate

Lead

Lead Leachate

Selenium

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
181	TP 18	1.6	6	-	<1	<1	-	6	-	3	-	<1	-	4	-	1	-	<1
182	TP 20	0.35	28	-	<1	<1	-	21	-	49	-	<1	-	29	-	58	-	<1
183	TP 20	0.5	26	-	<1	<1	-	26	-	11	-	<1	-	18	-	22	-	<1
184	TP 20	1.2	14	-	<1	<1	-	12	-	6	-	<1	-	8	-	4	-	<1
185	TP 21	0.3	36	-	<1	2	-	35	-	3	-	1	-	16	-	530	-	<1
186	TP 22	0.2	10	-	<1	<1	-	18	-	15	-	<1	-	13	-	59	-	<1
187	TP 22	1	16	-	<1	<1	-	15	-	6	-	<1	-	9	-	7	-	<1
188	TP 23	0.5	28	-	<1	<1	-	36	-	13	-	<1	-	23	-	24	-	<1
189	TP 23	1.5	11	-	<1	<1	-	10	-	5	-	<1	-	8	-	1	-	<1
190	TP 24	0.4	31	-	<1	<1	-	41	-	12	-	<1	-	27	-	10	-	<1
191	TP 25	0.5	28	-	<1	<1	-	22	-	9	-	<1	-	19	-	12	-	<1
192	TP 25	1.1	14	-	<1	<1	-	14	-	6	-	<1	-	9	-	4	-	<1
193	TP 26	0.4	29	-	<1	1	-	32	-	16	-	<1	-	20	-	55	-	<1
194	TP 27	0.3	25	-	<1	2	-	26	-	21	-	<1	-	17	-	76	-	<1
195	TP 27	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
196	TP 28	0.4	23	-	<1	2	-	23	-	16	-	<1	-	14	-	66	-	<1
197	TP 45	0.4	22	-	<1	<1	-	29	-	11	-	<1	-	19	-	16	-	<1
198	TP 45	1.2	23	-	<1	<1	-	15	-	8	-	<1	-	12	-	5	-	<1
199	TP 46	0.4	24	-	<1	<1	-	26	-	11	-	<1	-	18	-	23	-	<1
200	TP 46	1.3	18	-	<1	<1	-	8	-	6	-	<1	-	9	-	1	-	1

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GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : XXXXXXXXXX
Client Ref. No. : MD3333A



☐ Preliminary
☐ Validated

☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
Detection Limits	<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
201	TP 47	0.5	29	-	<1	<1	-	24	-	10	-	<1	-	18	-	13	-	<1
202	TP 47	1.2	12	-	>1	>1	-	11	-	6	-	<1	-	9	-	5	-	<1
203	TP 63	0.35	24	-	<1	<1	-	24	-	12	-	<1	-	18	-	16	-	<1
204	TP 63	1.1	9	-	<1	<1	-	11	-	5	-	<1	-	10	-	6	-	<1
205	TP 64	0.55	31	-	<1	<1	-	30	-	13	-	<1	-	23	-	10	-	<1
206	TP 64	1.3	11	-	<1	<1	-	9	-	7	-	<1	-	8	-	4	-	1
207	TP 65	0.4	28	-	<1	<1	-	34	-	10	-	<1	-	22	-	10	-	<1
208	TP 65	1.3	7	-	<1	<1	-	8	-	4	-	<1	-	7	-	4	-	2
209	TP 81	0.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
210	TP 81A	0.55	21	-	<1	<1	-	30	-	14	-	<1	-	28	-	8	-	<1
211	TP 81A	1.4	8	-	<1	<1	-	7	-	6	-	<1	-	8	-	2	-	<1
212	TP 86	0.45	31	-	<1	<1	-	89	-	81	-	<1	-	41	-	51	-	<1
213	TP 86	1.2	24	-	<1	<1	-	26	-	11	-	<1	-	21	-	15	-	2
214	TP 92	0.4	23	-	<1	<1	-	29	-	12	-	<1	-	18	-	30	-	2
215	TP 92	1.4	13	-	<1	<1	-	11	-	6	-	<1	-	9	-	5	-	<1
216	TP 93	0.35	16	-	<1	<1	-	15	-	8	-	<1	-	13	-	12	-	<1
217	TP 93	0.9	13	-	<1	<1	-	17	-	6	-	<1	-	12	-	5	-	<1
218	TP 94	0.4	32	-	<1	<1	-	23	-	42	-	<1	-	25	-	98	-	<1
219	TP 94	1.4	11	-	<1	<1	-	15	-	11	-	<1	-	12	-	16	-	<1
220	TP 95	0.35	27	-	<1	<1	-	21	-	11	-	<1	-	17	-	21	-	<1

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Checked by ... XXXXXXXXXX

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GEOL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : XXXXXXXXXX
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated

☒ NAMES Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
Detection Limits	<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
221	TP 95	1.2	24	-	2	<1	-	23	-	9	-	>1	-	17	-	16	-	<1
222	TP 96	0.4	23	-	1	<1	-	11	-	6	-	>1	-	10	-	4	-	2
223	TP 97	0.4	27	-	2	<1	-	28	-	11	-	>1	-	20	-	17	-	<1
224	TP 98	0.4	34	-	3	<1	-	35	-	13	-	>1	-	24	-	24	-	<1
225	TP 99	0.3	18	-	3	<1	-	22	-	14	-	>1	-	17	-	21	-	<1
226	TP 99	1.9	10	-	2	<1	-	8	-	5	-	>1	-	7	-	3	-	<1
227	TP 100	0.4	12	-	2	1	-	16	-	6	-	>1	-	11	-	10	-	<1
228	TP 100	1.4	13	-	2	<1	-	13	-	5	-	<1	-	9	-	3	-	<1
229	TP 100	1.6	15	-	1	<1	-	8	-	6	-	>1	-	6	-	6	-	<1
230	TP 102	0.1	26	-	<1	<1	-	26	-	24	-	<1	-	21	-	27	-	<1
231	TP 102	0.5	20	-	3	<1	-	17	-	47	-	<1	-	18	-	32	-	<1
232	TP 102	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
233	TP 103	0.3	21	-	1	<1	-	24	-	10	-	<1	-	15	-	21	-	<1
234	TP 103	1.2	9	-	<1	<1	-	19	-	8	-	<1	-	12	-	6	-	<1
235	TP 104	0.4	22	-	2	<1	-	31	-	11	-	<1	-	22	-	22	-	1
236	TP 104	1.3	13	-	1	<1	-	13	-	7	-	<1	-	12	-	5	-	<1
237	TP 105	0.4	23	-	2	<1	-	23	-	17	-	<1	-	23	-	12	-	<1
238	TP 105	1.2	17	-	4	<1	-	19	-	20	-	<1	-	29	-	13	-	<1
239	TP 105	3	12	-	<1	<1	-	7	-	4	-	<1	-	6	-	5	-	2
240	TP 119	0.2	12	-	<1	<1	-	7	-	4	-	<1	-	7	-	6	-	<1



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated
☒ NAMES Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Detection Method		ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	
Detection Limits		<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	
Sample Number	Sample Identity	Depth (m)	Concentration (ppm)															
			Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
241	TP 121	0.2	23	-	<1	<1	-	36	-	13	-	<1	-	19	-	65	-	<1
242	TP 121	1.2	8	-	2	<1	-	6	-	5	-	<1	-	7	-	2	-	<1
243	TP 125	0.1	18	-	<1	<1	-	27	-	42	-	<1	-	13	-	14	-	<1
244	TP 125	0.6	20	-	2	<1	-	23	-	9	-	<1	-	14	-	12	-	<1
245	TP 130	0.45	14	-	<1	<1	-	14	-	7	-	<1	-	10	-	7	-	<1
246	TP 130	1.1	10	-	2	<1	-	7	-	4	-	<1	-	7	-	3	-	<1
247	TP 132	0.1	17	-	3	4	-	46	-	21	-	<1	-	16	-	126	-	2
248	TP 132	0.7	24	-	2	<1	-	21	-	8	-	<1	-	16	-	5	-	2
249	TP 140	0.2	15	-	<1	<1	-	10	-	5	-	<1	-	11	-	5	-	<1
250	TP 140	1.3	10	-	2	<1	-	11	-	6	-	<1	-	8	-	3	-	<1
251	TP 10	0.3	19	-	<1	1	-	19	-	20	-	<1	-	14	-	34	-	<1
252	TP 10	1.2	4	-	<1	<1	-	4	-	5	-	<1	-	5	-	5	-	<1
253	TP 12	0.1	17	-	<1	<1	-	13	-	11	-	<1	-	13	-	30	-	<1
254	TP 12	1	15	-	<1	<1	-	7	-	5	-	<1	-	8	-	3	-	<1
255	TP 12	1.3	3	-	<1	<1	-	4	-	3	-	<1	-	5	-	<1	-	<1
256	TP 14	0.4	12	-	<1	<1	-	14	-	23	-	<1	-	11	-	23	-	<1
257	TP 14	1	2	-	<1	<1	-	4	-	3	-	<1	-	4	-	2	-	<1
258	TP 15	0.4	15	-	<1	<1	-	13	-	8	-	<1	-	9	-	12	-	1
259	TP 15	1.5	23	-	<1	<1	-	18	-	10	-	<1	-	15	-	19	-	<1
260	TP 15	2.5	11	-	<1	<1	-	16	-	8	-	<1	-	12	-	9	-	<1



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated
☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
Detection Limits	<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
261	TP 16	0.1	25	-	<1	<1	-	24	-	11	-	<1	-	14	-	17	-	1
262	TP 16	1.2	9	-	<1	<1	-	13	-	5	-	<1	-	8	-	5	-	2
263	TP 17	0.45	15	-	<1	<1	-	29	-	14	-	<1	-	17	-	18	-	<1
264	TP 17	1.5	9	-	<1	<1	-	10	-	5	-	<1	-	8	-	5	-	<1
265	TP 19	0.35	19	-	2	<1	-	30	-	16	-	<1	-	21	-	33	-	<1
266	TP 19	1.25	9	-	<1	<1	-	10	-	6	-	<1	-	8	-	5	-	<1
267	TP 38	0.3	<1	-	<1	<1	-	9	-	21	-	<1	-	20	-	166	-	2
268	TP 38	0.6	17	-	1	<1	-	18	-	65	-	<1	-	19	-	123	-	<1
269	TP 38	2	4	-	<1	<1	-	6	-	4	-	<1	-	5	-	14	-	<1
270	TP 39	0.1	24	-	<1	<1	-	24	-	21	-	<1	-	15	-	767	-	<1
271	TP 39	0.9	4	-	<1	<1	-	8	-	6	-	<1	-	7	-	3	-	<1
272	TP 40	0.35	17	-	<1	<1	-	18	-	10	-	<1	-	13	-	106	-	<1
273	TP 41	0.35	21	-	<1	<1	-	30	-	10	-	<1	-	19	-	34	-	<1
274	TP 41	1.4	<1	-	<1	<1	-	4	-	2	-	<1	-	7	-	3	-	<1
275	TP 42	0.35	7	-	<1	<1	-	8	-	9	-	<1	-	8	-	16	-	<1
276	TP 42	1.7	3	-	2	<1	-	5	-	2	-	<1	-	4	-	7	-	<1
277	TP 43	0.4	22	-	<1	<1	-	32	-	9	-	<1	-	18	-	9	-	<1
278	TP 43	1.6	4	-	<1	<1	-	5	-	9	-	<1	-	7	-	3	-	<1
279	TP 44	0.1	22	-	<1	<1	-	24	-	27	-	<1	-	17	-	299	-	<1
280	TP 44	2	<1	-	1	<1	-	5	-	2	-	<1	-	4	-	2	-	<1



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



☐ Preliminary
☐ Validated

☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
Detection Limits	<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
281	TP 90	0.4	13	-	>1	>1	-	18	-	8	-	>1	-	12	-	31	-	<1
282	TP 90	1.1	4	-	1	<1	-	14	-	6	-	<1	-	10	-	8	-	<1
283	TP 91	0.1	23	-	>1	>1	-	16	-	18	-	<1	-	13	-	27	-	<1
284	TP 91	0.75	6	-	>1	>1	-	7	-	5	-	<1	-	7	-	3	-	<1
285	TP 91	1.2	1	-	<1	<1	-	4	-	3	-	<1	-	6	-	4	-	<1
286	TP 91	2.3	<1	-	>1	>1	-	4	-	1	-	<1	-	4	-	1	-	<1
287	TP 93	1.6	4	-	<1	<1	-	7	-	4	-	<1	-	7	-	<1	-	<1
288	TP 97	1.7	12	-	<1	<1	-	4	-	5	-	<1	-	7	-	3	-	<1
289	TP 98	1.6	10	-	2	<1	-	5	-	5	-	<1	-	8	-	4	-	<1
290	TP 101	0.5	16	-	<1	<1	-	11	-	50	-	<1	-	15	-	26	-	<1
291	TP 101	1.6	9	-	1	<1	-	4	-	43	-	<1	-	8	-	7	-	<1
292	TP 128	0.35	17	-	<1	<1	-	15	-	8	-	<1	-	13	-	12	-	2
293	TP 128	1.5	7	-	<1	<1	-	2	-	3	-	<1	-	6	-	2	-	2
301	TP11	0.2	<1	-	<1	<1	-	2	-	<1	-	<1	-	<1	-	<1	-	<1
302	TP11	0.7	1	-	<1	<1	-	9	-	<1	-	<1	-	5	-	<1	-	<1
303	TP13	0.4	<1	-	<1	<1	-	8	-	<1	-	<1	-	4	-	<1	-	<1
304	TP13	1	<1	-	<1	<1	-	<1	-	<1	-	<1	-	1	-	<1	-	<1
305	TP120	0.35	<1	-	<1	<1	-	10	-	<1	-	<1	-	5	-	3	-	<1
306	TP120	0.75	<1	-	<1	<1	-	6	-	<1	-	<1	-	2	-	3	-	<1
307	TP120	1.4	<1	-	<1	<1	-	10	-	<1	-	<1	-	3	-	<1	-	<1



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



☐ Preliminary
☐ Validated

☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
Detection Limits	<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium on Leachate	Chromium	Chromium on Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
308	TP138	0.3	13	-	<1	<1	-	19	-	4	-	>1	-	11	-	8	-	<1
309	TP138	0.7	19	0.05	1	<1	<0.05	7	<0.05	13	0.08	>1	<0.05	10	0.09	11	0.19	<1
310	TP138	1.5	9	-	<1	<1	-	5	-	3	-	>1	-	5	-	1	-	<1
311	TP141	0.4	28	-	<1	<1	-	23	-	11	-	>1	-	22	-	7	-	<1
312	TP141	1.45	6	-	>1	<1	-	6	-	4	-	>1	-	6	-	<1	-	<1
313	TP142	0.2	18	-	<1	<1	-	22	-	13	-	>1	-	15	-	39	-	<1
314	TP142	1.4	2	-	<1	<1	-	<1	-	1	-	<1	-	2	-	<1	-	<1
315	TP143	0.3	22	-	1	<1	-	10	-	84	-	<1	-	23	-	16	-	<1
316	TP143	0.45	22	-	<1	<1	-	17	-	9	-	<1	-	14	-	10	-	2
317	TP143	1.2	13	-	<1	<1	-	8	-	9	-	<1	-	11	-	2	-	<1
318	TP144	0.4	16	-	<1	<1	-	13	-	45	-	<1	-	16	-	10	-	2
319	TP144	0.5	27	-	<1	<1	-	19	-	16	-	<1	-	18	-	19	-	<1
320	TP144	1.1	11	-	<1	<1	-	12	-	14	-	<1	-	12	-	4	-	1
321	TP145	0.0-0.3	13	-	<1	<1	-	9	-	12	-	>1	-	11	-	15	-	<1
322	TP145	0.45	26	-	<1	<1	-	21	-	11	-	<1	-	18	-	13	-	<1
323	TP145	1	16	-	<1	<1	-	9	-	7	-	<1	-	10	-	3	-	<1
324	TP146	0.3	25	-	<1	<1	-	16	-	9	-	<1	-	14	-	15	-	<1
325	TP146	1.2	16	-	<1	<1	-	8	-	7	-	<1	-	10	-	7	-	<1
326	TP147	0.35	28	-	<1	<1	-	28	-	11	-	<1	-	22	-	9	-	<1
327	TP147	1.2	13	-	<1	<1	-	13	-	7	-	<1	-	12	-	5	-	<1



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated

☐ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
Detection Limits	<1	<0.05	<1	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1	<0.05	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Arsenic On Leachate	Boron (Water Soluble)	Cadmium	Cadmium On Leachate	Chromium	Chromium On Leachate	Copper	Copper on Leachate	Mercury	Mercury On Leachate	Nickel	Nickel On Leachate	Lead	Lead Leachate	Selenium
328	TP148	0.8	26	-	<1	<1	-	23	-	11	-	<1	-	17	-	10	-	2
329	TP148	0.2	13	-	<1	<1	-	11	-	7	-	<1	-	13	-	2	-	<1
330	TP149	0.3	25	-	1	<1	-	17	-	12	-	<1	-	17	-	11	-	<1
331	TP149	0.5	23	-	<1	<1	-	7	-	6	-	<1	-	10	-	17	-	2
332	TP149	1.2	11	-	<1	<1	-	7	-	4	-	<1	-	6	-	<1	-	<1
335	TP 35	0.2	72	<0.05	3	<1	<0.05	39	<0.05	9	<0.05	<1	<0.05	23	<0.05	18	<0.05	<1
336	TP 35	0.5	32	-	4	<1	-	34	-	9	-	<1	-	17	-	11	-	<1
337	TP 35	1.5	19	-	2	<1	-	19	-	5	-	<1	-	10	-	4	-	<1
338	TP 53	0.3	12	-	<1	<1	-	10	-	4	-	<1	-	9	-	3	-	4
339	TP 53	1.9	26	-	2	<1	-	28	-	11	-	<1	-	18	-	35	-	<1
340	TP 53	2.6	26	-	2	<1	-	37	-	10	-	<1	-	16	-	85	-	<1
341	TP 106	0.3	4	-	2	<1	-	4	-	2	-	<1	-	3	-	1	-	<1
342	TP 106	1	7	-	1	<1	-	6	-	3	-	<1	-	4	-	2	-	1
343	TP 106	1.2	11	-	1	<1	-	6	-	4	-	<1	-	5	-	2	-	<1
344	TP 107A	0.3	13	-	3	<1	-	14	-	6	-	<1	-	8	-	6	-	<1
345	TP 107A	1.1	21	-	<1	<1	-	35	-	9	-	<1	-	17	-	10	-	<1
346	TP 107A	2	3	-	<1	<1	-	5	-	3	-	<1	-	5	-	2	-	<1
347	TP 129	0.35	22	-	<1	<1	-	24	-	7	-	<1	-	13	-	6	-	<1
348	TP 129	1.3	NDP	-	NDP	NDP	-	NDP	-	NDP	-	NDP	-	NDP	-	NDP	-	NDP
349	TP 134	0.5	26	-	<1	<1	-	25	-	15	-	<1	-	26	-	10	-	<1

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Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : [REDACTED]
Client Ref. No. : MD3333A



☐ Preliminary
☐ Validated
☒ **NAMAS Accredited**

[illegible][illegible]



GEOCHEM ANALYTICAL SERVICES

TABLE OF RESULTS

Job Number : 97/01023/02/01

Client : ASPINWALL & COMPANY

Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL

Location : RAF Upper Heyford

Client Contact : [REDACTED]

Client Ref. No. : MD3333A

☐ Preliminary☐ Validated☒ NAMAS Accredited

Preliminary

Validated

NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%			g/l		
Detection Method	ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro1		
Detection Limits	<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003		
Sample Number	Sample Identity	Depth (m)	Selenium Leachate	Zinc	Zinc in leachate	Solvent Extractable Matter	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
1	TP 7	0.3	-	37	-	-	-	-	-	-	-	-	-	411	0.05	-	7.86	0.005
2	TP 7	1.2	-	25	-	-	-	-	-	-	-	-	-	571	0.06	-	8.27	0.013
3	TP 8	0.3	-	27	-	-	-	-	-	-	-	-	-	332	0.07	-	7.96	0.019
4	TP 8	1	-	36	-	-	-	-	-	-	-	-	-	115	0.04	-	7.99	0.006
5	TP 9	0.6	-	46	-	-	-	-	-	-	-	-	-	382	0.05	-	7.93	0.005
6	TP 9	2	-	11	-	-	-	-	-	-	-	-	-	140	0.08	-	8.41	0.019
7	TP 31	0.7	-	77	-	-	-	-	-	-	-	-	-	808	0.07	-	9.25	0.019
8	TP 31	0.75	-	84	-	-	-	-	-	-	-	-	-	2543	0.42	-	8.20	0.592
9	TP 32	0.5	-	52	-	-	-	-	-	-	-	-	-	200	0.04	-	7.98	0.007
10	TP 32	1	-	72	-	-	-	-	-	-	-	-	-	373	0.02	-	7.83	<0.003
11	TP 36	0.9	-	38	-	-	-	-	-	-	-	-	-	628	0.05	-	7.98	0.003
12	TP 51	0.1	-	65	-	-	-	-	-	-	-	-	-	976	0.02	-	7.88	0.011
13	TP 51	0.35	-	61	-	-	-	-	-	-	-	-	-	2658	0.05	-	7.93	0.007
14	TP 52	0.1	-	147	-	-	-	-	-	-	-	-	-	1710	0.04	-	7.70	0.013
15	TP 52	0.5	-	46	-	-	-	-	-	-	-	-	-	181	0.01	-	7.85	0.004
16	TP 54	0.25	-	72	-	-	-	-	-	-	-	-	-	754	0.02	-	7.86	0.008
17	TP 54	0.7	-	23	-	-	-	-	-	-	-	-	-	189	0.04	-	8.07	0.004
18	TP 55	0.2	-	22	-	-	-	-	-	-	-	-	-	1372	0.08	-	8.41	0.014
19	TP 55	0.8	-	54	-	-	-	-	-	-	-	-	-	2094	0.07	-	8.21	0.015
20	TP 56	0.25	-	63	-	-	-	-	-	-	-	-	-	1404	0.04	-	7.83	0.009



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : XXXXXXXXXX
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated
☒ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%			g/l	
Detection Method		ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro
Detection Limits		<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003
		Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH by TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/Meth Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
	0.75	-	39	-	-	-	-	-	-	-	-	-	823	0.06	-	8.00	0.006
	0.25	-	42	-	-	-	-	-	-	-	-	-	7919	0.06	-	7.94	0.027
	1	-	30	-	-	-	-	-	-	-	-	-	1093	0.06	-	8.20	0.012
	0.4	-	44	-	-	-	-	-	-	-	-	-	330	0.09	-	8.88	0.172
	1	-	34	-	-	-	-	-	-	-	-	-	339	0.06	-	7.98	<0.003
	0.2	-	54	-	-	-	-	-	-	-	-	-	318	0.06	-	8.14	0.046
	1.1	-	33	-	-	-	-	-	-	-	-	-	350	0.05	-	7.69	0.012
	0.1	-	97	-	-	-	-	-	-	-	-	-	1461	0.02	-	7.66	0.011
	0.5	-	34	-	-	-	-	-	-	-	-	-	888	0.05	-	7.89	0.005
	0.95	-	83	-	-	-	-	-	-	-	-	-	5878	0.05	-	7.96	0.016
	1.5	-	46	-	-	-	-	-	-	-	-	-	174	<0.01	-	7.70	0.003
	0.4	-	49	-	-	-	-	-	-	-	-	-	1030	0.10	-	8.88	0.090
	1	-	11	-	-	-	-	-	-	-	-	-	250	0.05	-	8.01	0.017
	0.1	-	78	-	-	-	-	-	-	-	-	-	709	0.05	-	7.71	0.011
	0.35	-	54	-	-	-	-	-	-	-	-	-	279	0.04	-	7.78	0.006
	0.25	-	46	-	-	-	-	-	-	-	-	-	256	0.05	-	7.73	0.007
	1	-	15	-	-	-	-	-	-	-	-	-	334	0.06	-	8.10	0.014
	0.2	-	196	-	-	-	-	-	-	-	-	-	2244	0.21	-	7.67	0.026
	0.5	-	57	-	-	-	-	-	-	-	-	-	257	0.03	-	7.71	0.022
	0.25	-	22	-	-	-	-	-	-	-	-	-	1711	0.09	-	8.31	0.015



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : [REDACTED]
Client Ref. No. : MD3333A



☐ Preliminary
☐ Validated

☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%			g/l
Detection Method	ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro1
Detection Limits	<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003

Sample Number	Sample Identity	Depth (m)	Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
41	TP 133 (A)	UNKNOWN	-	-	-	-	-	-	-	-	-	WHITE	12.0	-	-	-	-	-
42	TP 1	0.1	-	45	-	-	-	-	-	-	-	-	-	1067	0.06	-	7.22	0.012
43	TP 1	0.8	-	58	-	-	-	-	-	-	-	-	-	611	0.05	-	7.70	0.006
44	TP 2	0.4	-	14	-	-	-	-	-	-	-	-	-	341	0.08	-	8.16	0.011
45	TP 2	1.1	-	24	-	-	17	8	86	25	-	-	-	112	0.08	-	7.94	0.007
46	TP 2	2	-	262	-	-	31	9	219	40	-	-	-	259	0.06	-	8.14	0.013
47	TP 3	0.4	-	62	-	-	-	-	-	-	-	-	-	436	0.05	-	7.64	0.006
48	TP 3	0.9	-	32	-	-	-	-	-	-	-	-	-	433	0.09	-	8.12	0.015
49	TP 4	0.3	-	13	-	-	-	-	-	-	-	-	-	1259	0.07	-	8.16	0.017
50	TP 4	0.8	-	21	-	-	-	-	-	-	-	-	-	432	0.09	-	7.99	0.019
51	TP 5	0.4	-	36	-	-	-	-	-	-	-	-	-	253	0.07	-	8.19	0.016
52	TP 5	0.85	-	69	-	-	-	-	-	-	-	-	-	89	<0.01	-	8.13	0.055
53	TP 6	0.6	-	47	-	-	-	-	-	-	-	-	-	350	<0.01	-	7.71	0.067
54	TP 6	1.45	-	21	-	-	-	-	-	-	-	-	-	266	0.02	-	8.10	0.012
55	TP 6	1.9	-	9	-	-	-	-	-	-	-	-	-	1381	0.06	-	8.28	0.009
56	TP 59	0.9	-	10	-	-	-	-	-	-	-	-	-	151	0.04	-	8.33	0.008
57	TP 59	0.15	-	39	-	-	-	-	-	-	-	-	-	432	0.01	-	7.61	0.016
58	TP 60	0.7	-	60	-	-	-	-	-	-	-	-	-	910	<0.01	-	7.83	0.005
59	TP 60	1	-	22	-	-	-	-	-	-	-	-	-	227	0.04	-	8.00	0.005
60	TP 61	0.7	-	35	-	-	-	-	-	-	-	-	-	403	0.03	-	7.96	0.026



GLC CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated
☒ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%			g/l		
Detection Method		ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro	
Detection Limits		<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003	
Sample Number	Sample Identity	Depth (m)	Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH by TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
61	TP 61	1.1	-	30	-	-	66	13	306	99	-	-	-	406	0.06	-	8.02	0.005
62	TP 62	0.4	-	54	-	-	-	-	-	-	-	-	-	305	0.04	-	7.78	0.008
63	TP 62	0.8	-	8	-	-	-	-	-	-	-	-	-	221	0.04	-	8.38	<0.003
64	TP 62	1.4	-	14	-	-	-	-	-	-	-	-	-	419	0.08	-	8.38	<0.003
65	TP 67	0.35	-	26	-	-	-	-	-	-	-	-	-	95	0.04	-	7.59	0.005
66	TP 67	1.3	-	23	-	-	-	-	-	-	-	-	-	1051	0.03	-	8.23	<0.003
67	TP 68	0.1	-	107	-	-	-	-	-	-	-	-	-	939	<0.01	-	7.46	0.011
68	TP 68	0.8	-	17	-	-	-	-	-	-	-	-	-	691	0.05	-	8.19	<0.003
69	TP 69	0.4	-	64	-	-	-	-	-	-	-	-	-	404	0.01	-	7.50	0.004
70	TP 69	0.95	-	16	-	-	-	-	-	-	-	-	-	339	0.06	-	8.19	0.006
71	TP 70	0.2	-	54	-	-	-	-	-	-	-	-	-	761	0.03	-	8.02	0.023
72	TP 70	1	-	16	-	-	-	-	-	-	-	-	-	209	0.04	-	8.22	0.004
73	TP 71	0.1	-	44	-	-	-	-	-	-	-	-	-	692	0.01	-	7.80	0.007
74	TP 71	0.4	-	36	-	-	-	-	-	-	-	-	-	4097	<0.01	-	8.04	0.017
75	TP 71	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
76	TP 73	0.3	-	42	-	-	-	-	-	-	-	-	-	611	0.02	-	7.71	0.009
77	TP 73	0.6	-	45	-	-	-	-	-	-	-	-	-	1024	0.04	-	8.00	0.005
78	TP 73	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79	TP 78	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80	TP 78 A	0.35	-	31	-	-	-	-	-	-	-	-	-	596	0.03	-	8.28	0.024



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS



Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A

☐ Preliminary

☐ Validated

☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%			g/l
Detection Method	ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro1
Detection Limits	<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003

Sample Number	Sample Identity	Depth (m)	Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO ₄	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO ₄
81	TP 78 A	0.9	-	17	-	-	-	-	-	-	-	-	-	1329	0.05	-	8.29	0.004
82	TP 78 A	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83	TP 79	0.5	-	51	-	-	-	-	-	-	-	-	-	323	0.18	-	7.57	0.02
84	TP 79	0.9	-	19	-	-	-	-	-	-	-	-	-	240	0.07	-	8.23	0.017
85	TP 80	0.1	-	61	-	-	-	-	-	-	-	-	-	675	0.03	-	7.68	0.009
86	TP 80	0.55	-	46	-	-	-	-	-	-	-	-	-	393	0.02	-	7.84	0.006
87	TP 139	0.5	-	16	-	-	-	-	-	-	-	-	-	769	0.04	-	8.08	0.011
88	TP 139	1.1	-	42	-	-	96	11	409	107	-	-	-	517	0.02	-	7.64	0.007
89	TP 139	1.7	-	16	-	-	-	-	-	-	-	-	-	283	0.07	-	7.99	0.003
105	TP 50	0.1	-	52	-	-	-	-	-	-	-	-	-	7106	0.03	-	8.05	0.023
106	TP 50	1.8	-	17	-	-	-	-	-	-	-	-	-	1116	0.06	-	8.43	0.006
107	TP 49	0.1	-	68	-	-	-	-	-	-	-	-	-	855	0.01	-	8.06	0.010
108	TP 49	1	-	6	-	-	-	-	-	-	-	-	-	1665	0.05	-	8.38	0.010
109	TP 66	0.6	-	6	-	-	-	-	-	-	-	-	-	631	0.12	-	10.13	0.109
110	TP 66	1.4	-	52	-	-	230	3	196	233	-	-	-	429	0.05	-	8.13	0.049
111	TP 66	1.45	-	6	-	-	67	<1	99	67	-	-	-	167	0.05	-	8.35	0.017
112	TP 72	0.35	-	21	-	-	-	-	-	-	-	-	-	1206	<0.01	-	8.01	0.007
113	TP 72	1.2	-	42	-	-	-	-	-	-	-	-	-	303	<0.01	-	7.84	0.005
114	TP 74	0.5	-	31	-	-	-	-	-	-	-	-	-	662	0.03	-	8.06	0.010
115	TP 74	1.3	-	27	-	-	-	-	-	-	-	-	-	241	0.04	-	7.97	0.013

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GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated
☒ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		%	ppm	%			g/l
Detection Method		ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro
Detection Limits		<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003
Depth (m)		Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
	0.5	-	30	-	-	-	-	-	-	-	-	-	687	0.01	-	7.83	0.009
	1.4	-	144	-	-	674	1	295	675	-	-	-	971	0.07	-	8.13	0.045
	1.9	-	30	-	-	168	45	291	280	-	-	-	505	0.04	-	8.38	0.008
	0.45	-	46	-	-	-	-	-	-	-	-	-	226	0.02	-	7.97	0.006
	1.25	-	15	-	-	-	-	-	-	-	-	-	206	0.05	-	8.39	0.004
	0.5	-	45	-	-	-	-	-	-	-	-	-	306	<0.01	-	8.05	0.005
	1.5	-	15	-	-	-	-	-	-	-	-	-	206	0.04	-	8.18	0.012
	0.3	-	54	-	-	-	-	-	-	-	-	-	623	<0.01	-	7.89	0.009
	0.8	-	76	-	-	-	-	-	-	-	-	-	907	0.05	-	8.43	0.019
	0.1	-	38	-	-	-	-	-	-	-	-	-	466	0.01	-	7.79	0.008
	0.9	-	15	-	-	-	-	-	-	-	-	-	1459	0.03	-	8.42	0.004
	0.2	-	44	-	-	-	-	-	-	-	-	-	618	<0.01	-	7.82	0.015
	0.8	-	20	-	-	-	-	-	-	-	-	-	600	0.05	-	8.30	<0.003
	0.1	-	48	-	-	-	-	-	-	-	-	-	3920	<0.01	-	7.77	0.018
	0.7	-	11	-	-	-	-	-	-	-	-	-	222	0.04	-	8.31	0.003
	0.4	-	57	-	-	-	-	-	-	-	-	-	1118	<0.01	-	7.95	0.009
	1.55	-	20	-	-	-	-	-	-	-	-	-	204	0.03	-	8.27	0.009
	0.4	-	41	-	-	-	-	-	-	-	-	-	484	<0.01	-	7.90	0.005
	1.4	-	7	-	-	-	-	-	-	-	-	-	657	0.05	-	8.36	0.004
0.4	-	22	-	-	-	-	-	-	-	-	-	474	0.04	-	8.54	0.050	



GEOMATICS ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : XXXXXXXXXX
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated

☒ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		%	ppm	%			g/l	
Detection Method		ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectrofl	
Detection Limits		<0.1	<1	<0.05	<1	<1	>1	<1	<1	<0.1	NONE	<0.001	>1	<0.01	<0.01	<0.01	<0.003	
Sample Number	Sample Identity	Depth (m)	Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
136	TP 89	1.9	-	16	-	-	-	-	-	-	-	-	-	373	0.05	-	8.30	0.016
137	TP 109	0.4	-	37	-	-	-	-	-	-	-	-	-	348	0.02	-	8.01	0.006
138	TP 109	1.2	-	15	-	-	108	>1	188	108	-	-	-	296	0.06	-	8.18	0.059
139	TP 109	1.65	-	35	-	-	-	-	-	-	-	-	-	561	0.02	-	7.93	0.009
140	TP 110	0.2	-	16	-	-	-	-	-	-	-	-	-	229	0.04	-	8.13	0.005
141	TP 110	0.5	-	17	-	-	-	-	-	-	-	-	-	616	0.03	-	8.07	0.005
142	TP 110	1.4	-	9	-	-	-	-	-	-	-	-	-	305	0.06	-	8.43	0.010
143	TP 111	0.15	-	49	-	-	-	-	-	-	-	-	-	3619	0.02	-	7.88	0.013
144	TP 111	0.7	-	40	-	-	-	-	-	-	-	-	-	712	0.05	-	8.24	0.017
145	TP 113	0.4	<0.1	1365	<0.05	-	-	-	-	-	NONE	<0.001	2522	0.04	7.89	8.28	0.033	
146	TP 113A	0.4	<0.1	4563	1.73	-	-	-	-	-	<0.1	NONE	<0.001	1066	0.02	7.97	8.12	0.036
147	TP 124	0.2	-	45	-	-	-	-	-	-	-	-	-	339	<0.01	-	7.77	0.005
148	TP 124	1.2	-	14	-	-	-	-	-	-	-	-	-	737	0.05	-	8.23	0.019
149	TP 124	1.9	-	5	-	-	8473	9	290	8482	-	-	-	8780	0.22	-	7.92	0.044
150	TP 124	1.7	-	7	-	-	5755	13	657	5788	-	-	-	6437	0.07	-	8.09	0.022
151	TP 127	0.25	-	58	-	-	-	-	-	-	-	-	-	312	0.01	-	7.75	0.005
152	TP 127	0.9	-	12	-	-	-	-	-	-	-	-	-	292	0.06	-	8.35	0.008
153	TP 127	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
179	TP 18	0.2	-	58	-	-	-	-	-	-	-	-	-	800	0.05	-	7.74	0.016
180	TP 18	0.8	-	16	-	-	-	-	-	-	-	-	-	120	0.08	-	8.23	0.006

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GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : XXXXXXXXXX
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated
☒ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		%	ppm	%			g/l
Detection Method		ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro
Detection Limits		<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003
	Depth (m)	Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH by TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
	1.6	-	13	-	-	41	8	125	49	-	-	-	174	0.08	-	8.12	0.030
	0.35	-	44	-	-	-	-	-	-	-	-	-	3631	0.06	-	8.09	0.032
	0.5	-	51	-	-	-	-	-	-	-	-	-	872	0.01	-	8.18	0.009
	1.2	-	15	-	-	-	-	-	-	-	-	-	200	0.05	-	8.28	0.011
	0.3	-	271	-	-	-	-	-	-	-	-	-	54	0.59	-	9.80	1.306
	0.2	-	95	-	-	-	-	-	-	-	-	-	4946	0.02	-	8.17	0.022
	1	-	21	-	-	-	-	-	-	-	-	-	269	0.06	-	8.16	0.013
	0.5	-	53	-	-	-	-	-	-	-	-	-	256	0.02	-	7.84	0.004
	1.5	-	13	-	-	-	-	-	-	-	-	-	229	0.07	-	8.40	0.008
	0.4	-	52	-	-	-	-	-	-	-	-	-	413	0.01	-	7.98	0.008
	0.5	-	43	-	-	-	-	-	-	-	-	-	388	0.03	-	8.19	0.006
	1.1	-	16	-	-	-	-	-	-	-	-	-	153	0.08	-	8.20	0.011
	0.4	-	184	-	-	-	-	-	-	-	-	-	7911	0.04	-	8.15	0.016
	0.3	-	114	-	9665	-	-	-	-	-	-	-	10506	<0.01	-	8.17	0.011
	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.4	-	117	-	-	-	-	-	-	-	-	-	3993	0.05	-	8.31	0.007
	0.4	-	58	-	-	-	-	-	-	-	-	-	385	0.03	-	8.01	0.010
	1.2	-	24	-	-	-	-	-	-	-	-	-	190	0.06	-	8.38	0.025
	0.4	-	60	-	-	-	-	-	-	-	-	-	314	0.03	-	7.87	0.016
	1.3	-	15	-	-	-	-	-	-	-	-	-	192	0.05	-	7.61	0.032



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated

☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%			g/l
Detection Method	ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro1
Detection Limits	<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003

Sample Number	Sample Identity	Depth (m)	Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Mfn. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH by TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
201	TP 47	0.5	-	52	-	-	-	-	-	-	-	-	-	509	0.03	-	7.97	0.009
202	TP 47	1.2	-	22	-	-	-	-	-	-	-	-	-	338	0.02	-	8.28	0.026
203	TP 63	0.35	-	53	-	-	-	-	-	-	-	-	-	374	0.02	-	7.98	0.009
204	TP 63	1.1	-	26	-	-	-	-	-	-	-	-	-	292	0.06	-	8.15	0.007
205	TP 64	0.55	-	59	-	-	-	-	-	-	-	-	-	250	0.01	-	8.09	0.009
206	TP 64	1.3	-	28	-	-	-	-	-	-	-	-	-	226	0.08	-	8.22	0.008
207	TP 65	0.4	-	50	-	-	-	-	-	-	-	-	-	419	<0.01	-	7.86	0.044
208	TP 65	1.3	-	18	-	-	-	-	-	-	-	-	-	208	0.03	-	8.32	0.003
209	TP 81	0.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
210	TP 81A	0.55	-	50	-	-	-	-	-	-	-	-	-	274	<0.01	-	8.10	0.007
211	TP 81A	1.4	-	15	-	-	-	-	-	-	-	-	-	239	0.05	-	8.39	0.013
212	TP 86	0.45	-	85	-	-	-	-	-	-	<0.1	-	-	830	0.01	-	7.98	0.016
213	TP 86	1.2	-	60	-	-	-	-	-	-	-	-	-	153	0.09	-	8.29	0.010
214	TP 92	0.4	-	53	-	-	-	-	-	-	-	-	-	454	0.03	-	7.99	0.013
215	TP 92	1.4	-	19	-	-	-	-	-	-	-	-	-	384	0.05	-	8.28	0.018
216	TP 93	0.35	-	44	-	-	-	-	-	-	-	-	-	448	0.04	-	8.08	0.010
217	TP 93	0.9	-	28	-	495	1215	125	329	1340	-	-	-	1671	0.06	-	8.09	0.006
218	TP 94	0.4	-	139	-	-	-	-	-	-	-	-	-	958	0.04	-	8.10	0.010
219	TP 94	1.4	-	52	-	-	-	-	-	-	-	-	-	830	0.01	-	8.01	0.013
220	TP 95	0.35	-	49	-	-	-	-	-	-	-	-	-	552	<0.01	-	8.06	0.011

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GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : XXXXXXXXXX
Client Ref. No. : MD3333A



☐ Preliminary
☐ Validated
☒ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%			g/l		
Detection Method		ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro	
Detection Limits		<0.1	<1	<0.05	>1	<1	>1	>1	>1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003	
Depth (m)		Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4	
	1.2	-	45	-	-	-	-	-	-	-	-	-	314	0.04	-	8.03	0.008	
	0.4	-	28	-	-	-	-	-	-	-	-	-	185	0.04	-	8.87	0.032	
	0.4	-	53	-	-	-	-	-	-	-	-	-	1152	0.09	-	9.81	0.159	
	0.4	-	64	-	-	-	-	-	-	-	-	-	372	0.01	-	7.58	0.014	
	0.3	-	70	-	-	-	-	-	-	-	-	-	630	0.04	-	7.99	0.027	
	1.9	-	15	-	-	48	14	114	62	-	-	-	177	0.04	-	8.13	0.024	
	0.4	-	31	-	-	-	-	-	-	-	-	-	312	0.04	-	7.32	0.029	
	1.4	-	17	-	-	40	17	242	57	-	-	-	299	0.05	-	8.20	0.023	
	1.6	-	20	-	-	126	11	291	137	-	-	-	429	0.05	-	8.05	0.039	
	0.1	-	133	-	-	-	-	-	-	-	-	-	4675	0.01	-	7.58	0.014	
	0.5	-	194	-	-	-	-	-	-	-	-	-	1881	0.02	-	8.18	0.013	
	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	0.3	-	47	-	-	-	-	-	-	-	-	-	-	747	0.04	-	8.17	0.012
	1.2	-	35	-	-	-	-	-	-	-	-	-	-	123	0.06	-	8.18	0.013
	0.4	-	52	-	-	-	-	-	-	-	-	-	-	560	0.01	-	7.92	0.013
	1.3	-	24	-	-	-	-	-	-	-	-	-	-	211	0.05	-	8.32	0.004
	0.4	-	49	-	-	-	-	-	-	-	-	-	-	387	0.06	-	8.03	0.012
	1.2	-	76	-	-	61	18	135	59	-	-	-	-	214	<0.01	-	7.08	0.009
3	-	13	-	-	14	3	90	17	-	-	-	-	107	0.27	-	7.86	0.060	
0.2	-	20	-	-	-	-	-	-	-	-	-	-	141	0.09	-	8.41	0.018	



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated

☒ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%			g/l	
Detection Method		ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro1
Detection Limits		<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003
Depth (m)		Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH by TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
	0.2	-	68	-	-	-	-	-	-	-	-	-	4882	0.04	-	7.48	0.024
	1.2	-	10	-	-	-	-	-	-	-	-	-	122	0.07	-	8.28	3.206
	0.1	-	53	-	-	-	-	-	-	-	-	-	888	0.04	-	8.05	0.016
	0.6	-	42	-	-	-	-	-	-	-	-	-	407	0.05	-	8.48	0.033
	0.45	-	32	-	-	-	-	-	-	-	-	-	728	0.08	-	10.27	0.132
	1.1	-	13	-	-	-	-	-	-	-	-	-	261	0.07	-	8.49	0.049
	0.1	-	156	-	-	-	-	-	-	-	-	-	2126	0.03	-	8.09	0.014
	0.7	-	34	-	-	-	-	-	-	-	-	-	105	0.04	-	8.07	0.010
	0.2	-	25	-	-	-	-	-	-	-	-	-	250	0.07	-	8.34	0.006
	1.3	-	17	-	-	-	-	-	-	-	-	-	219	0.08	-	7.28	0.015
	0.3	-	53	-	-	-	-	-	-	-	-	-	118	0.04	-	7.91	0.008
	1.2	-	13	-	-	-	-	-	-	-	-	-	75	0.06	-	8.29	0.004
	0.1	-	58	-	-	-	-	-	-	-	-	-	236	0.03	-	7.95	0.015
	1	-	24	-	-	-	-	-	-	-	-	-	42	0.06	-	8.43	0.005
	1.3	-	10	-	-	-	-	-	-	-	-	-	174	0.05	-	8.24	0.005
	0.4	-	92	-	-	127	174	1159	301	-	-	-	1463	0.10	-	7.99	0.027
	1	-	11	-	-	-	-	-	-	-	-	-	156	0.05	-	8.46	<0.003
	0.4	-	33	-	-	-	-	-	-	-	-	-	335	0.04	-	8.18	0.008
	1.5	-	51	-	-	-	-	-	-	-	-	-	351	0.02	-	7.97	0.008
	2.5	-	31	-	-	119	10	259	128	-	-	-	387	0.07	-	8.11	0.013



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated
☒ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%			g/l		
Detection Method		ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro	
Detection Limits		<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003	
Sample Number	Sample Identity	Depth (m)	Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
261	TP 16	0.1	-	53	-	-	-	-	-	-	-	-	-	8530	0.02	-	7.76	0.020
262	TP 16	1.2	-	17	-	-	-	-	-	-	-	-	-	284	0.05	-	8.23	0.006
263	TP 17	0.45	-	58	-	-	-	-	-	-	-	-	-	311	0.01	-	7.67	0.006
264	TP 17	1.5	-	20	-	-	-	-	-	-	-	-	-	191	0.04	-	8.19	0.012
265	TP 19	0.35	-	69	-	-	-	-	-	-	-	-	-	563	0.01	-	7.88	0.012
266	TP 19	1.25	-	19	-	-	-	-	-	-	-	-	-	114	0.04	-	8.24	0.006
267	TP 38	0.3	-	27	-	-	-	-	-	-	-	-	-	149	2.20	-	7.65	1.361
268	TP 38	0.6	-	69	-	-	-	-	-	-	-	-	-	373	0.03	-	8.02	0.093
269	TP 38	2	-	18	-	-	-	-	-	-	-	-	-	104	0.07	-	8.22	0.092
270	TP 39	0.1	-	104	-	-	-	-	-	-	-	-	-	901	0.02	-	7.92	0.013
271	TP 39	0.9	-	16	-	-	-	-	-	-	-	-	-	159	0.06	-	8.22	0.004
272	TP 40	0.35	-	163	-	-	-	-	-	-	-	-	-	1121	0.03	-	8.09	0.016
273	TP 41	0.35	-	50	-	-	-	-	-	-	-	-	-	178	0.02	-	7.66	0.008
274	TP 41	1.4	-	9	-	-	-	-	-	-	-	-	-	181	0.05	-	8.25	0.023
275	TP 42	0.35	-	31	-	-	-	-	-	-	-	-	-	202	0.03	-	8.28	0.003
276	TP 42	1.7	-	10	-	-	39	15	86	54	-	-	-	141	0.09	-	8.25	0.028
277	TP 43	0.4	-	48	-	-	-	-	-	-	-	-	-	70	0.03	-	8.26	0.010
278	TP 43	1.6	-	11	-	-	-	-	-	-	-	-	-	146	0.06	-	8.34	0.012
279	TP 44	0.1	-	152	-	-	-	-	-	-	-	-	-	2414	0.03	-	7.96	0.014
280	TP 44	2	-	11	-	-	-	-	-	-	-	-	-	69	0.07	-	8.14	0.009



GLUCHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : [REDACTED]
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated

☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%		g/l
Detection Method	ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Spectro1
Detection Limits	<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.003

Sample Number	Sample Identity	Depth (m)	Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MethOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
281	TP 90	0.4	-	42	-	-	-	-	-	-	-	-	-	136	0.05	-	8.14	0.009
282	TP 90	1.1	-	304	-	-	-	-	-	-	-	-	-	619	0.05	-	8.04	0.007
283	TP 91	0.1	-	67	-	-	-	-	-	-	-	-	-	838	0.05	-	7.96	0.012
284	TP 91	0.75	-	16	-	-	38	36	145	74	-	-	-	219	0.06	-	7.97	0.023
285	TP 91	1.2	-	14	-	-	107	127	532	234	-	-	-	767	0.15	-	7.97	0.074
286	TP 91	2.3	-	11	-	-	30	7	109	37	-	-	-	146	0.06	-	8.14	0.006
287	TP 93	1.6	-	15	-	-	948	23	185	1001	-	-	-	1158	0.08	-	8.17	0.018
288	TP 97	1.7	-	14	-	-	-	-	-	-	-	-	-	208	0.06	-	8.24	0.004
289	TP 98	1.6	-	15	-	-	-	-	-	-	-	-	-	103	0.05	-	8.15	0.003
290	TP 101	0.5	-	180	-	-	-	-	-	-	-	-	-	620	0.03	-	8.11	0.009
291	TP 101	1.6	-	23	-	-	-	-	-	-	-	-	-	142	0.06	-	8.41	0.012
292	TP 128	0.35	-	37	-	-	-	-	-	-	-	-	-	622	0.05	-	7.92	0.007
293	TP 128	1.5	-	12	-	-	-	-	-	-	-	-	-	124	0.06	-	8.29	0.005
301	TP11	0.2	-	5	-	-	-	-	-	-	-	-	-	122	0.03	-	8.27	0.006
302	TP11	0.7	-	20	-	-	-	-	-	-	-	-	-	550	<0.01	-	8.30	0.017
303	TP13	0.4	-	24	-	-	-	-	-	-	-	-	-	522	<0.01	-	8.18	0.007
304	TP13	1	-	4	-	-	-	-	-	-	-	-	-	208	0.03	-	8.41	0.051
305	TP120	0.35	-	33	-	-	-	-	-	-	-	-	-	2102	0.04	-	8.45	0.060
306	TP120	0.75	-	16	-	-	-	-	-	-	-	-	-	3296	0.05	-	8.56	0.036
307	TP120	1.4	-	17	-	-	-	-	-	-	-	-	-	602	0.05	-	8.61	0.058

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GEOCHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated
☒ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%			g/l	
Detection Method		ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro
Detection Limits		<0.1	<1	<0.05	>1	<1	>1	>1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003
		Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
	0.3	-	66	-	-	-	-	-	-	-	-	-	1537	<0.01	-	8.16	0.017
	0.7	<0.1	30	0.16	-	-	-	-	-	-	-	-	4517	0.08	7.84	8.27	0.061
	1.5	-	12	-	-	734	36	394	770	-	-	-	1165	0.03	-	8.81	0.030
	0.4	-	46	-	-	-	-	-	-	-	-	-	441	<0.01	-	7.92	0.017
	1.45	-	10	-	-	-	-	-	-	-	-	-	2118	0.04	-	8.29	0.062
	0.2	-	185	-	-	513	556	6048	1069	-	-	-	7124	0.03	-	8.24	0.143
	1.4	-	6	-	-	-	-	-	-	-	-	-	131	0.03	-	8.58	0.050
	0.3	-	205	-	-	47	37	323	74	-	-	-	397	0.06	-	8.26	0.089
	0.45	-	38	-	-	16	6	215	22	-	-	-	237	0.03	-	7.95	0.017
	1.2	-	27	-	-	-	-	-	-	-	-	-	219	0.03	-	8.31	0.063
	0.4	-	69	-	-	-	-	-	-	-	-	-	600	0.04	-	8.39	0.078
	0.5	-	52	-	-	26	6	456	32	-	-	-	488	0.01	-	7.77	0.073
	1.1	-	30	-	-	23	7	203	30	-	-	-	183	0.04	-	8.21	0.035
	0.0-0.3	-	84	-	-	-	-	-	-	-	-	-	907	0.11	-	8.35	0.076
	0.45	-	43	-	-	-	-	-	-	-	-	-	154	0.02	-	7.89	<0.003
	1	-	23	-	-	-	-	-	-	-	-	-	236	0.03	-	8.23	0.030
	0.3	-	57	-	-	522	16	764	538	-	-	-	1304	0.08	-	7.93	0.081
	1.2	-	34	-	-	452	4	116	456	-	-	-	573	0.05	-	8.30	0.056
	0.35	-	57	-	-	-	-	-	-	-	-	-	285	<0.01	-	7.91	0.097
	1.2	-	28	-	-	-	-	-	-	-	-	-	230	0.02	-	8.36	0.026



GL CHEM ANALYTICAL SERVICES
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☐ Validated

☒ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		%	ppm	%			g/l	
Detection Method		ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro1	
Detection Limits		<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003	
Sample Number	Sample Identity	Depth (m)	Selenium Leachate	Zinc	Zinc in Leachate	Solvent Extractable Matter	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC	Hexavalent Chrome (acid)	Asbestos Type	Asbestos	DCM/MeOH Extract	Acid Sol. Sulphate as SO4	pH of Leachate	pH Value in Soil	Water Soluble Sulphate as SO4
328	TP148	0.8	-	57	-	-	110	18	498	128	-	-	-	626	0.03	-	8.23	0.109
329	TP148	0.2	-	30	-	-	-	-	-	-	-	-	-	305	0.06	-	8.20	0.106
330	TP149	0.3	-	68	-	-	22	4	42	25	-	-	-	67	0.05	-	8.96	0.194
331	TP149	0.5	-	77	-	-	1101	22	426	1123	-	-	-	1550	0.07	-	8.20	0.132
332	TP149	1.2	-	13	-	-	-	-	-	-	-	-	-	162	0.06	-	8.52	0.135
335	TP 35	0.2	<0.1	78	<0.05	-	949	40	179	989	-	-	-	1169	0.11	-	8.22	0.102
336	TP 35	0.5	-	44	-	-	265	259	494	524	-	-	-	1021	0.01	-	7.87	0.020
337	TP 35	1.5	-	17	-	-	-	-	-	-	-	-	-	211	0.04	-	8.14	0.014
338	TP 53	0.3	-	152	-	-	-	-	-	-	-	-	-	2472	0.18	-	11.27	0.128
339	TP 53	1.9	-	51	-	-	2783	34	269	2817	-	-	-	3089	0.06	-	7.45	0.027
340	TP 53	2.6	-	42	-	-	677	30	278	707	-	-	-	986	<0.01	-	7.65	0.025
341	TP 106	0.3	-	34	-	-	-	-	-	-	-	-	-	922	0.26	-	8.55	0.385
342	TP 106	1	-	10	-	-	-	-	-	-	-	-	-	187	0.05	-	6.85	0.058
343	TP 106	1.2	-	11	-	-	-	-	-	-	-	-	-	515	0.05	-	8.36	0.057
344	TP 107A	0.3	-	18	-	-	-	-	-	-	-	-	-	527	0.11	-	8.33	0.077
345	TP 107A	1.1	-	47	-	-	-	-	-	-	-	-	-	238	0.02	-	8.11	0.068
346	TP 107A	2	-	10	-	-	-	-	-	-	-	-	-	149	0.05	-	8.44	0.018
347	TP 129	0.35	-	28	-	-	-	-	-	-	-	-	-	100	0.04	-	8.26	0.012
348	TP 129	1.3	-	NDP	-	-	-	-	-	-	-	-	-	NDP	NDP	-	NDP	NDP
349	TP 134	0.5	-	49	-	-	-	-	-	-	-	-	-	1232	0.03	-	7.97	0.010

Printed on 30 June 1997

Checked by

Page 92 of 205



Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 01/05/97
(of first sample)

Sample Type : SOIL
Location : RAF Upper Heyford
Client Contact : [REDACTED]
Client Ref. No. : MD3333A



☐ Preliminary
☐ Validated
☐ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		%	ppm	%			g/l
Detection Method	ICP	ICP	ICP	Soxtec	TLC	TLC	TLC	TLC	Spectro	Visual	Grav	Gravi	Leco	Meter	Meter	Spectro1
Detection Limits	<0.1	<1	<0.05	<1	<1	<1	<1	<1	<0.1	NONE	<0.001	<1	<0.01	<0.01	<0.01	<0.003

[illegible]



by

G.C.



Separatory Funnel Ext:= No
 Soxtec Extraction:= Yes
 Column Extraction:= No

Internal Standard:= A :- 2,2,4,4,6,8,8, HEPTAMETHYLNONANE B :- 1-CHLOROCTADECANE C :- SQUALANE

[illegible]

Checked by

TECHNICAL SERVICE

Diesel Range Organics

by:

G.C.



Client Ref:= MD3333A
Sample Matrix:= Soil
Job Number:= 97/1023/02/01

Date Sample Received:= 1/5/97
Date Extracted/Prepared:= 22/5/97
Date Analysed:= 25/5/97

Separatory Funnel Ext:= No
 Soxhlet Extraction:= Yes
 Column Extraction:= No

Internal Standard:= A :- 2,2,4,4,6,8,8, HEPTAMETHYLNONANE B :- 1-CHLOROCTADECANE C :- SQUALANE

[illegible]

Checked by _____

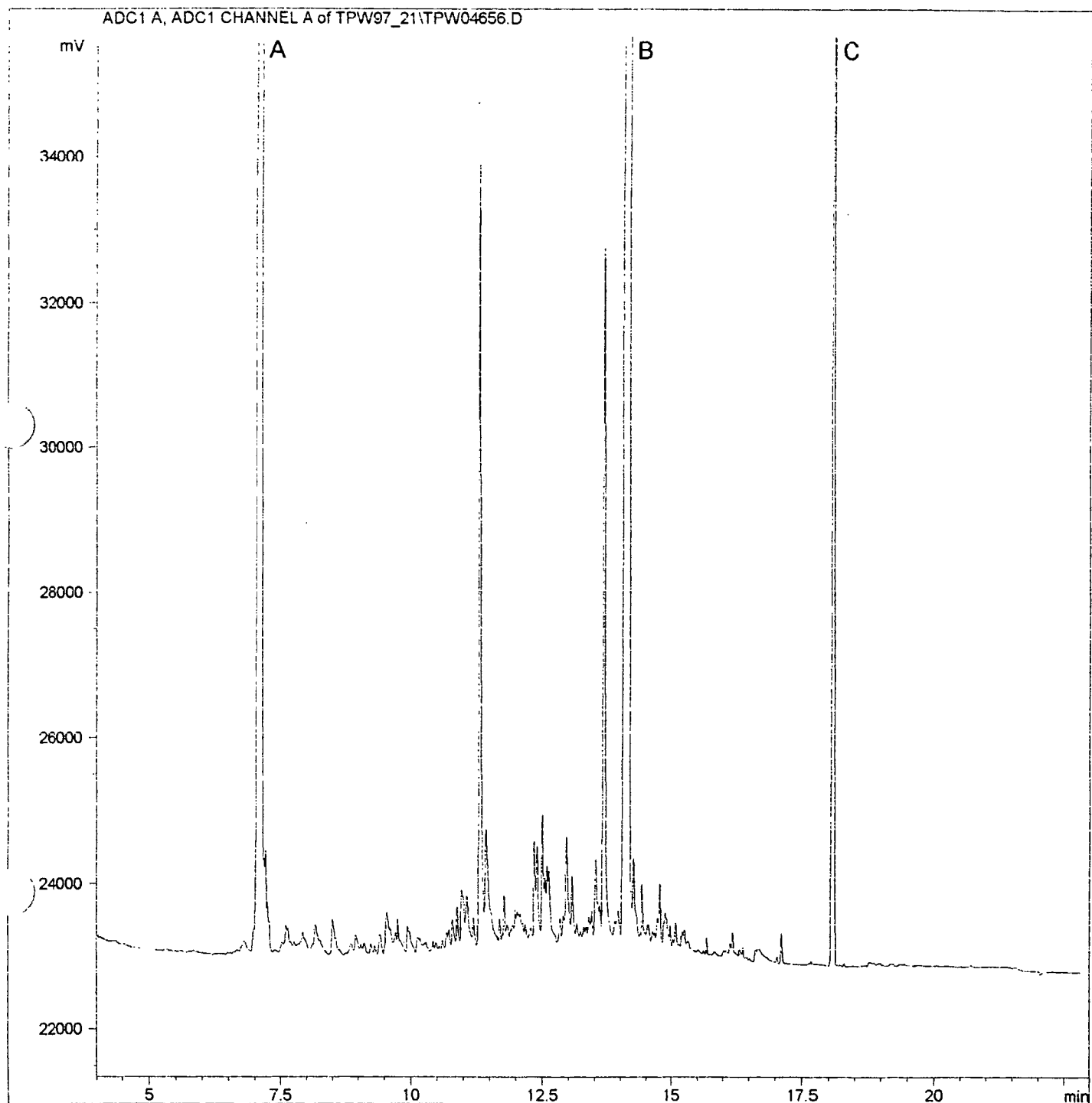


by
G.C.



GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

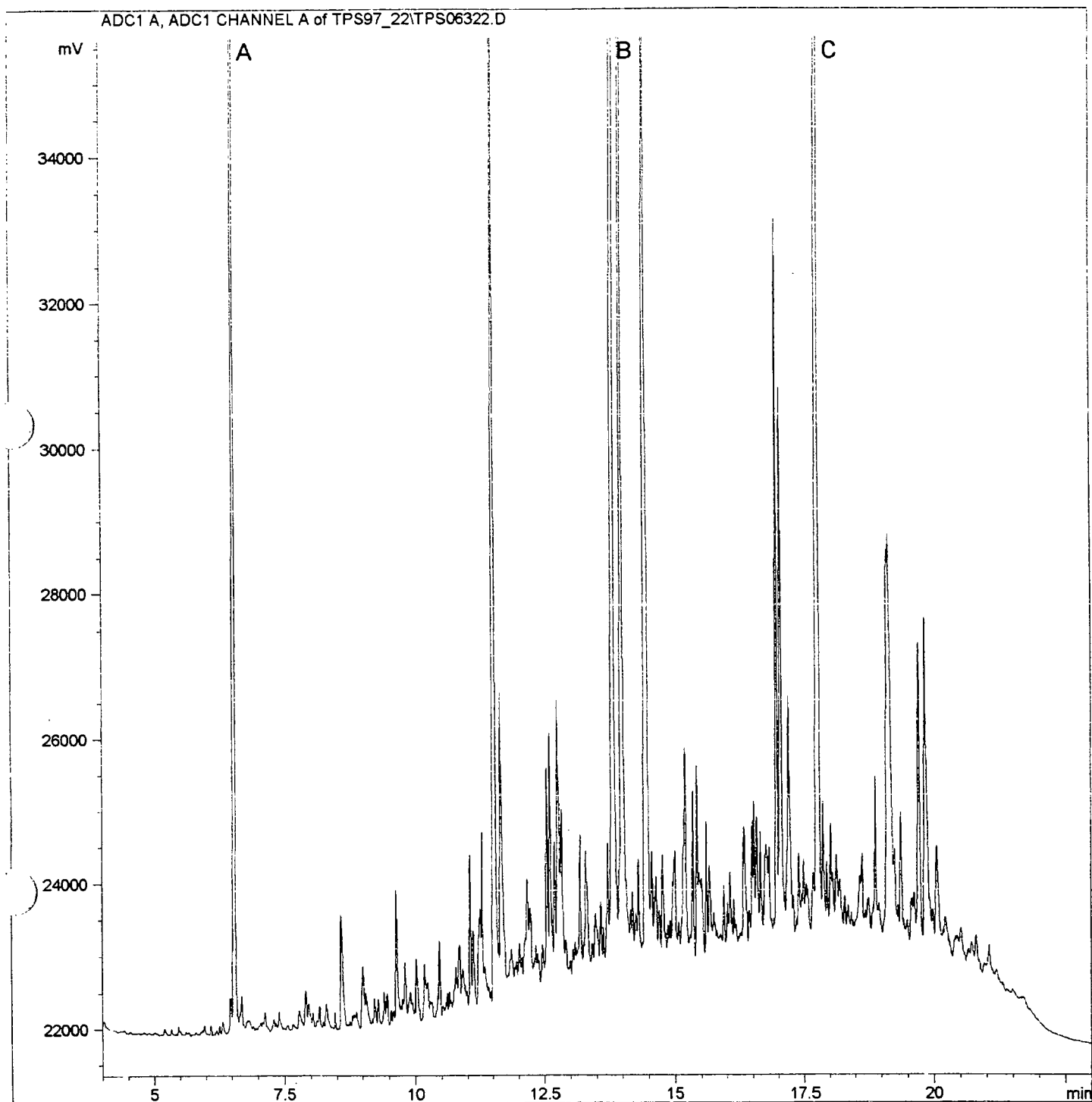
1023-105





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

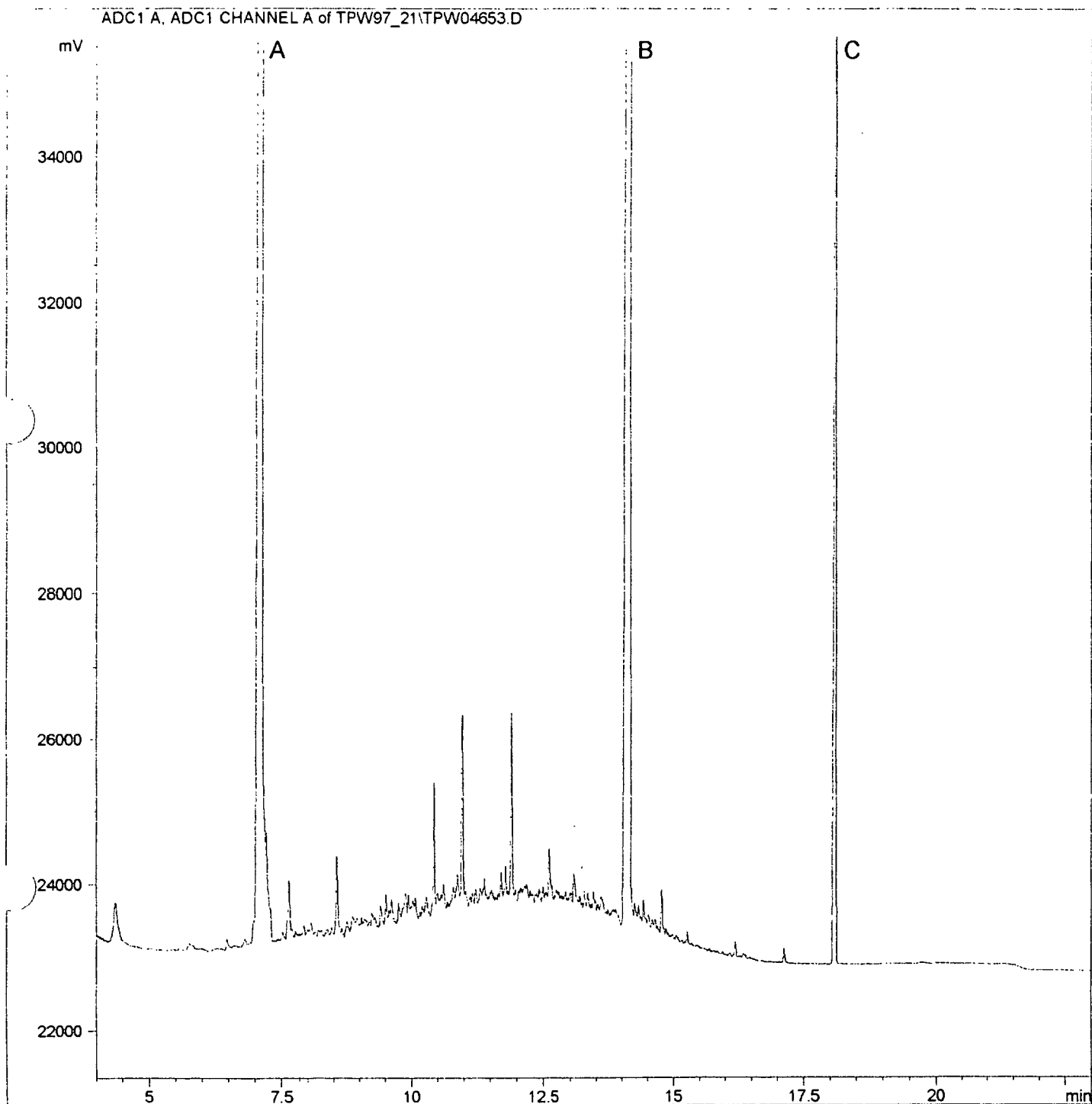
1023-194





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

1023-217



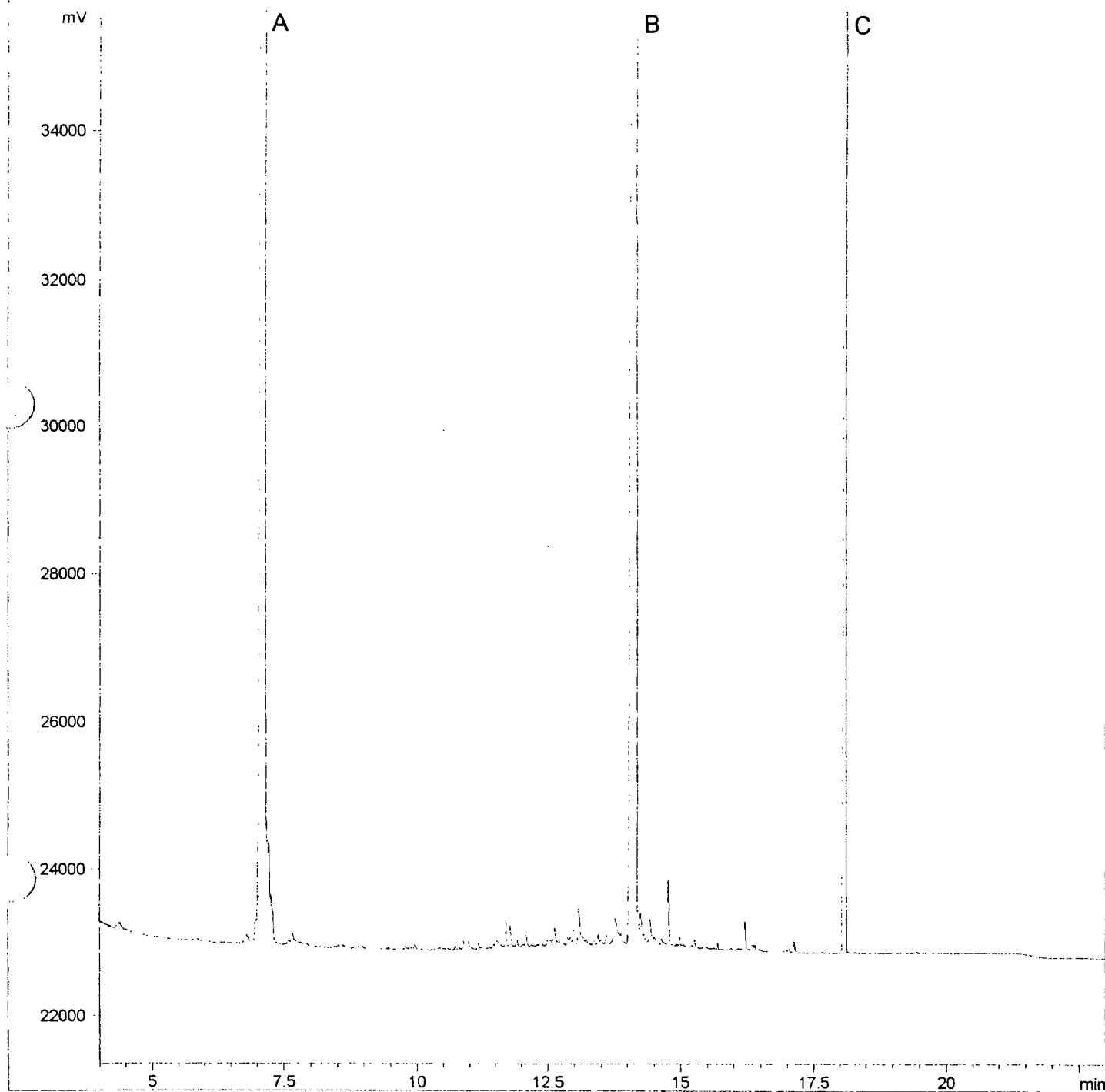


GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

1023-256



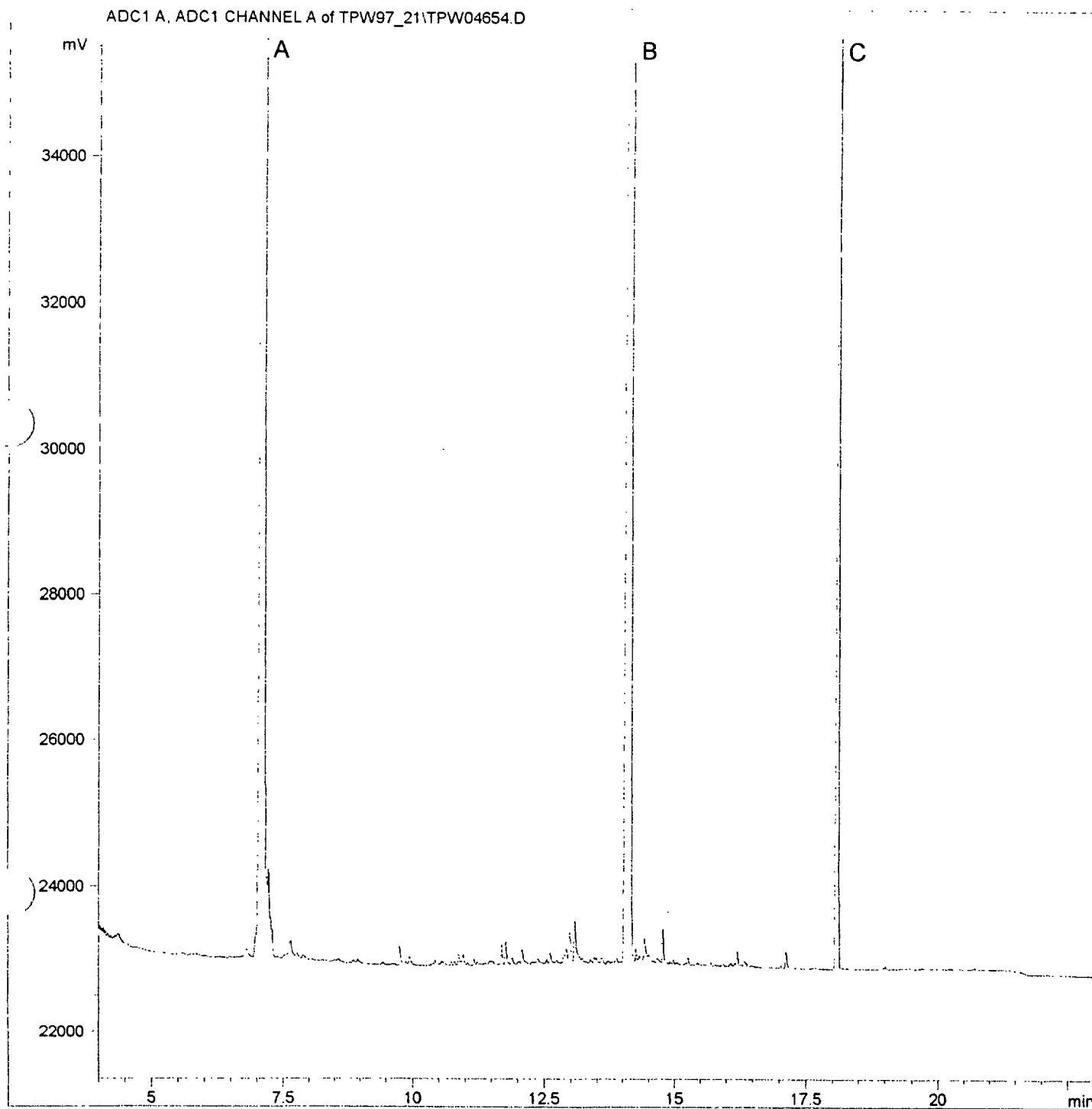
ADC1 A, ADC1 CHANNEL A of TPW97_21\TPW04655.D





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

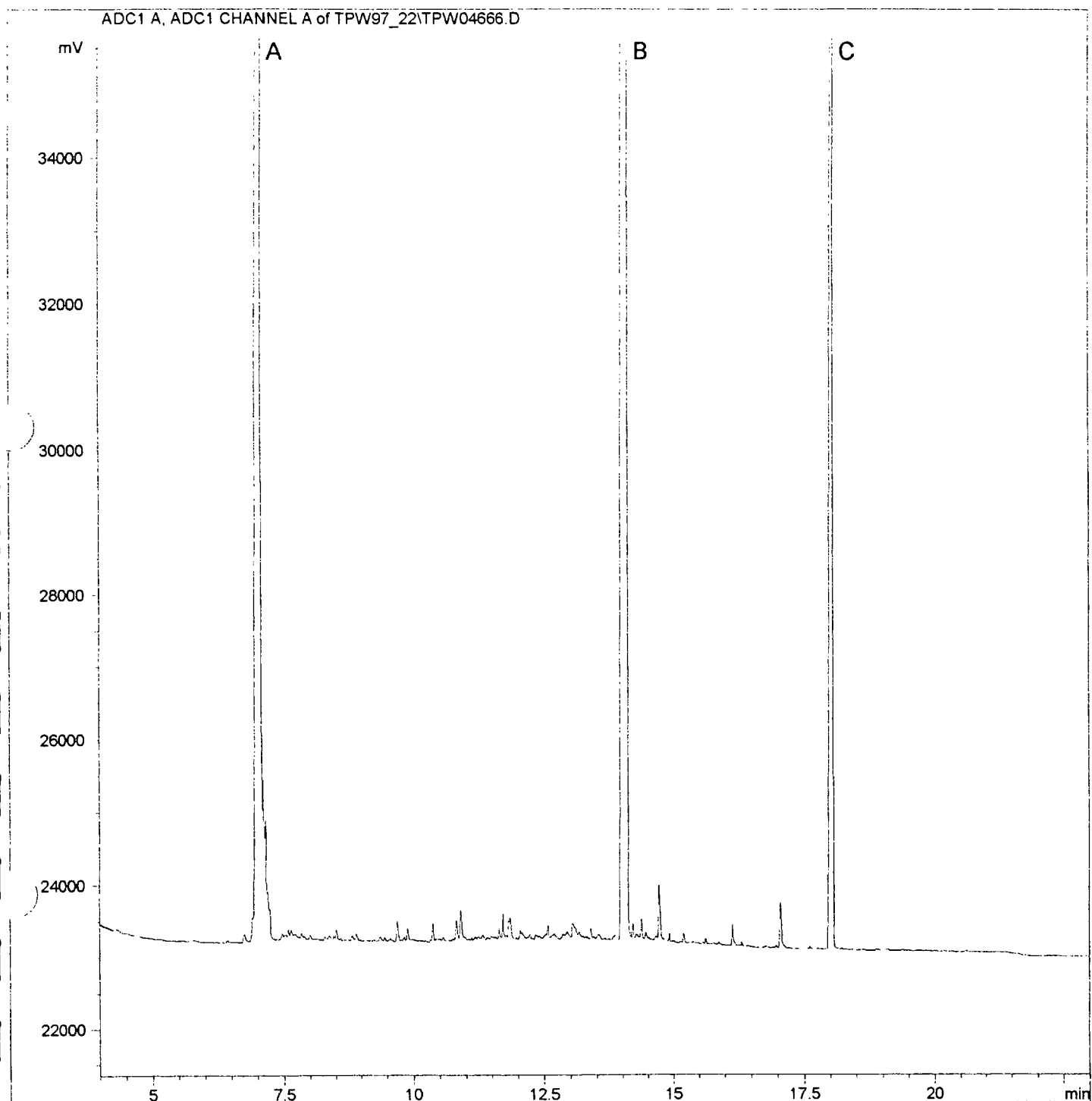
1023-261





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

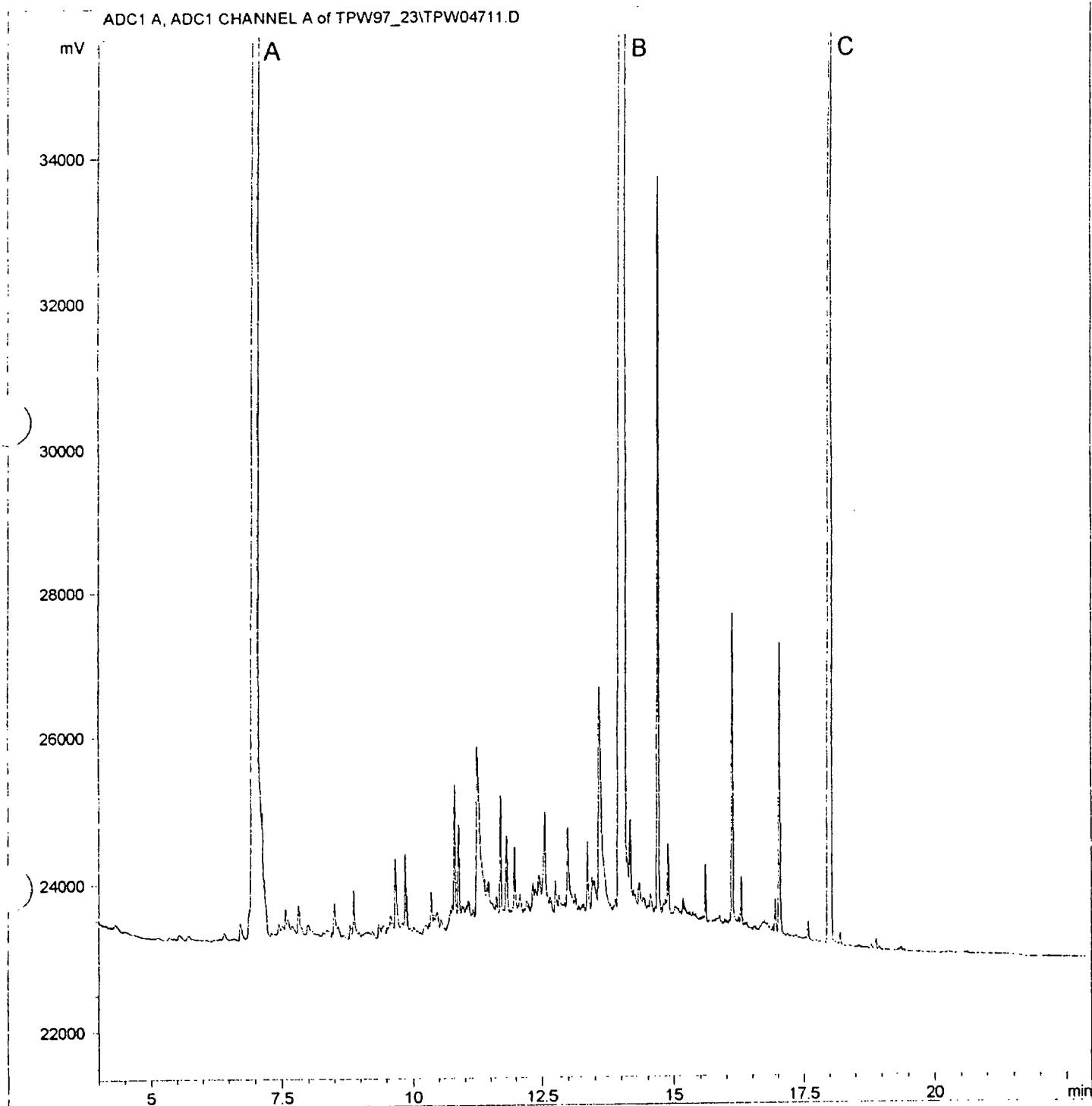
1023-313





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

1023-414



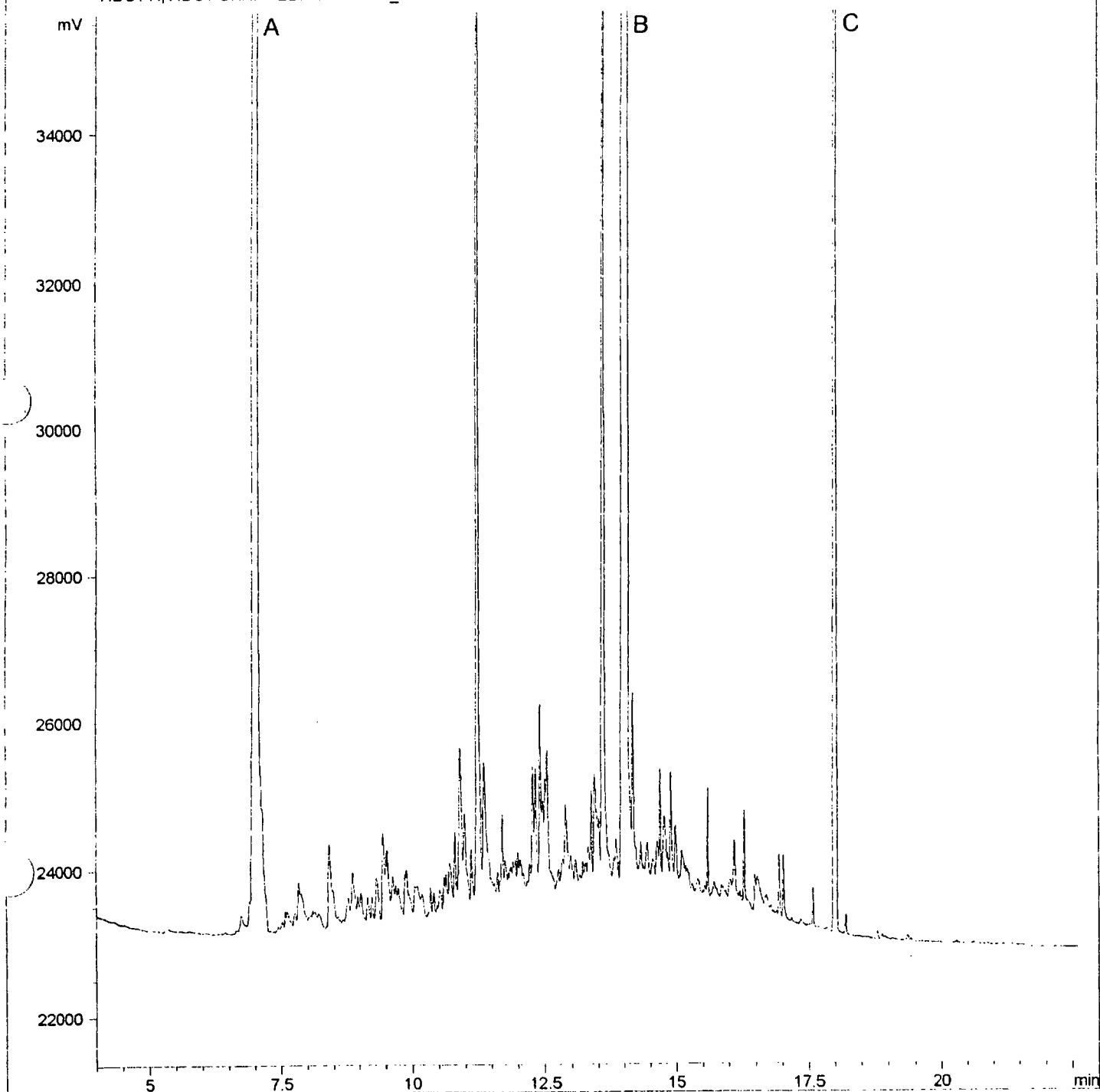


GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

1023-415



ADC1 A, ADC1 CHANNEL A of TPW97_23\TPW04712.D



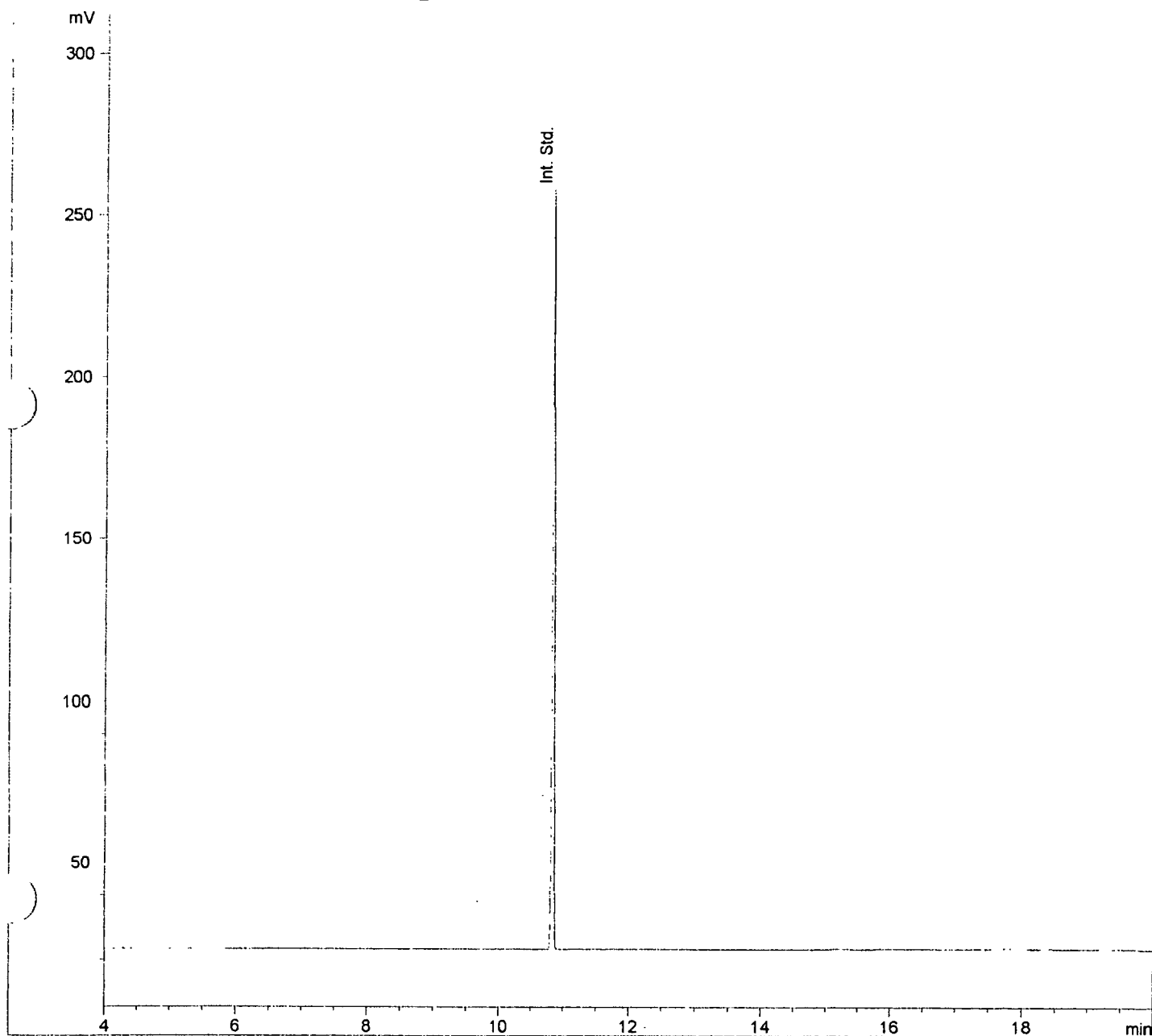


GEOCHEM ANALYTICAL SERVICES
Gasoline Range Organics (G.R.O.) Analysis
By G.C.

1023-105



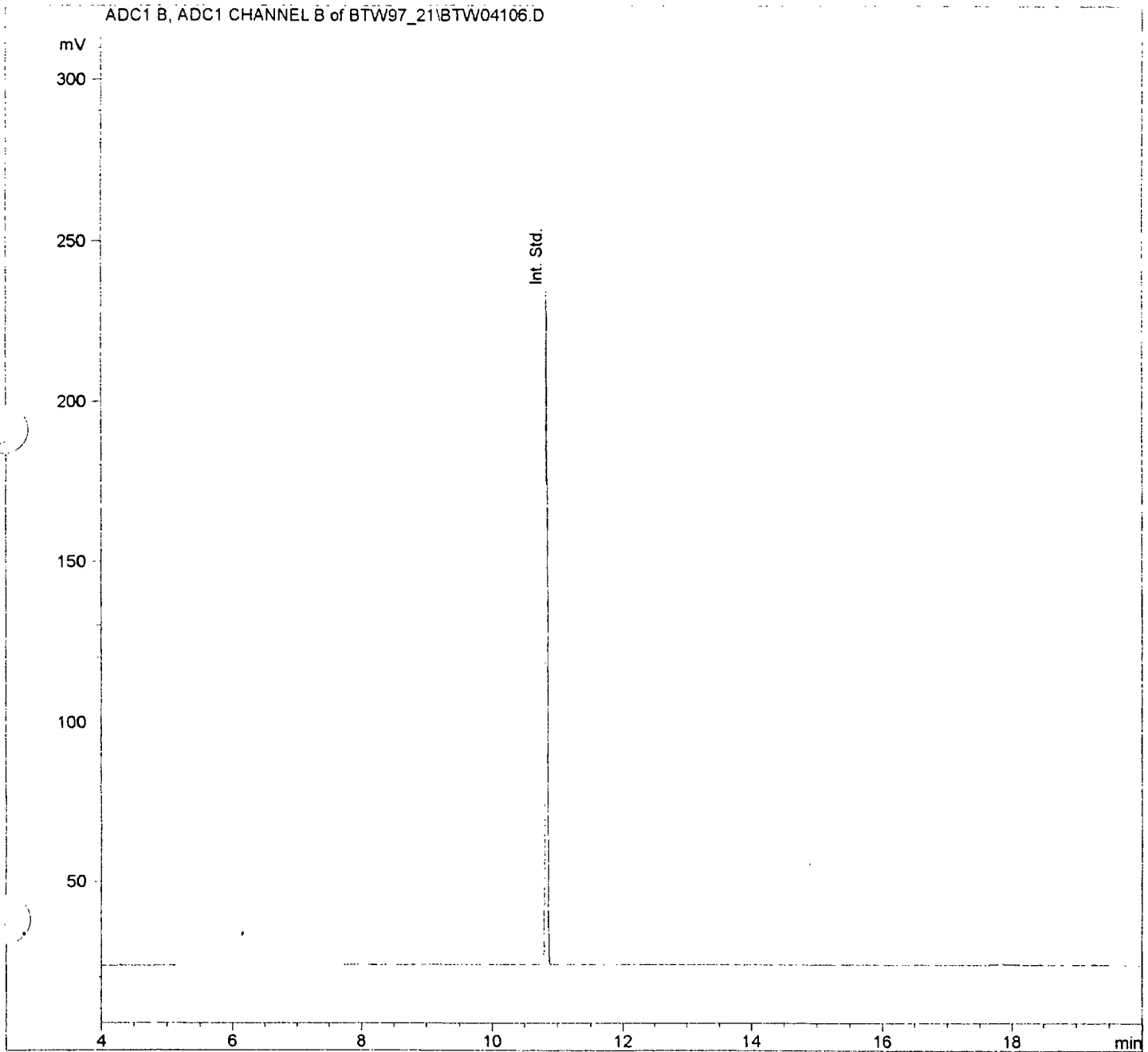
ADC1 B, ADC1 CHANNEL B of BTW97_21\BTW04107.D





GEOCHEM ANALYTICAL SERVICES
Gasoline Range Organics (G.R.O.) Analysis
By G.C.

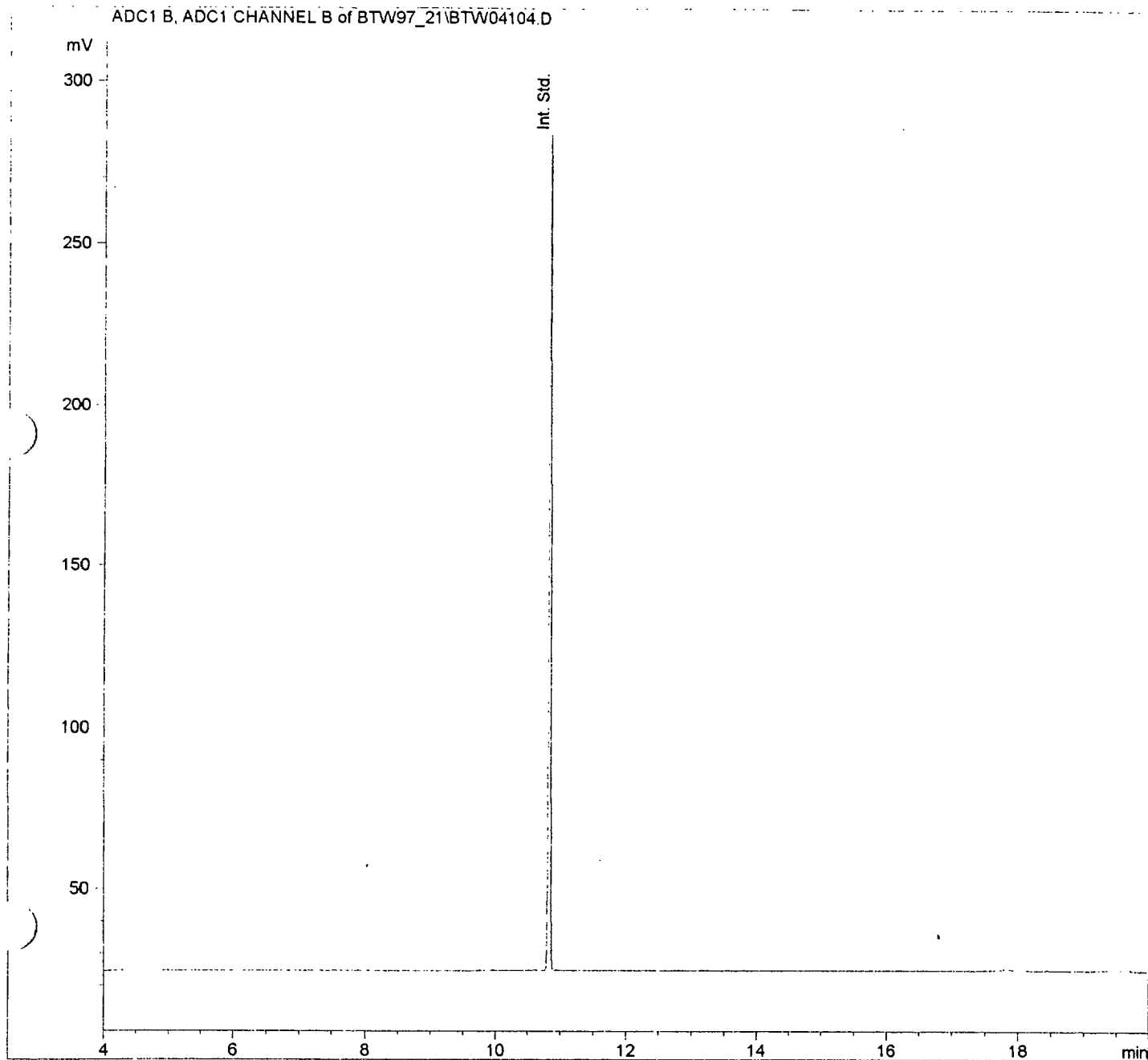
1023-194





GEOCHEM ANALYTICAL SERVICES
Gasoline Range Organics (G.R.O.) Analysis
By G.C.

1023-256



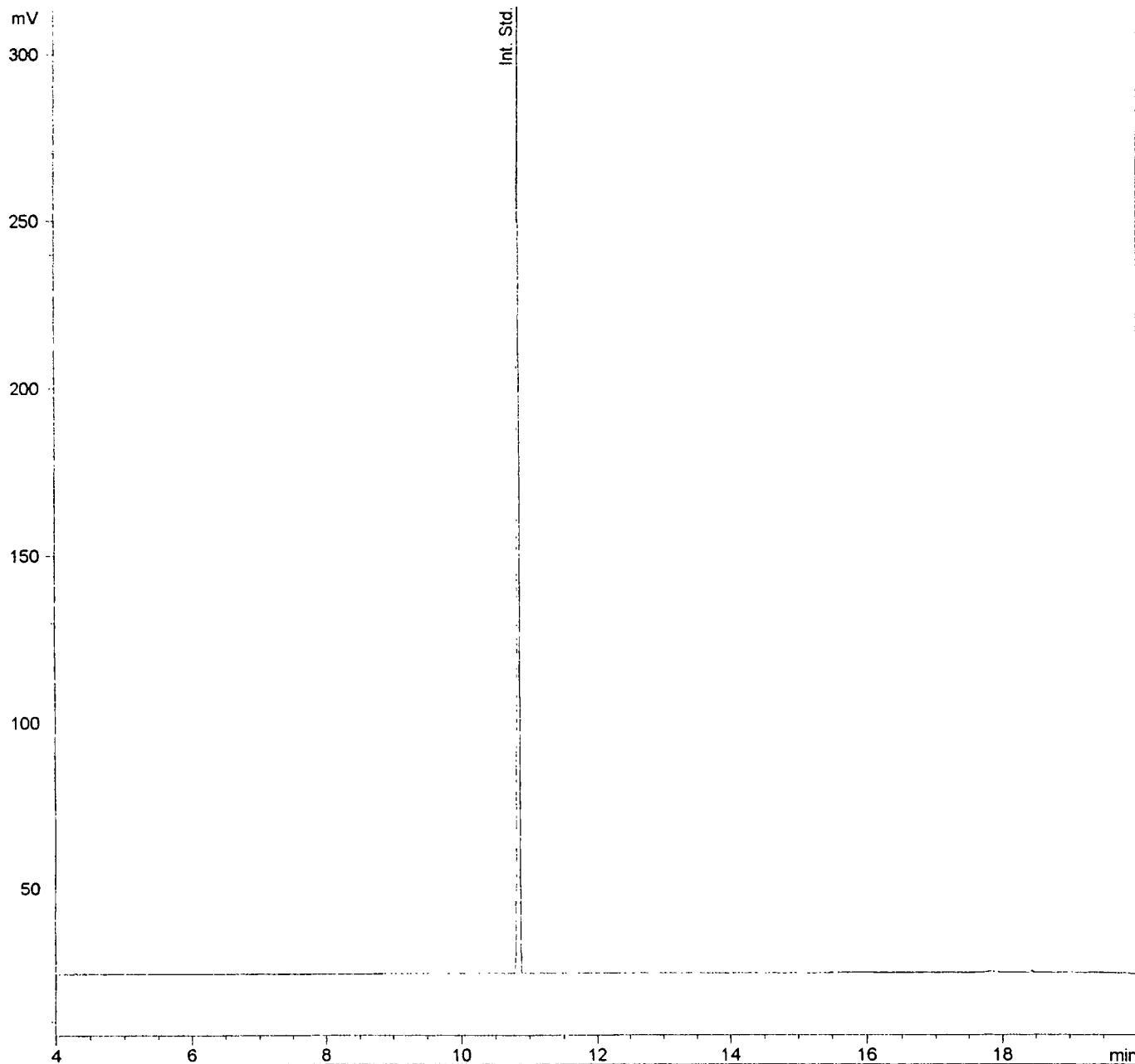


GEOCHEM ANALYTICAL SERVICES
Gasoline Range Organics (G.R.O.) Analysis
By G.C.

1023-261



ADC1 B, ADC1 CHANNEL B of BTW97_21\BTW04105.D



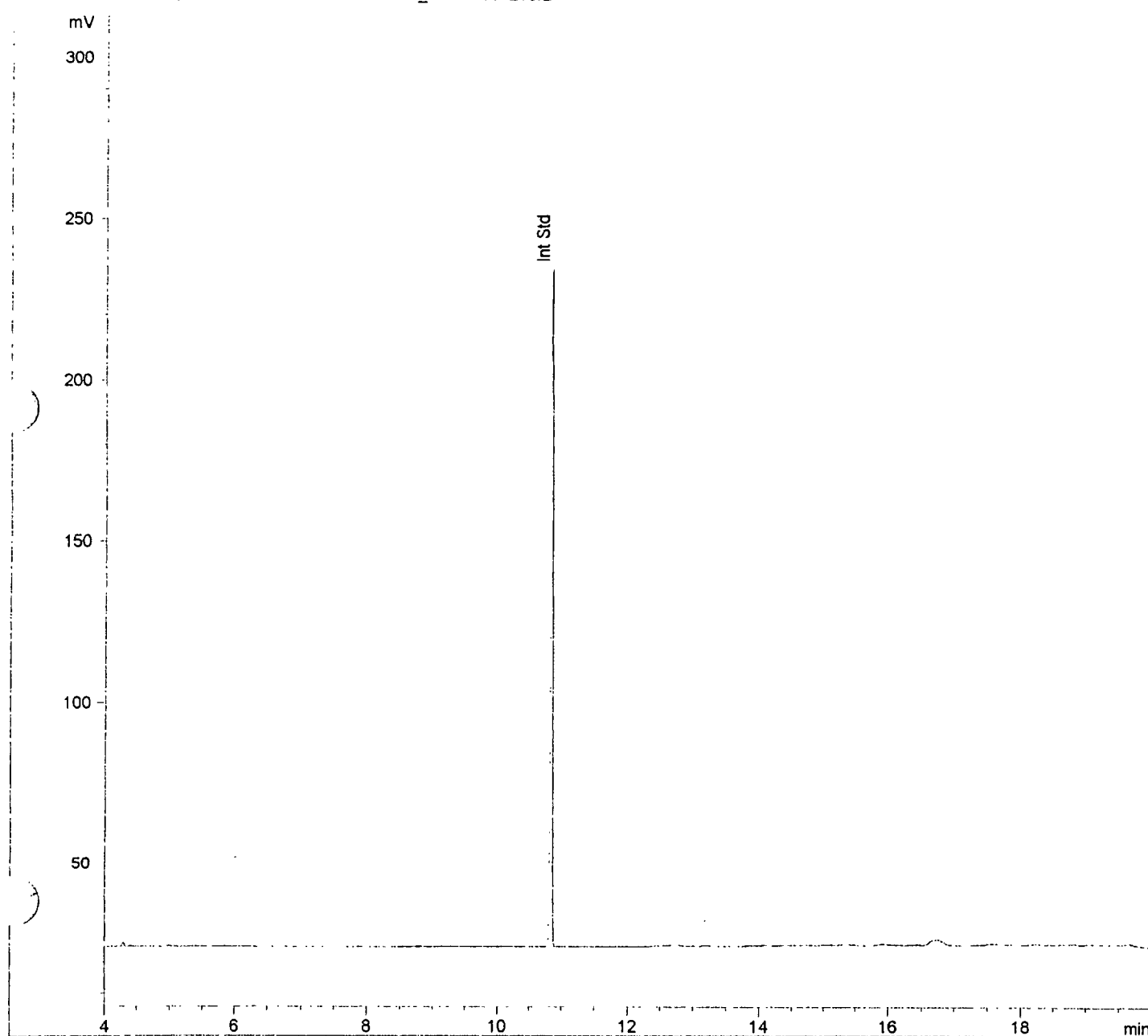


GEOCHEM ANALYTICAL SERVICES
BTEX & GRO Analysis
By G.C.

1023-414



ADC1 B, ADC1 CHANNEL B of BTW97_23\BTW04216.D



Peak #	R T (min)	Response Factor	Amount (ppb)	Name
1	0.0	0.0	0	Benzene
2	0.0	0.0	0	Toluene
3	10.8	1.0	20000	Int Std
4	0.0	0.0	0	Ethyl Benzene
5	0.0	0.0	0	p,m Xylene
6	0.0	0.0	0	o-Xylene

* NB. Amounts shown as Zero represent less than the P.Q.L. (<10ppb)

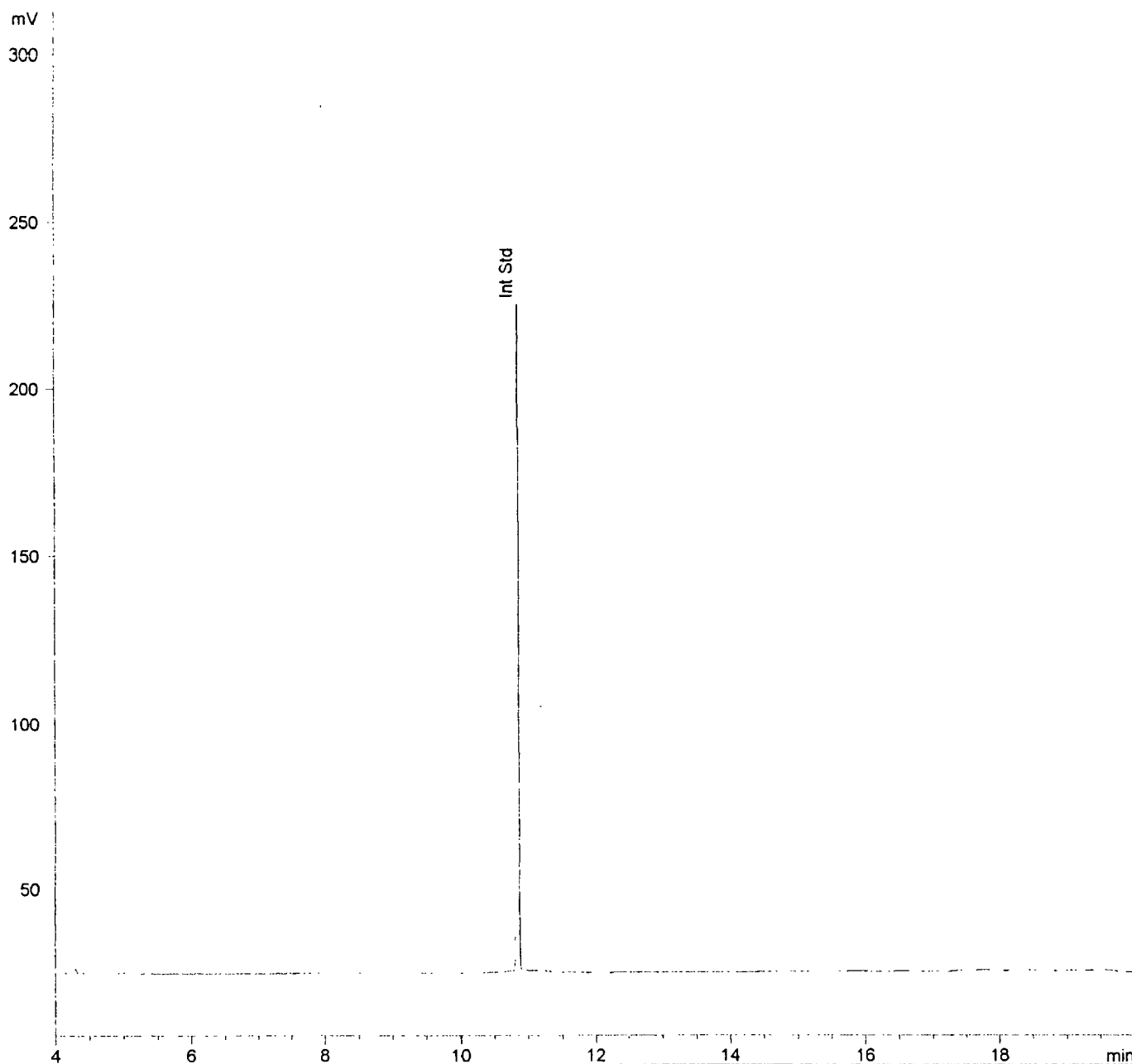


GEOCHEM ANALYTICAL SERVICES
BTEX & GRO Analysis
By G.C.

1023-415



ADC1 B, ADC1 CHANNEL B of BTW97_23\BTW04217.D



Peak #	R T (min)	Response Factor	Amount (ppb)	Name
1	0.0	0.0	0	Benzene
2	0.0	0.0	0	Toluene
3	10.8	1.0	20000	Int Std
4	0.0	0.0	0	Ethyl Benzene
5	0.0	0.0	0	p,m Xylene
6	0.0	0.0	0	o-Xylene

* NB. Amounts shown as Zero represent less than the P.Q.L. (<10ppb)



GEOCHEM ANALYTICAL SERVICES

Semi-Volatiles

By
G.C.M.S.



Sample Matrix:	Soil
Our Reference:	97/1023/02/01
Date Sample Received:	25/4/97
Date Extracted/Prepared:	23/5/97
Separatory Funnel Ext:	No
Soxtec Extraction:	Yes
Column Extraction:	No
Date Analysed:	29/5/97
GC-MS Mode:	SCAN
Internal Standard:	External

Sample Number	149
Sample Identity	TP124 1.90
P.Q.L.	10
Units	µg/kg
1	11411
2	20291
3	31164
4	32335
5	27761
6	12074
7	52796
8	12903
9	15424
10	65557
11	84464
12	125686
13	17213
14	183854
15	49261
16	183696
17	29241
18	83364
19	63062
20	27708
21	38498
22	17343
23	39211
24	6646

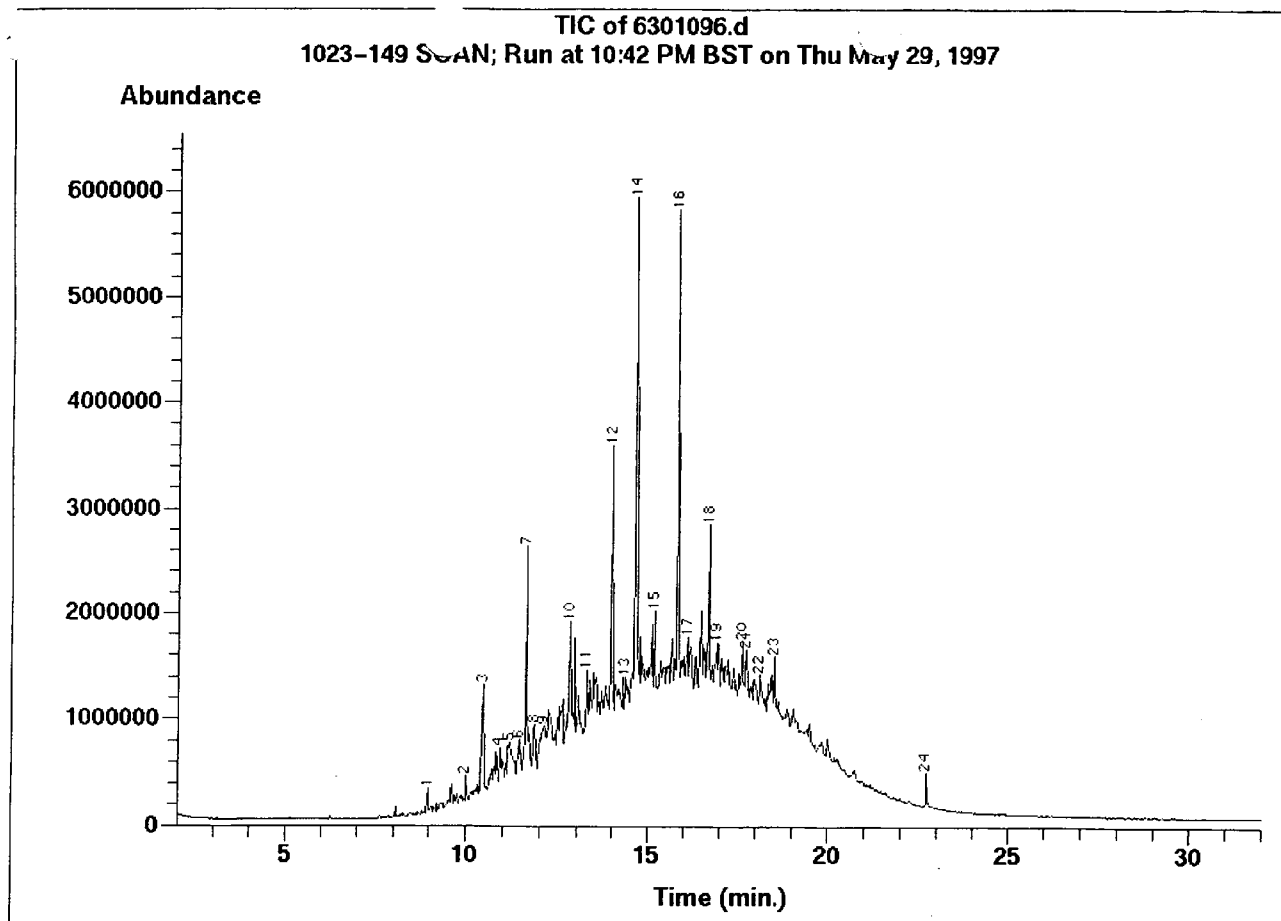
Checked By

Search results for Data File /chem/hp1/6301096.d

1023-149 SCAN

Injected Thu May 29 97 10:42:23 PM by Geochem Analytical Services

Peak Number	Retention Time	Prob.	Compound Name
1	8.961	72	Hexadecane, 2,6,10,14-tetramethyl-
2	9.998	38	Cyclopentane, 1-methyl-3-(1-methylethyl)
3	10.462	91	Dodecane, 2,7,10-trimethyl-
4	10.927	95	Naphthalene, 1,3-dimethyl-
5	11.173	95	Naphthalene, 2,7-dimethyl-
6	11.418	58	4-Hexenoic acid, 3-methyl-2,6-dioxo-
7	11.609	87	Undecane
8	11.855	80	Tetracontane, 3,5,24-trimethyl-
9	12.101	62	17-Pentatriacontene
10	12.810	64	Dodecane
11	13.275	55	Dodecane, 5,8-diethyl-
12	13.957	87	Dodecane, 2-methyl-8-propyl-
13	14.367	52	4-Hexenoic acid, 3-methyl-2,6-dioxo-
14	14.640	93	Heptadecane, 2,6-dimethyl-
15	15.159	89	Dodecane, 5,8-diethyl-
16	15.815	86	Hexadecane, 2,6,10,14-tetramethyl-
17	16.088	64	Decane
18	16.689	91	Octacosane
19	16.908	70	Undecane
20	17.618	83	1-Hexadecene
21	17.754	70	Ethanol, 2-(dodecyloxy)-
22	18.137	64	4-Hexenoic acid, 3-methyl-2,6-dioxo-
23	18.520	76	Pentadecane, 2-methyl-
24	22.729	80	1,2-Benzenedicarboxylic acid, 3-nitro-



Search results for Data File /chem/hp1/6401097.d

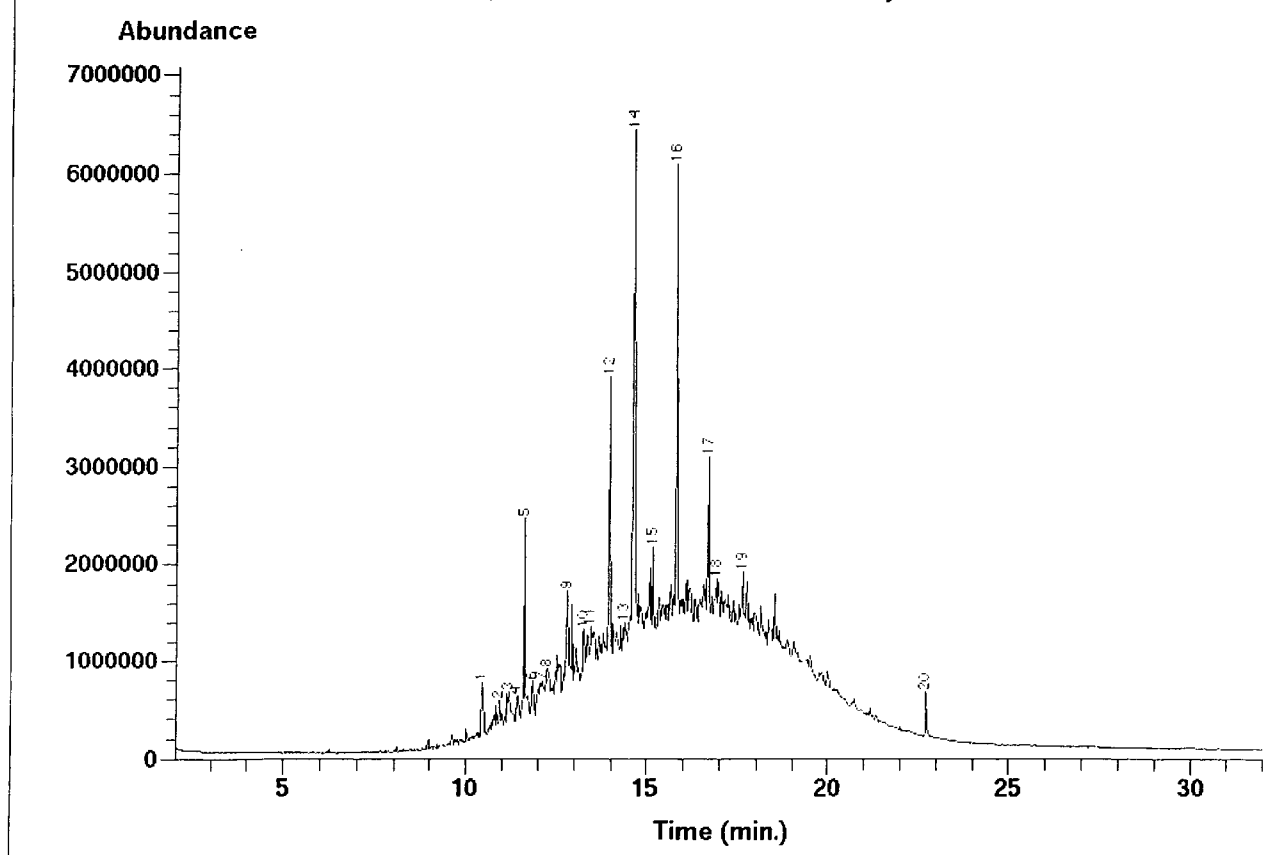
1023-150 SCAN

Injected Thu May 29 97 11:21:54 PM by Geochem Analytical Services

Peak Number	Retention Time	Prob.	Compound Name
1	10.434	90	Heptadecane, 2,6,10,14-tetramethyl-
2	10.925	96	Naphthalene, 1,8-dimethyl-
3	11.143	97	Naphthalene, 1,5-dimethyl-
4	11.416	55	1-Dotriacontanol
5	11.607	83	Undecane
6	11.853	80	Tetracontane, 3,5,24-trimethyl-
7	12.098	80	Oxirane, [(hexadecyloxy)methyl]-
8	12.262	92	Naphthalene, 1,4,6-trimethyl-
9	12.809	42	Undecane
10	13.274	55	Dodecane
11	13.383	52	1-Dotriacontanol
12	13.957	83	Heptadecane, 2,6-dimethyl-
13	14.367	52	4-Hexenoic acid, 3-methyl-2,6-dioxo-
14	14.641	93	Heptadecane, 2,6-dimethyl-
15	15.160	89	Dodecane, 5,8-diethyl-
16	15.815	87	Heptadecane, 2,6,10,15-tetramethyl-
17	16.689	94	Tetradecane
18	16.908	83	Heptadecane, 2,6,10,14-tetramethyl-
19	17.618	83	Hexadecane, 2,6,10,14-tetramethyl-
20	22.727	80	1,2-Benzenedicarboxylic acid, 3-nitro-

TIC of 6401097.d
1023-150 SCAN; Run at 11:21 PM BST on Thu May 29, 1997

Library search report Page 2

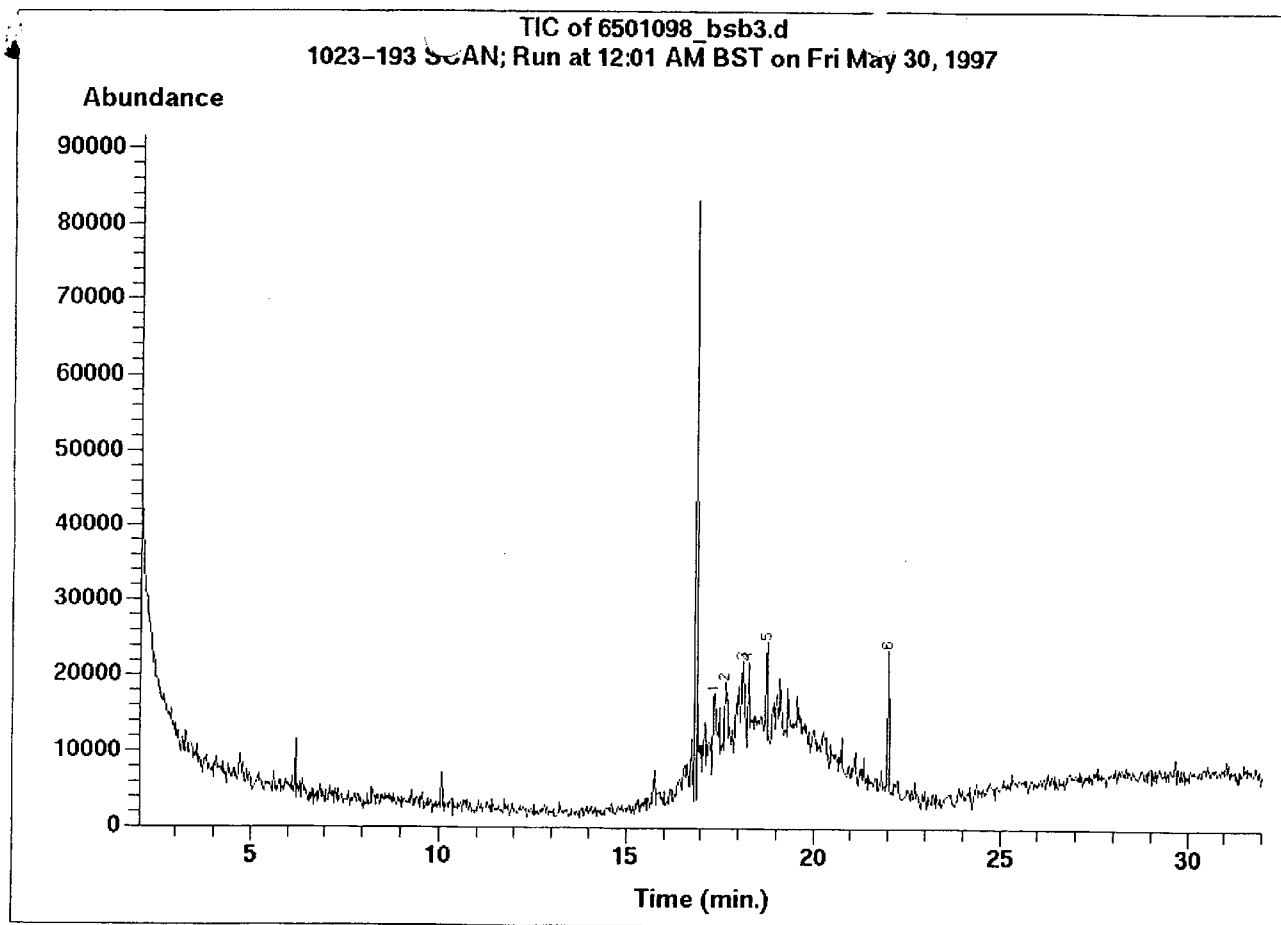


Search results for Data File /chem/hpl/6501098_bsb3.d

1023-193 SCAN

Injected Fri May 30 97 12:01:26 AM by **BSB** MODIFIED

Peak Number	Retention Time	Prob.	Compound Name
1	17.352	15	2(1H)-Pyridinone, 1-methyl-
2	17.680	43	Cyclohexane, 1-(cyclohexylmethyl)-2-ethy
3	18.089	49	Cyclohexane, 1-(cyclohexylmethyl)-4-ethy
4	18.253	22	1,3-Hexadiene, 3-ethyl-2-methyl-, (Z)-
5	18.745	47	Tridecane, 5-propyl-
6	21.998	47	2,5-Octadecadiynoic acid, methyl ester



Search results for Data File /chem/hpl/6601099_bsb1.d

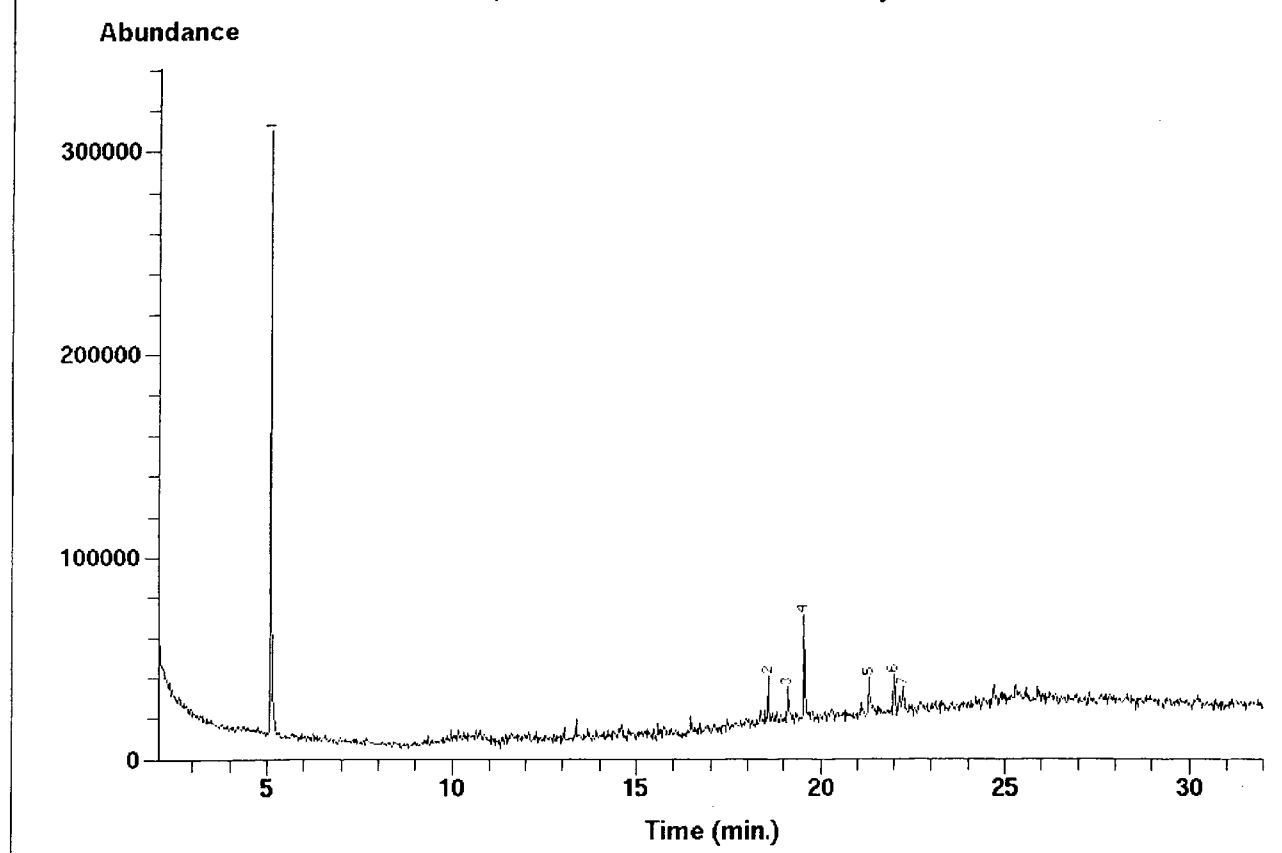
1023-306 SCAN

Injected Fri May 30 97 12:40:56 AM by **BSB** MODIFIED

Peak Number	Retention Time	Prob.	Compound Name
1	5.090	50	Heptane, 1,1'-oxybis-
2	18.576	95	Fluoranthene
3	19.121	94	Pyrene
4	19.556	46	2-Hexene, 5-methyl-, (E)-
5	21.327	50	2,4(1H,3H)-Pyrimidinedione, 5-nitro-
6	22.007	22	Benzonitrile, m-phenethyl-
7	22.253	52	3,6-Phenanthrenedicarbonitrile

TIC of 6601099_bs51.d
1023-306 AN; Run at 12:40 AM BST on Fri May 30, 1997

Full library search report Page 2

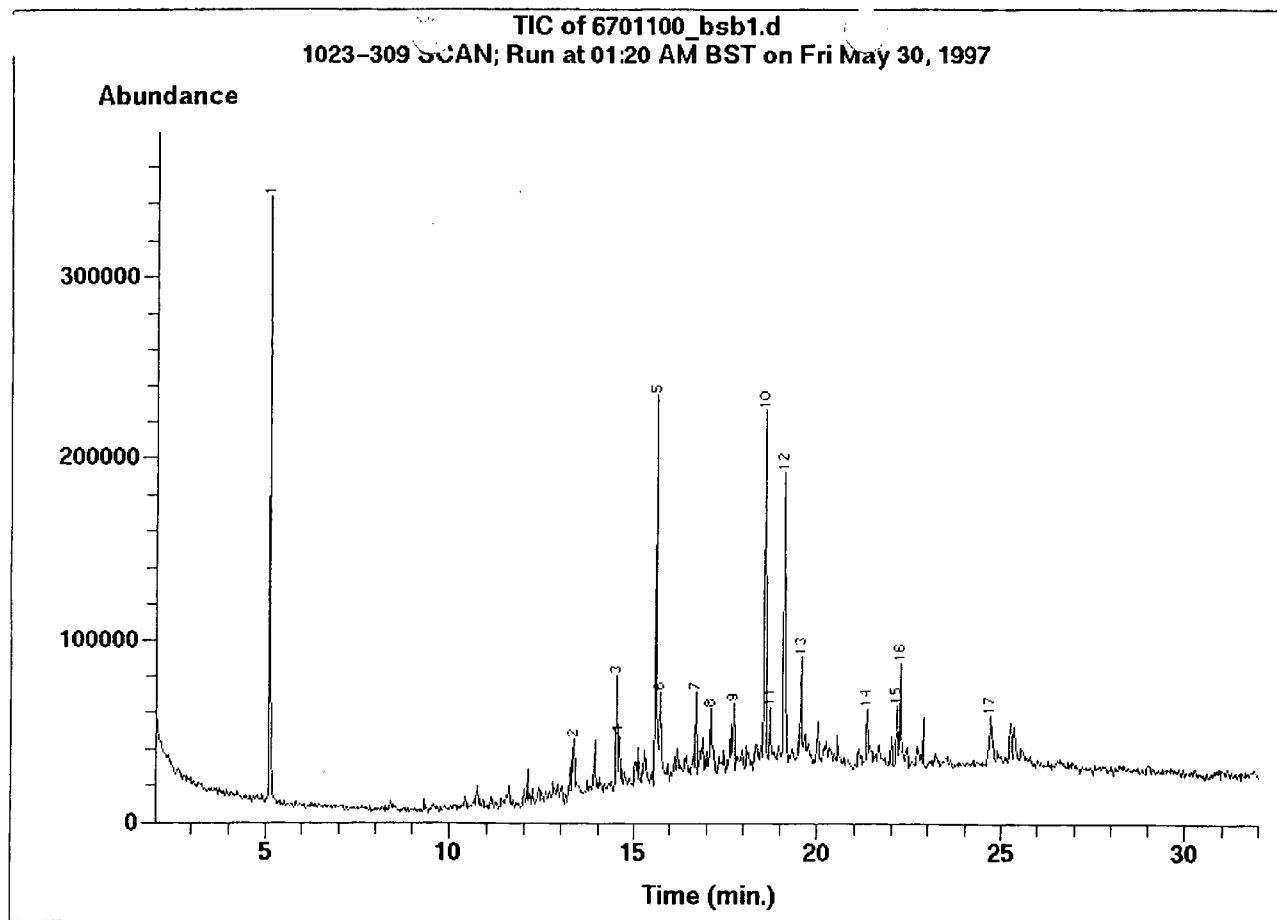


Search results for Data File /chem/hp1/6701100_bsb1.d

1023-309 SCAN

Injected Fri May 30 97 01:20:30 AM by **BSB** MODIFIED

Peak Number	Retention Time	Prob.	Compound Name
1	5.089	40	1-Decene, 2,4-dimethyl-
2	13.350	96	Hexadecane
3	14.524	94	Tridecane
4	14.606	76	Butane, 2-iodo-2-methyl-
5	15.615	95	Anthracene
6	15.752	74	Octacosane
7	16.734	95	Tetradecane
8	17.116	49	(5-CHLORO-8-QUINOLINATO-O,N) BORANE
9	17.744	89	Pentadecane
10	18.589	97	Pyrene
11	18.726	60	Tridecane, 2-methyl-
12	19.108	70	Fluoranthene
13	19.571	45	Cyclopentane, 3-hexyl-1,1-dimethyl-
14	21.344	53	Octadecanoic acid, butyl ester
15	22.163	96	Chrysene
16	22.244	96	Triphenylene
17	24.727	98	Benz[e]acephenanthrylene



Search results for Data File /chem/hpl/6801101_bsb1.d

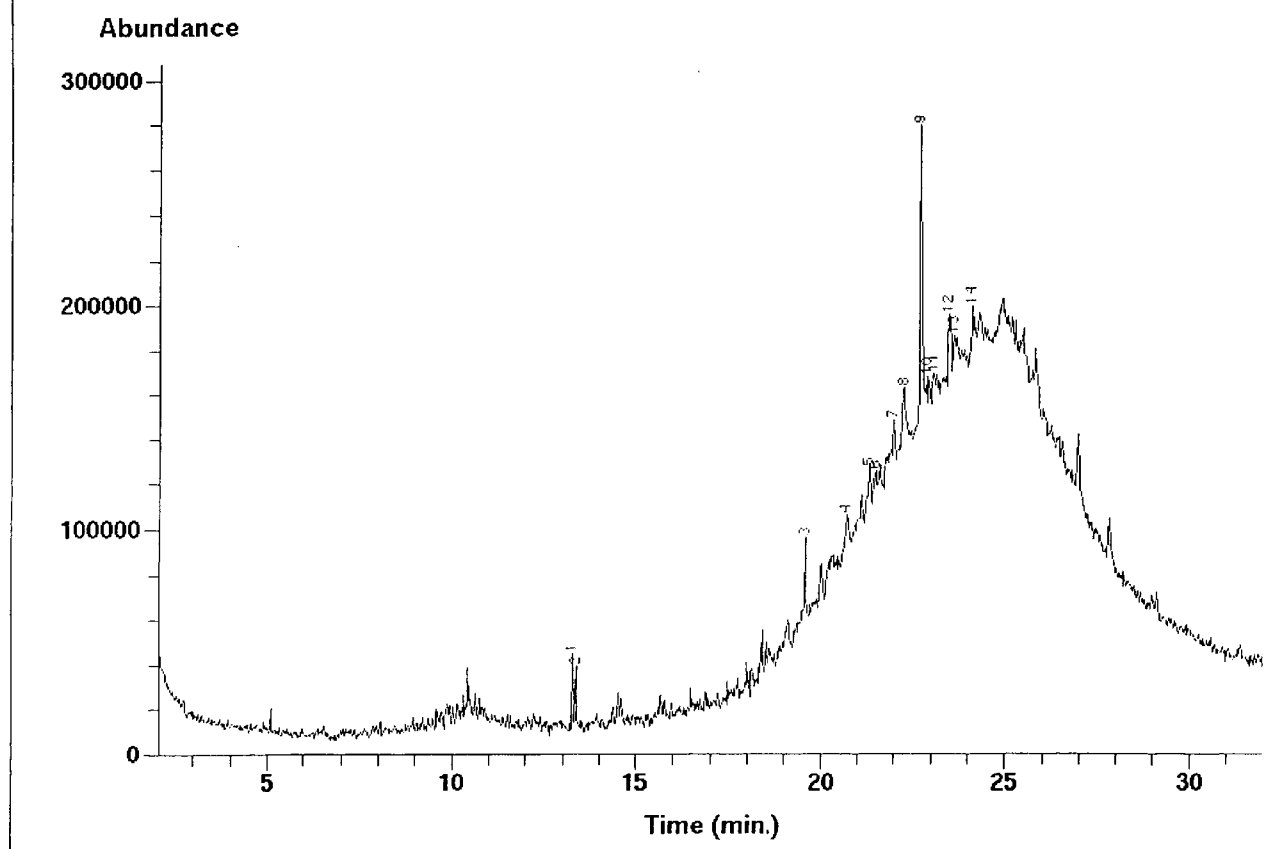
1023-339 SCAN

Injected Fri May 30 97 02:00:00 AM by **BSB** MODIFIED

Peak Number	Retention Time	Prob.	Compound Name
1	13.267	38	2,4(1H,3H)-Pyrimidinedione, 5-nitro-
2	13.376	36	Heptane, 1,1-dimethoxy-
3	19.565	38	1-Undecene, 5-methyl-
4	20.712	43	1-Octadecanethiol
5	21.341	72	4-Hexenoic acid, 3-methyl-2,6-dioxo-
6	21.505	72	1-Hentetracontanol
7	21.997	38	Cyclohexane, (2,2-dimethylcyclopentyl)-
8	22.271	58	Cyclohexane, 1-(1,5-dimethylhexyl)-4-(4-
9	22.735	83	1,2-Benzenedicarboxylic acid, diisooctyl
10	22.927	90	Octadecane, 1-chloro-
11	23.091	91	4-Hexenoic acid, 3-methyl-2,6-dioxo-
12	23.501	95	Pentacosane
13	23.637	87	Cyclotetradecane, 1,7,11-trimethyl-4-(1-
14	24.129	91	Cyclotetradecane, 1,7,11-trimethyl-4-(1-

TIC of 6801101_bsb1.d
1023-339 SCAN; Run at 02:00 AM BST on Fri May 30, 1997

Full library search report Page 2





GEOCHEM ANALYTICAL SERVICES

Semi-Volatiles

By
G.C.M.S.



Sample Matrix:	Soil
Our Reference:	97/1023/02/01
Date Sample Received:	3/6/97
Date Extracted/Prepared:	11/6/97
Separatory Funnel Ext:	No
Soxtec Extraction:	Yes
Column Extraction:	No
Date Analysed:	17/6/97
GC-MS Mode:	SCAN
Internal Standard:	External

Sample Number	415
Sample Identity	BH6 1.0-2.0m
P.Q.L.	1
Units	mg/kg
1	2
2	6
3	2
4	5
5	3
6	24
7	6
8	2
9	3
10	3
11	8
12	4
13	25
14	27
15	5
16	4
17	2
18	4
19	10
20	15
21	3
22	5
23	3
24	16
25	7
26	9
27	3
28	8
29	5

Checked By:...

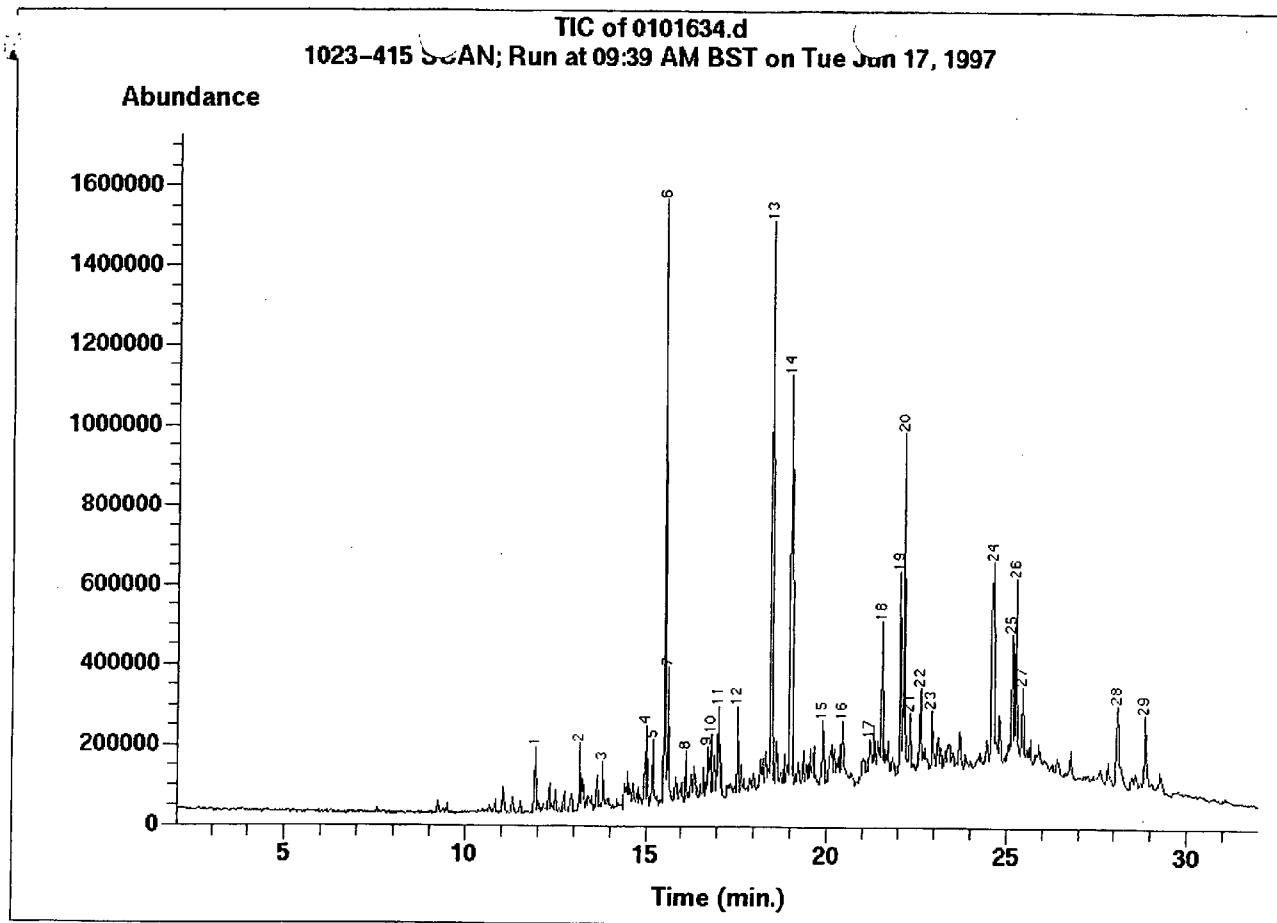
Job Number: 97/01023/02/01

Search results for Data File /chem/hp1/0101634.d

1023-415 SCAN

Injected Tue Jun 17 97 09:39:04 AM by Geochem Analytical Services

Peak Number	Retention Time	Prob.	Compound Name
1	11.906	76	Acenaphthene (8CI)
2	13.163	93	9H-Fluorene
3	13.791	94	Dibenzofuran, 4-methyl-
4	14.966	42	Azulene, 7-ethyl-1,4-dimethyl-
5	15.185	83	Dibenzothiophene
6	15.513	96	Phenanthrene
7	15.622	94	Anthracene
8	16.114	91	1,1'-Biphenyl, 2-azido-
9	16.742	96	Anthracene, 2-methyl-
10	16.824	94	Anthracene, 2-methyl-
11	17.015	58	4H-Cyclopenta[def]phenanthrene
12	17.561	95	9,10-Anthracenedione
13	18.489	96	Fluoranthene
14	19.008	87	Pyrene
15	19.908	94	11H-Benzo[b]fluorene
16	20.454	92	Heptadecane
17	21.218	70	7H-Benz[de]anthracen-7-one
18	21.546	91	Benzo[ghi]fluoranthene
19	22.038	98	Benz[a]anthracene
20	22.147	93	Triphenylene
21	22.338	93	3,4-DIHYDROCYCLOPENTA(CD)PYRENE (ACEPYRE
22	22.611	49	1,2-Benzenedicarboxylic acid, diisooctyl
23	22.939	86	Hexadecane
24	24.633	97	Benzo[j]fluoranthene
25	25.153	96	Benzo[j]fluoranthene
26	25.262	97	Benz[e]acephenanthrylene
27	25.453	97	Benzo[j]fluoranthene
28	28.105	96	Indeno[1,2,3-cd]pyrene
29	28.870	95	Dibenzo[def,mno]chrysene



Job Number 97/01023/02/01		Sample number	226			
		Client Ref	TP 99			
		Depth	1.9			
		Date analysed	12/5/97			
		Matrix	Soil			
Peak	CAS No:	Units	µg/kg			
2T	75-71-8	Dichlorodifluoromethane	<1			
3T	74-87-3	Chloromethane	<1			
4T	75-01-4	Vinyl chloride	<1			
5T	74-83-9	Bromomethane	<1			
6T	75-00-3	Chloroethane	<1			
7T	75-69-4	Trichlorofluoromethane	<1			
8T	156-60-5	trans-1,2-Dichloroethene	<1			
9T	75-09-2	Dichloromethane	<1			
10T	75-35-4	1,1-Dichloroethene	<1			
11T	75-34-3	1,1-Dichloroethane	<1			
12T	156-59-2	cis-1,2-Dichloroethene	<1			
13T	74-97-5	Bromochloromethane	<1			
14T	67-66-3	Chloroform	<1			
16T	107-06-2	1,2-Dichloroethane	<1			
17T	71-55-6	1,1,1-Trichloroethane	<1			
18T	563-58-6	1,1-Dichloropropene	<1			
19T	71-43-2	Benzene	<1			
20T	56-23-5	Carbontetrachloride	<1			
22T	74-95-3	Dibromomethane	<1			
23T	78-87-5	1,2-Dichloropropane	<1			
24T	79-01-6	Trichloroethene	<1			
25T	10061-01-5	cis-1,3-Dichloropropene	<1			
26T	10061-02-6	trans-1,3-Dichloropropene	<1			
27T	79-00-5	1,1,2-Trichloroethane	<1			
29T	108-88-3	Toluene	<1			
30T	142-28-9	1,3-Dichloropropane	<1			
31T	124-48-1	Dibromochloromethane	<1			
32T	106-93-4	1,2-Dibromoethane	<1			
33T	127-18-4	Tetrachloroethene	<1			
35T	108-90-7	Chlorobenzene	<1			
36T	100-41-4	Ethylbenzene	<1			
37T	106-42-3/108-38-3	p/m-Xylene	<1			
38T	100-42-5	Styrene	<1			
39T	95-47-6	o-Xylene	<1			
40T	79-34-5	1,1,2,2-Tetrachloroethane	<1			
41T	96-18-4	1,2,3-Trichloropropane	<1			
43T	98-82-8	Isopropylbenzene	<1			
44T	108-86-1	Bromobenzene	<1			
45T	95-49-8	2-Chlorotoluene	<1			
46T	103-65-1	Propylbenzene	<1			
47T	95-36-3	1,2,4-Trimethylbenzene	<1			
48T	99-87-6	4-Isopropyltoluene	<1			
49T	108-67-8	1,3,5-Trimethylbenzene	<1			
50T	95-50-1	1,2-Dichlorobenzene	<1			
52T	106-46-7	1,4-Dichlorobenzene	<1			
53T	135-98-8	sec-Butylbenzene	<1			
54T	98-06-6	tert-Butylbenzene	<1			
55T	541-73-1	1,3-Dichlorobenzene	<1			
56T	104-51-8	n-Butylbenzene	<1			
57T	96-12-8	1,2-Dibromo-3-chloro-propane	<1			
58T	120-82-1	1,2,4-Trichlorobenzene	<1			
59T	91-20-3	Naphthalene	<1			
60T	87-61-6	1,2,3-Trichlorobenzene	<1			
61T	87-68-3	Hexachlorobutadiene	<1			

Water blank subtracted

Job Number: 97/01023/02/01

Approved by

Geochem Group Limited

Print name

Page

Page

Job Number 97/1023/02/05		Sample number	284			
		Client Ref	TP91			
		Depth	0.75			
		Date analysed	12/5/97			
		Matrix	Soil			
		Dilution factor (P.Q.L)	5			
Peak	CAS No:	Units	µg/kg			
2T	75-35-4	1,1-Dichloroethene	<5			
3T	75-09-2	Dichloromethane	<5			
4T	156-59-2	trans-1,2-Dichloroethene	<5			
5T	75-34-3	1,1-Dichloroethane	<5			
6T	156-60-5	cis-1,2-Dichloroethene	<5			
7T	67-66-3	Chloroform	<5			
8T	594-20-7	2,2-Dichloropropane	<5			
10T	107-06-2	1,2-Dichloroethane	<5			
11T	71-55-6	1,1,1-Trichloroethane	<5			
12T	563-58-6	1,1-Dichloropropene	<5			
13T	71-43-2	Benzene	<5			
14T	56-23-5	Carbon Tetrachloride	<5			
16T	74-95-3	Dibromomethane	<5			
17T	78-87-5	1,2-Dichloropropane	<5			
18T	75-27-4	Bromodichloromethane	<5			
19T	79-01-6	Trichloroethene	<5			
20T	10061-01-6	cis-1,3-Dichloropropene	<5			
21T	10061-02-5	trans-1,3-Dichloropropene	<5			
22T	79-00-5	1,1,2-Trichloroethane	<5			
24T	108-88-3	Toluene	<5			
25T	124-48-1	Dibromochloromethane	<5			
26T	106-93-4	1,2-Dibromoethane	<5			
27T	127-18-4	Tetrachloroethene	<5			
29T	108-90-7	Chlorobenzene	<5			
30T	100-41-4	Ethylbenzene	<5			
31T	1330-20-7	Xylenes(meta & para)	<5			
32T	75-25-2	Bromoform	<5			
33T	100-42-5	Styrene	<5			
34T	79-34-5	1,1,2,2-Tetrachloroethane	<5			
35T	95-47-6	o-Xylene	<5			
36T	142-28-9	1,3-Dichloropropane	<5			
37T	98-82-8	Isopropylbenzene	<5			
39T	108-86-1	Bromobenzene	<5			
40T	95-49-8	2-Chlorotoluene	<5			
41T	103-65-1	n-Propylbenzene	<5			
42T	106-43-4	4-Chlorotoluene	<5			
43T	108-67-8	1,3,5-Trimethylbenzene	<5			
44T	25155-15-1	4-Isopropyltoluene	<5			
45T	95-63-6	1,2,4-Trimethylbenzene	<5			
46T	95-50-1	1,2-Dichlorobenzene	<5			
48T	541-73-1	1,3-Dichlorobenzene	<5			
49T	135-98-8	sec-Butylbenzene	<5			
50T	98-06-6	tert-Butylbenzene	<5			
51T	106-46-7	1,4-Dichlorobenzene	<5			
52T	104-51-8	n-Butylbenzene	<5			
		Total Other Volatiles	<5			

N.B. Water blank subtracted

High dilution factor

* Out of calibration

Approved by

Print name

Job Number: 97/01023/02/01

Geochem Group Limited
Page 175 of 205



GEOCHEM ANALYTICAL SERVICES

Tentatively Identified Compounds

by
GCMS



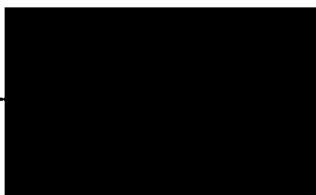
Method: Purge & Trap
Detection: GC/MS
Mode: Full scan
Internal Std: Internal & Surrogate
Conc: 100µg/kg
Matrix: Soil

Our ref: 97/1023-284
Your ref: TP 91

Peak No:	Compound Identification	R.Time (min)	Conc. (µg/kg)
a	Carbon disulphide	7.08	18

Units: µg/kg

Approved by: _____





GEOCHEM ANALYTICAL SERVICES

Volatiles Analysis

by
G.C.M.S.



Job Number 97/1023/02/06		Sample number	310			
		Client Ref	TP138			
		Depth	1.50			
		Date analysed	22/05/97			
		Matrix	Soil			
		Dilution factor (P.Q.L)	10			
Peak	CAS No:	Units	µg/kg			
2T	75-35-4	1,1-Dichloroethene	<10			
3T	75-09-2	Dichloromethane	*43			
4T	156-59-2	trans-1,2-Dichloroethene	<10			
5T	75-34-3	1,1-Dichloroethane	<10			
6T	156-60-5	cis-1,2-Dichloroethene	<10			
7T	67-66-3	Chloroform	<10			
8T	594-20-7	2,2-Dichloropropane	<10			
10T	107-06-2	1,2-Dichloroethane	<10			
11T	71-55-6	1,1,1-Trichloroethane	<10			
12T	563-58-6	1,1-Dichloropropene	<10			
13T	71-43-2	Benzene	<10			
14T	56-23-5	Carbon Tetrachloride	<10			
16T	74-95-3	Dibromomethane	<10			
17T	78-87-5	1,2-Dichloropropane	<10			
18T	75-27-4	Bromodichloromethane	<10			
19T	79-01-6	Trichloroethene	24			
20T	10061-01-6	cis-1,3-Dichloropropene	<10			
21T	10061-02-5	trans-1,3-Dichloropropene	<10			
22T	79-00-5	1,1,2-Trichloroethane	<10			
24T	108-88-3	Toluene	<10			
25T	124-48-1	Dibromochloromethane	<10			
26T	106-93-4	1,2-Dibromoethane	<10			
27T	127-18-4	Tetrachloroethene	<10			
29T	108-90-7	Chlorobenzene	<10			
30T	100-41-4	Ethylbenzene	<10			
31T	1330-20-7	Xylenes(meta & para)	<10			
32T	75-25-2	Bromoform	<10			
33T	100-42-5	Styrene	<10			
34T	79-34-5	1,1,2,2-Tetrachloroethane	<10			
35T	95-47-6	o-Xylene	<10			
36T	142-28-9	1,3-Dichloropropane	<10			
38T	98-82-8	Isopropylbenzene	<10			
39T	108-86-1	Bromobenzene	<10			
40T	95-49-8	2-Chlorotoluene	<10			
41T	103-65-1	n-Propylbenzene	<10			
42T	106-43-4	4-Chlorotoluene	<10			
43T	108-67-8	1,3,5-Trimethylbenzene	<10			
44T	25155-15-1	4-Isopropyltoluene	<10			
45T	95-63-6	1,2,4-Trimethylbenzene	<10			
46T	95-50-1	1,2-Dichlorobenzene	<10			
48T	541-73-1	1,3-Dichlorobenzene	<10			
49T	135-98-8	sec-Butylbenzene	<10			
50T	98-06-6	tert-Butylbenzene	<10			
51T	106-46-7	1,4-Dichlorobenzene	<10			
52T	104-51-8	n-Butylbenzene	<10			
		Total Other Volatiles	4678			

N.B. Water blank subtracted

High dilution factor

* Out of calibration

Approved by

Print name



GEOCHEM ANALYTICAL SERVICES

Volatiles Analysis

by
G.C.M.S.



Job Number		Sample number	313	234	331		
97/1023/02/06		Client Ref	TP142	TP146	TP149		
		Depth	0.20	0.30	0.50		
		Date analysed	19/05/97	19/05/97	20/05/97		
		Matrix	Soil	Soil	Soil		
		Dilution factor (P.Q.L)	5	5	10		
Peak	CAS No:	Units	µg/kg	µg/kg	µg/kg		
2T	75-35-4	1,1-Dichloroethene	<5	<5	<10		
3T	75-09-2	Dichloromethane	38	<5	30		
4T	156-59-2	trans-1,2-Dichloroethene	<5	<5	<10		
5T	75-34-3	1,1-Dichloroethane	<5	<5	<10		
6T	156-60-5	cis-1,2-Dichloroethene	<5	<5	<10		
7T	67-66-3	Chloroform	<5	<5	<10		
8T	594-20-7	2,2-Dichloropropane	<5	<5	<10		
10T	107-06-2	1,2-Dichloroethane	<5	<5	<10		
11T	71-55-6	1,1,1-Trichloroethane	<5	<5	<10		
12T	563-58-6	1,1-Dichloropropene	<5	<5	<10		
13T	71-43-2	Benzene	<5	<5	<10		
14T	56-23-5	Carbon Tetrachloride	<5	<5	<10		
16T	74-95-3	Dibromomethane	<5	<5	<10		
17T	78-87-5	1,2-Dichloropropane	<5	<5	<10		
18T	75-27-4	Bromodichloromethane	<5	<5	<10		
19T	79-01-6	Trichloroethene	<5	<5	<10		
20T	10061-01-6	cis-1,3-Dichloropropene	<5	<5	<10		
21T	10061-02-5	trans-1,3-Dichloropropene	<5	<5	<10		
22T	79-00-5	1,1,2-Trichloroethane	<5	<5	<10		
24T	108-88-3	Toluene	<5	<5	26		
25T	124-48-1	Dibromochloromethane	<5	<5	<10		
26T	106-93-4	1,2-Dibromoethane	<5	<5	<10		
27T	127-18-4	Tetrachloroethene	<5	<5	<10		
29T	108-90-7	Chlorobenzene	<5	<5	<10		
30T	100-41-4	Ethylbenzene	<5	<5	<10		
31T	1330-20-7	Xylenes(meta & para)	<5	<5	36		
32T	75-25-2	Bromoform	<5	<5	<10		
33T	100-42-5	Styrene	<5	<5	<10		
34T	79-34-5	1,1,2,2-Tetrachloroethane	<5	<5	<10		
35T	95-47-6	o-Xylene	<5	<5	30		
36T	142-28-9	1,3-Dichloropropane	<5	<5	<10		
38T	98-82-8	Isopropylbenzene	<5	<5	<10		
39T	108-86-1	Bromobenzene	<5	<5	<10		
40T	95-49-8	2-Chlorotoluene	<5	<5	<10		
41T	103-65-1	n-Propylbenzene	<5	<5	<10		
42T	106-43-4	4-Chlorotoluene	<5	<5	<10		
43T	108-67-8	1,3,5-Trimethylbenzene	<5	<5	457		
44T	25155-15-1	4-Isopropyltoluene	<5	<5	<10		
45T	95-63-6	1,2,4-Trimethylbenzene	<5	6	524		
46T	95-50-1	1,2-Dichlorobenzene	<5	<5	<10		
48T	541-73-1	1,3-Dichlorobenzene	<5	<5	<10		
49T	135-98-8	sec-Butylbenzene	<5	<5	<10		
50T	98-06-6	tert-Butylbenzene	<5	<5	187		
51T	106-46-7	1,4-Dichlorobenzene	<5	<5	<10		
52T	104-51-8	n-Butylbenzene	<5	<5	<10		
		Total Other Volatiles	<5	17	21013		

N.B. Water blank subtracted

High dilution factor

* Out of calibration

Approved by

Print name



GEOCHEM ANALYTICAL SERVICES

Tentatively Identified Compounds

by
GCMS



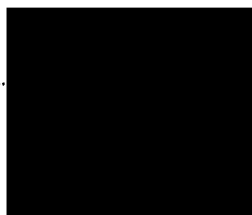
Method: Purge & Trap
Detection: GC/MS
Mode: Full scan
Internal Std: Internal & Surrogate
Conc: 100µg/kg
Matrix: Soil

Our ref: 97/1023-331
Your ref: TP 149

Peak No:	Compound Identification	R. Time (min)	Conc. (µg/kg)
a	3-methyl-Octane	23.56	579
b	3,5-dimethyl-Octane	25.98	1137
c	2,6-dimethyl-Octane	26.40	2067
d	1-ethyl-2-methyl-Benzene	27.17	525
e	2-methyl-Nonane	27.66	1609
f	2,6-dimethyl-Nonane	30.04	1106
g	butyl-Cyclohexane	30.59	909

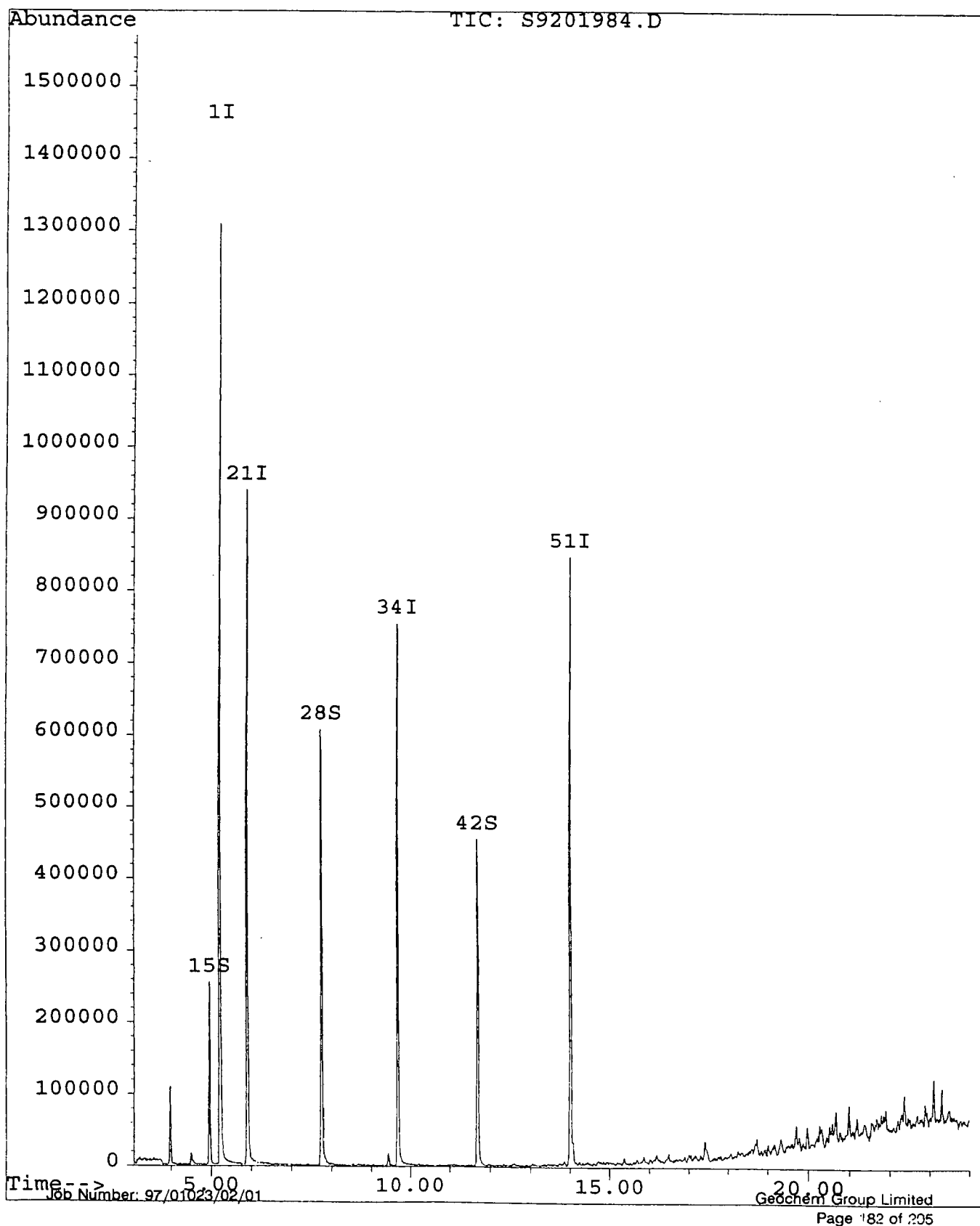
Units: µg/kg

Approved by: _____

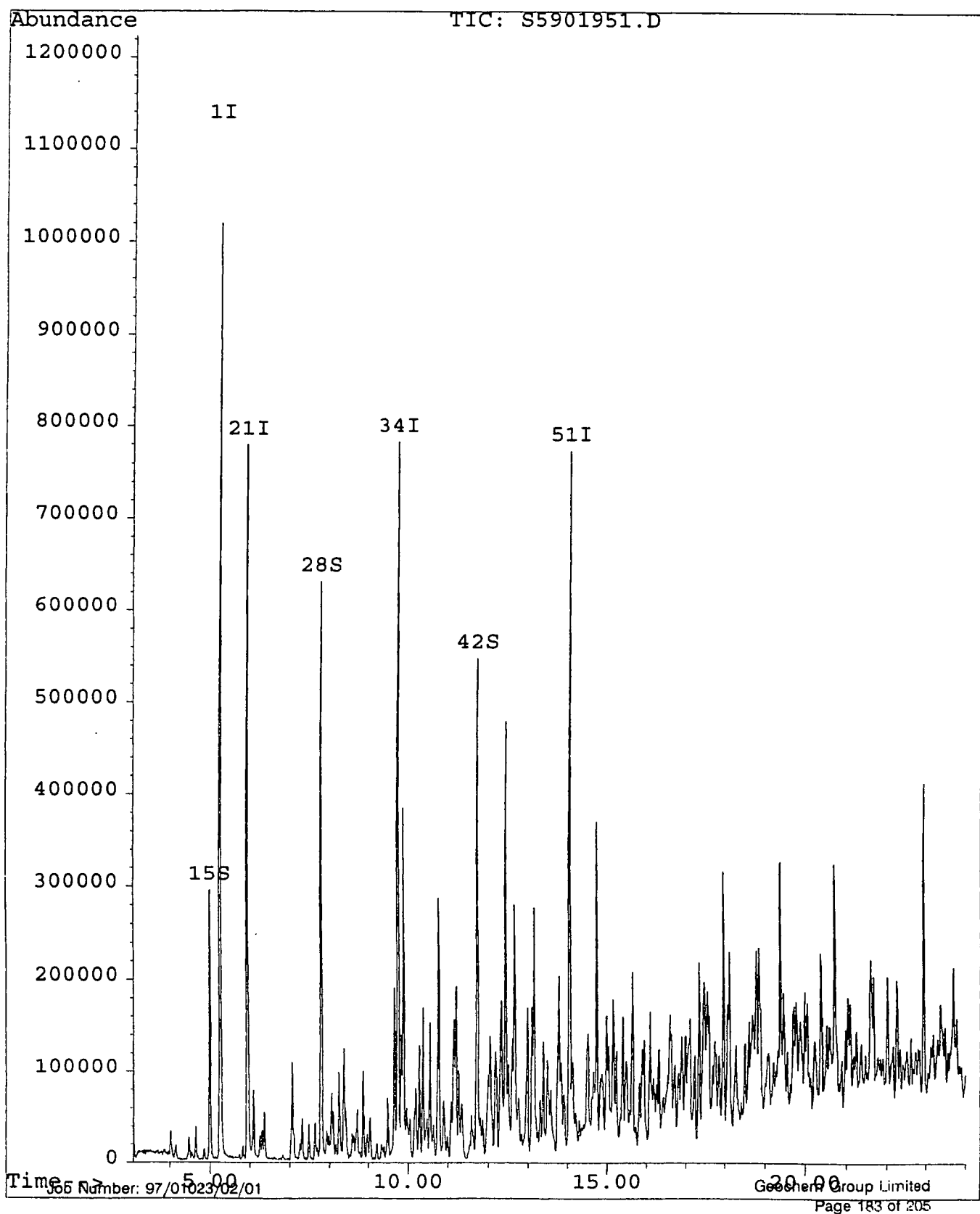


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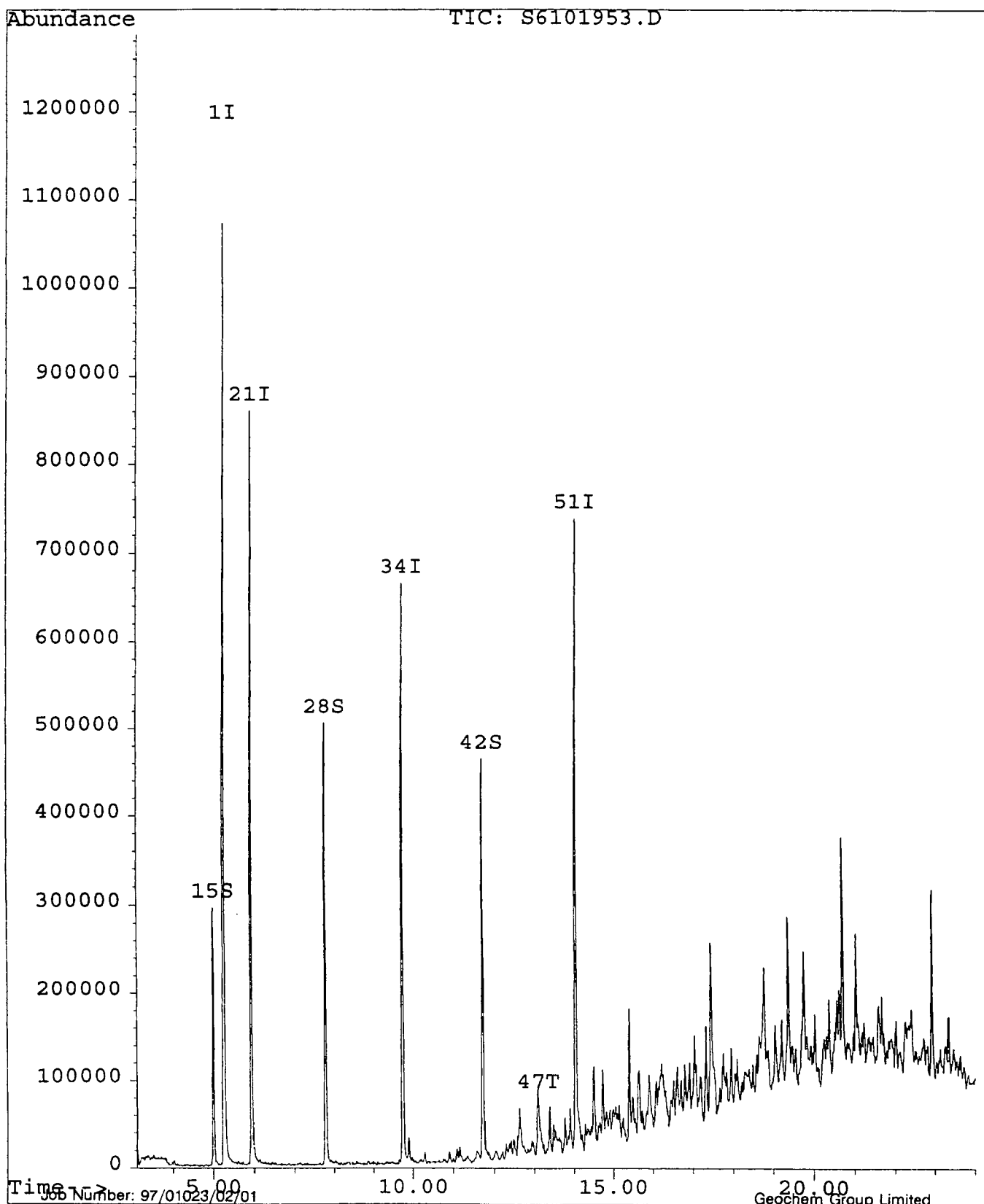
File : C:\HPCHEM\1\DATA\120597\S9201984.D
Operator : Geochem Analytical Services
Acquired : 12 May 97 10:53 pm using AcqMethod 60VOCHS
Instrument : MSD Vols5
Sample Name: 1023-226
Misc Info :
Vial Number: 15



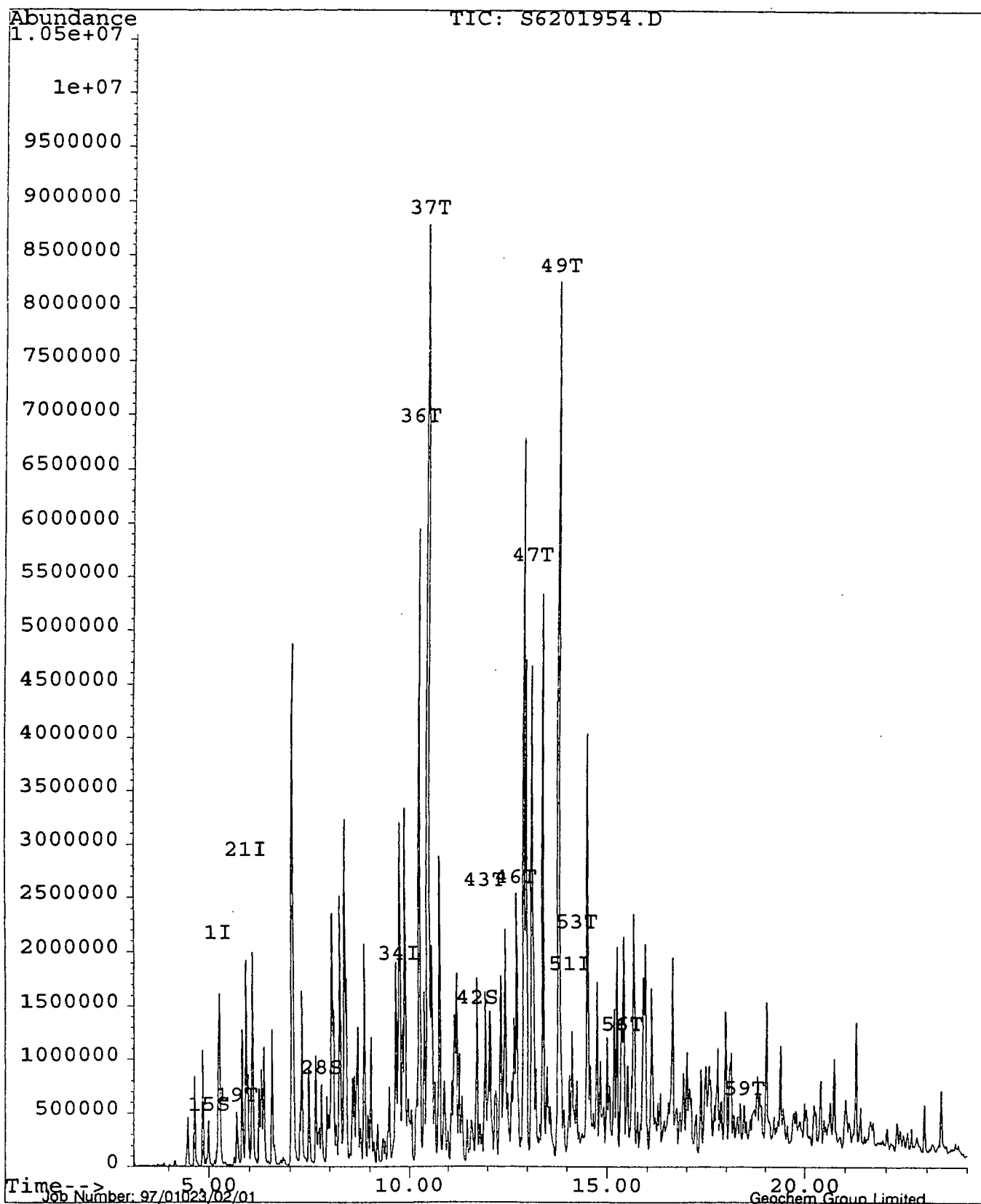
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Operator : Geochem Analytical Services
Acquired : 10 May 97 7:00 am using AcqMethod 60VOCHS
Instrument : MSD Vols5
Sample Name: 1023-217
Misc Info :
Vial Number: 30



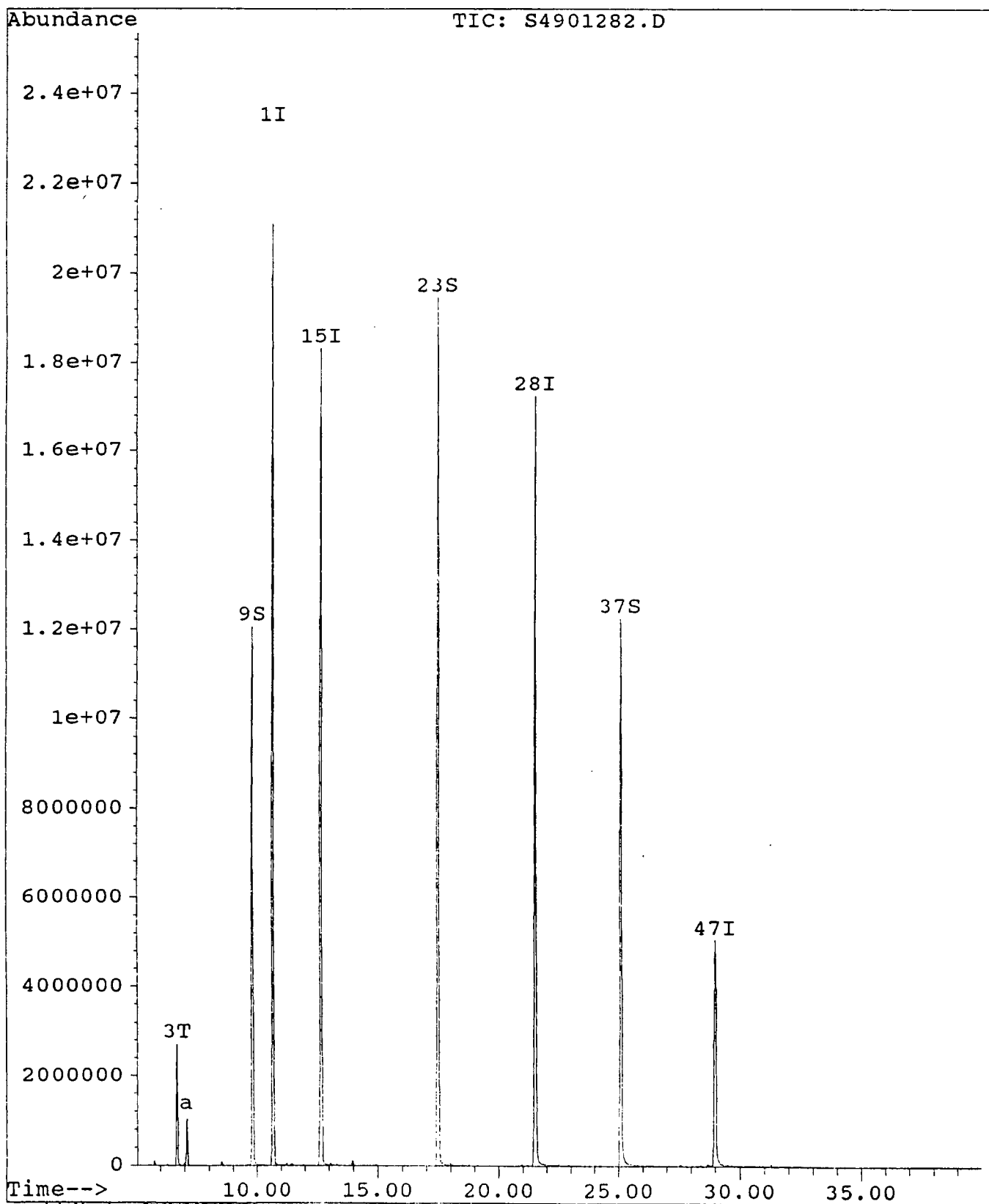
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Acquired : 10 May 97 8:09 am using AcqMethod 60VOCHS
Instrument : MSD Vols5
Sample Name: 1023-228
Misc Info :
Vial Number: 32



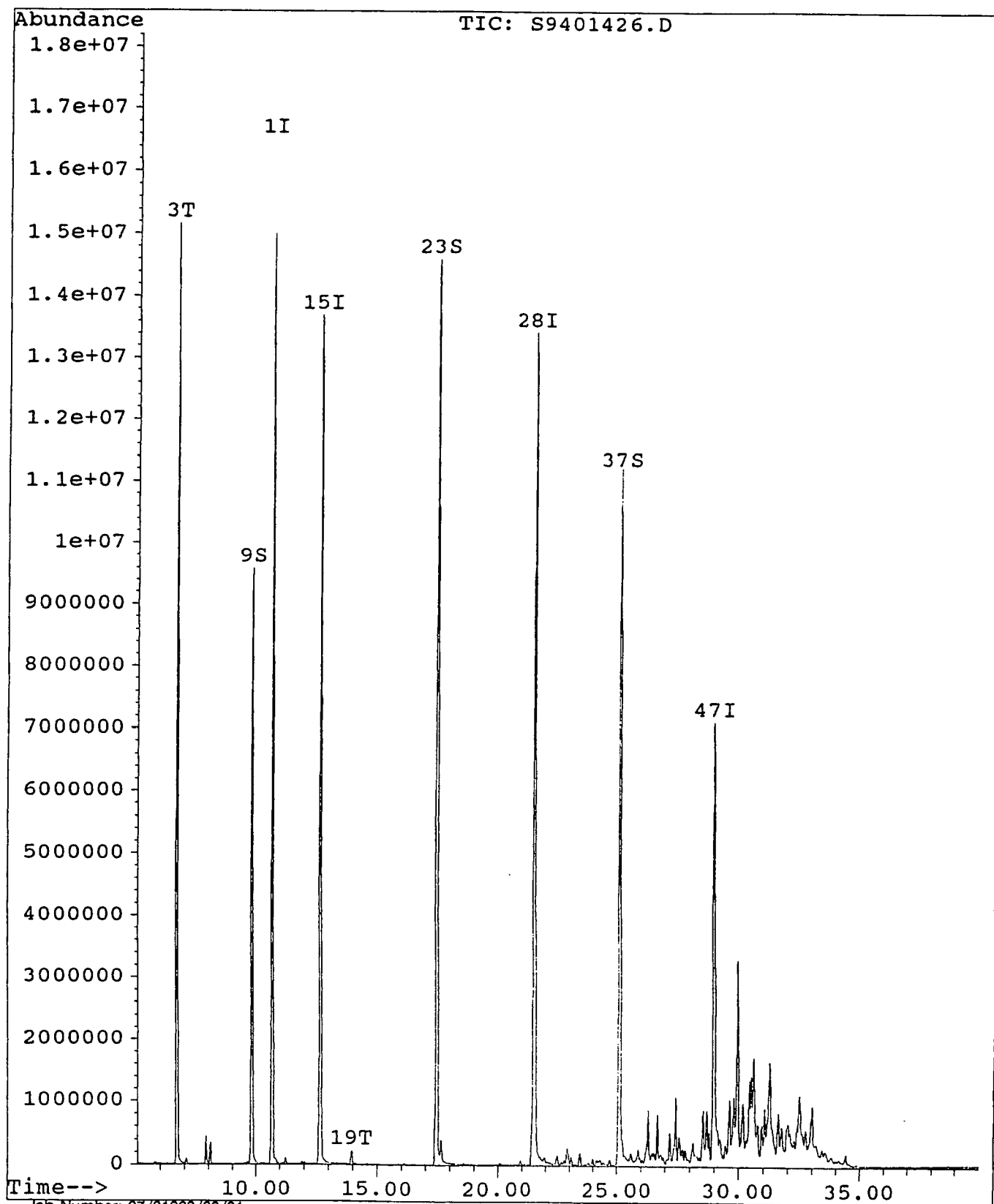
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Operator : Geochem Analytical Services
Acquired : 10 May 97 8:43 am using AcqMethod 60VOCHS
Instrument : MSD Vols5
Sample Name: 1023-238
Misc Info :
Vial Number: 33



File : C:\HPCHEM\1\DATA\S4901282.D
Operator : Geochem Analytical Services
Acquired : 12 May 97 11:15 pm using AcqMethod VOLENV
Instrument : 5971 MSD
Sample Name: 1023/5-284
Misc Info : Aspinall & Company
Vial Number: 49



File : C:\HPCHEM\1\DATA\S9401426.D
Operator : Geochem Analytical Services
Acquired : 22 May 97 9:11 am using AcqMethod VOLENV
Instrument : 5971 MSD
Sample Name: 1023/6-310
Misc Info : Aspinwall & Company
Vial Number: 94



Quantitation Report

Data File : C:\HPCHEM\1\DATA\S6001392.D

Acq Time : 19 May 97 8:22 pm

Sample : 1023/6-313

Misc : Aspinwall & Company

Quant Time: May 20 11:55 1997

Operator: Geochem

Inst : 5971 MS

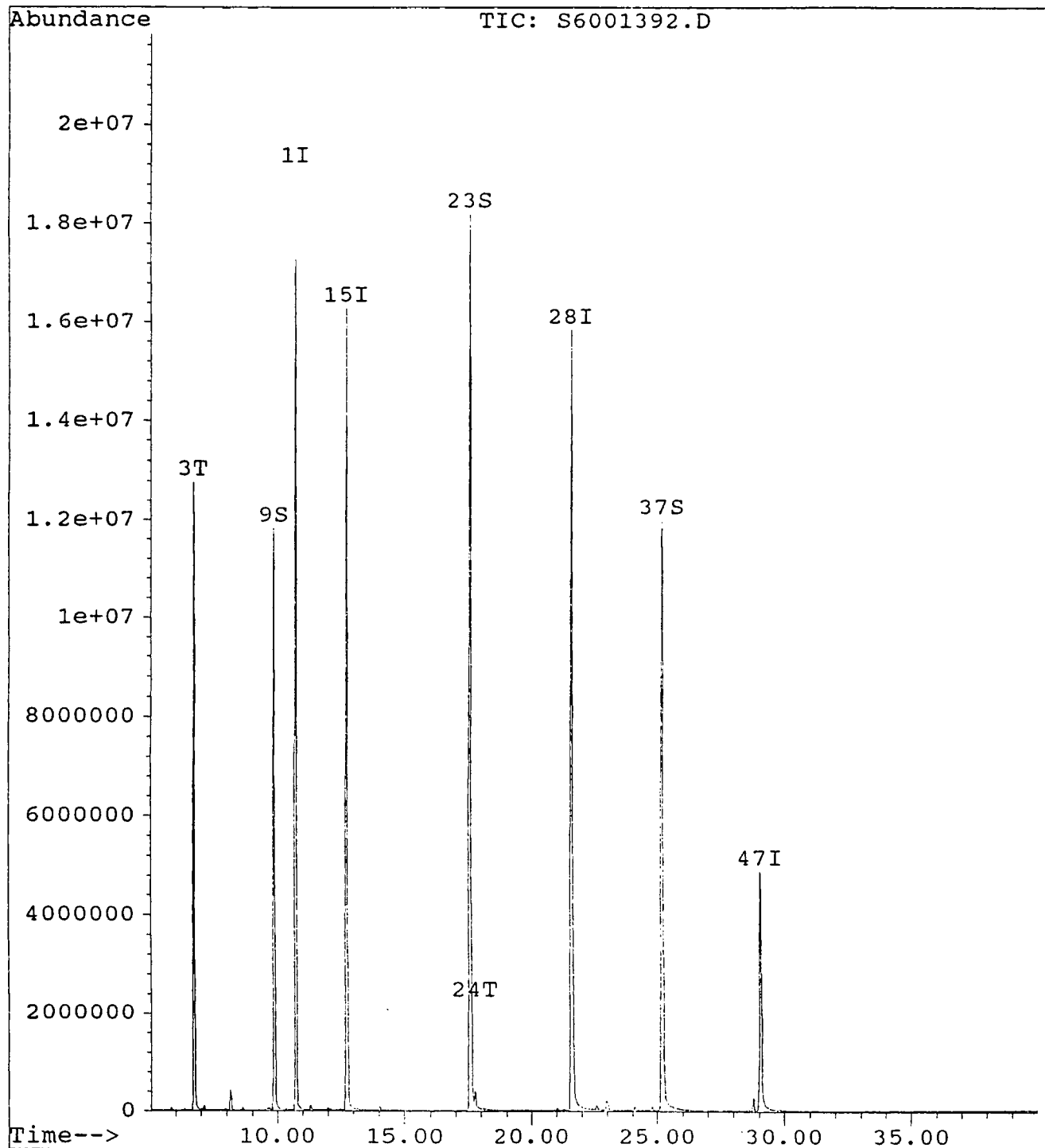
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VOLENV.M

Title : Volatile standards for 5 point calibration

Last Update : Thu May 15 10:40:37 1997

Response via : Multiple Level Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\S6101393.D

Acq Time : 19 May 97 9:19 pm

Sample : 1023/6-324

Misc : Aspinwall & Company

Quant Time: May 21 11:39 1997

Operator: Geochem

Inst : 5971 MS

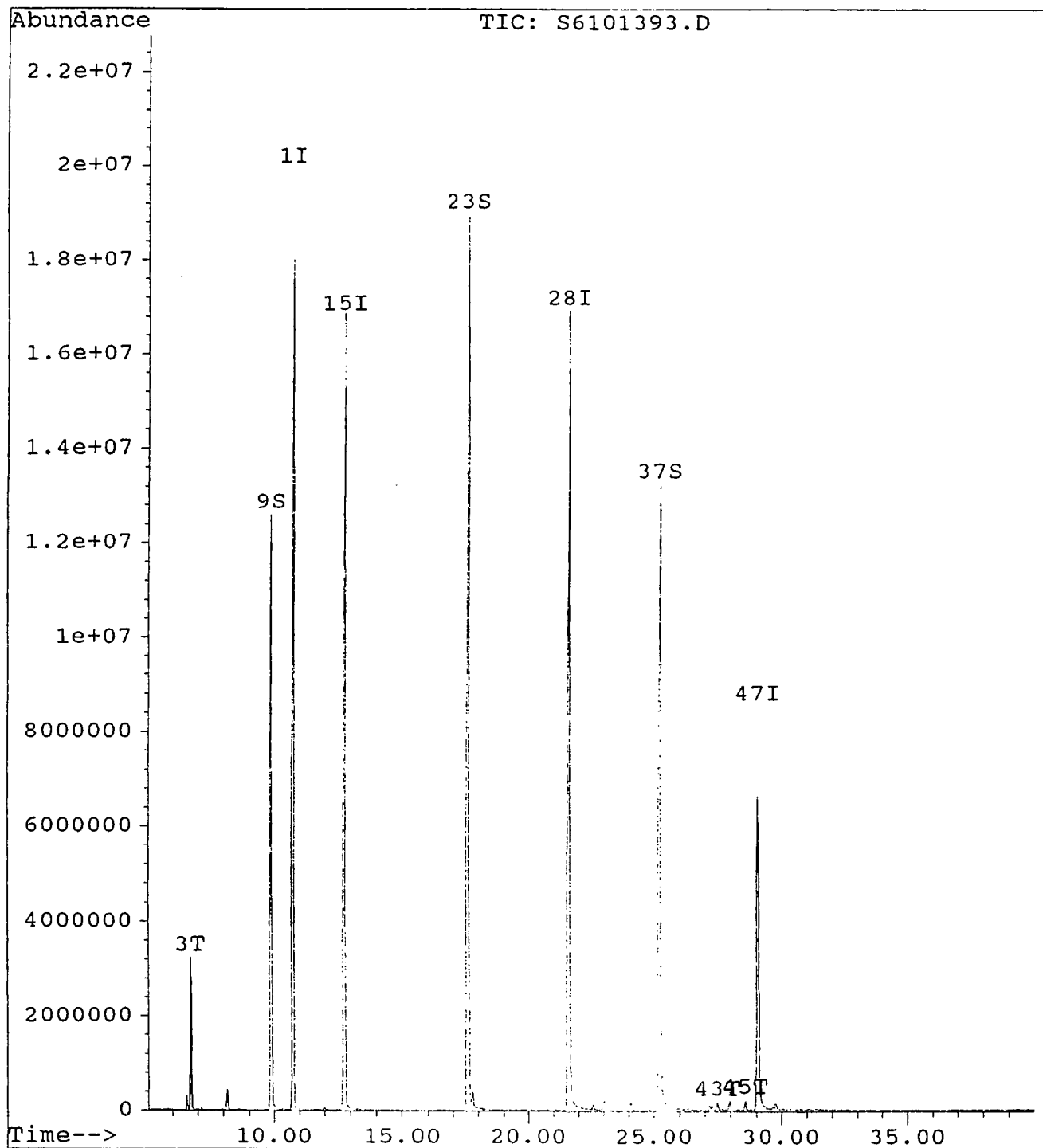
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Method : C:\HPCHEM\1\METHODS\VOLENV.M

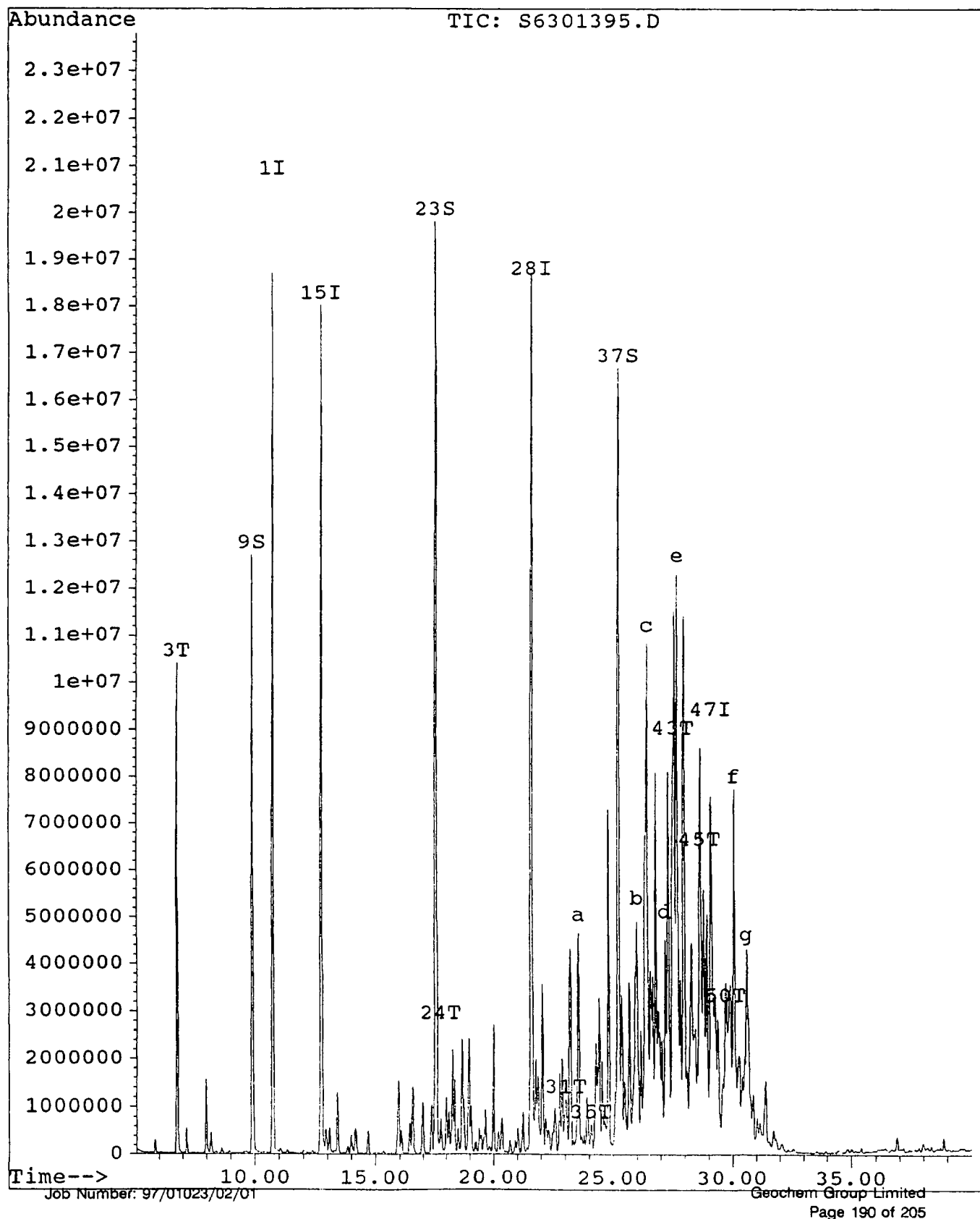
Title : Volatile standards for 5 point calibration

Last Update : Thu May 15 10:40:37 1997

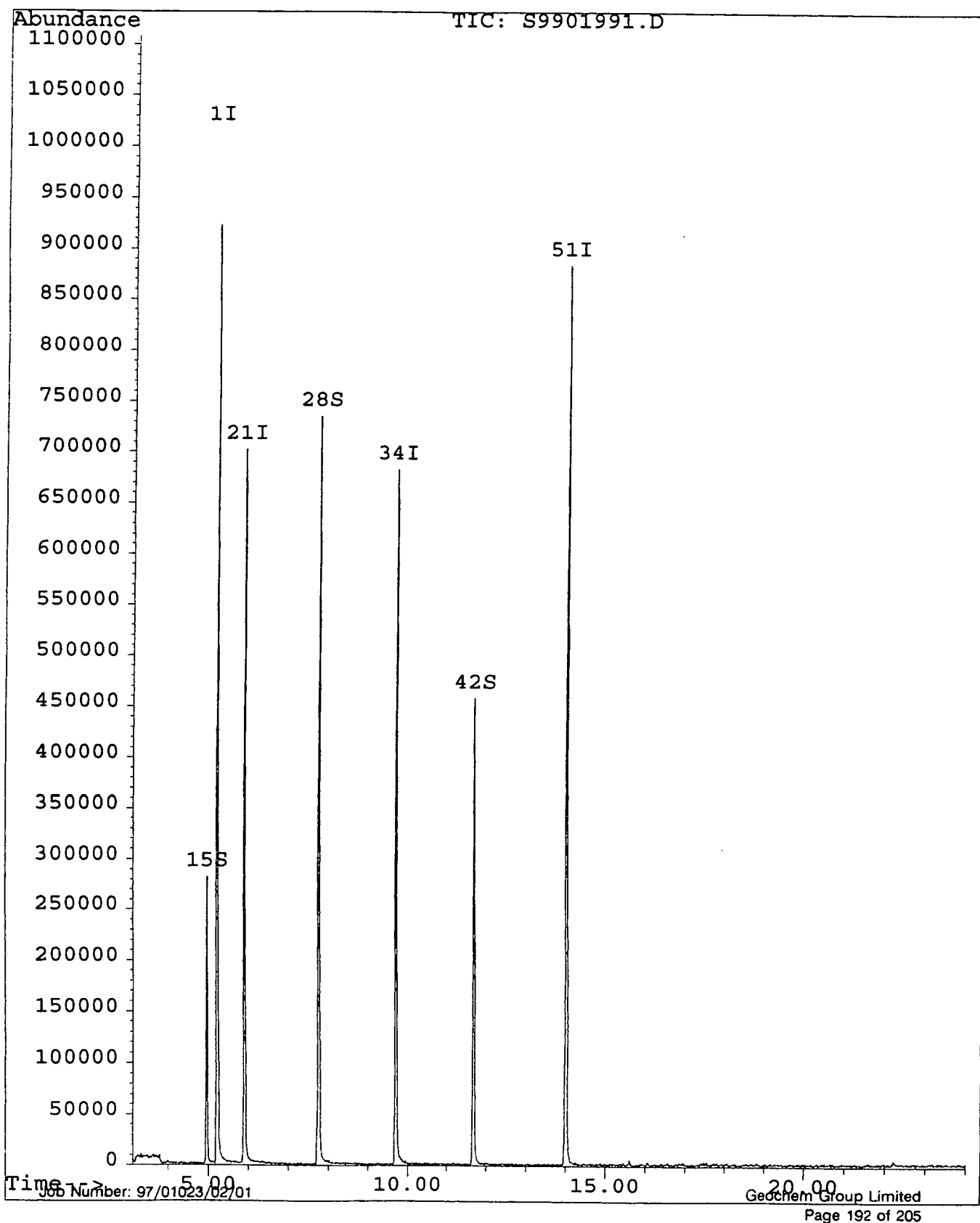
Response via : Multiple Level Calibration



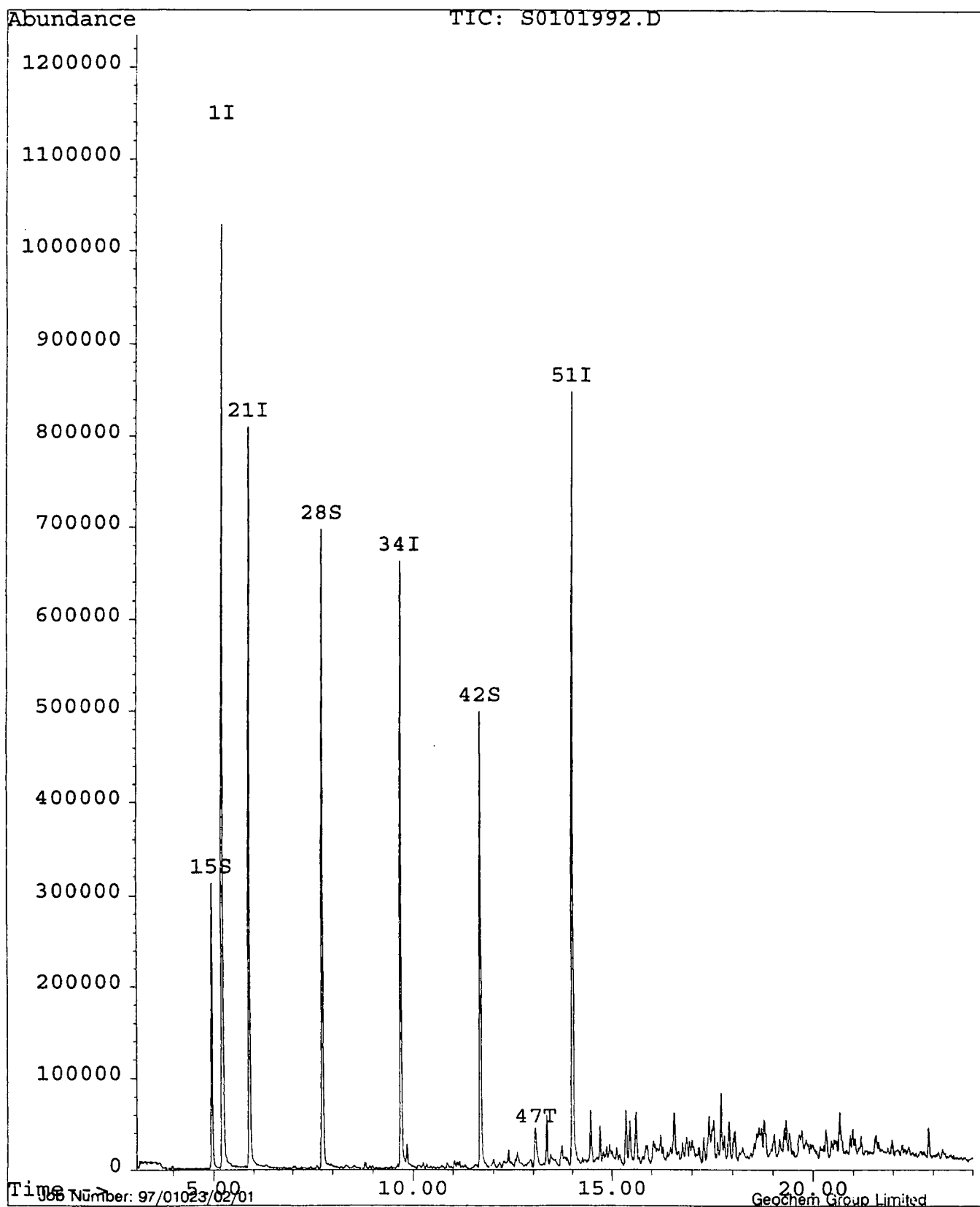
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Operator : Geochem Analytical Services
Acquired : 20 May 97 9:58 am using AcqMethod VOLENV
Instrument : 5971 MSD
Sample Name: 1023/6-331
Misc Info : Aspinwall & Company
Vial Number: 63



File : C:\HPCHEM\1\DATA\120597\S9901991.D
Operator : Geochem Analytical Services
Acquired : 13 May 97 2:53 am using AcqMethod 60VOCHS
Instrument : MSD Vols5
Sample Name: 1023-335
Misc Info :
Vial Number: 22



File : C:\HPCHEM\1\DATA\120597\S0101992.D
Operator : Geochem Analytical Services
Acquired : 13 May 97 3:28 am using AcqMethod 60VOCHS
Instrument : MSD Vols5
Sample Name: 1023-350
Misc Info :
Vial Number: 23





GEOCHEM ANALYTICAL SERVICES

Polynuclear Aromatic Hydrocarbons

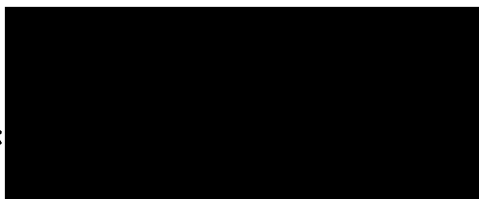
By
G.C.M.S.



Sample Matrix: Soil
Our Reference: 97/1023/02/01
Date Sample Received: 25/4/97
Date Extracted/Prepared: 23/5/97
Extraction procedure: Microwave
Column Extraction: No
Date Analysed: 29/5/97
GC-MS Mode: SIM
Internal Standard: External

CAS Number	Sample No.	105				
	Client Ref.	TP50 0.10				
	P.Q.L.	10				
	Units	µg/kg				
91-20-3	Naphthalene	1038				
208-96-8	Acenaphthylene	662				
83-32-9	Acenaphthene	1826				
86-73-7	Fluorene	2069				
85-01-8	Phenanthrene	20548				
120-12-7	Anthracene	5306				
206-44-0	Fluoranthene	29922				
129-00-0	Pyrene	26112				
56-55-3	Benz[a]anthracene	13440				
218-01-9	Chrysene	13706				
205-99-2	Benzo[b]fluoranthene	10216				
207-08-9	Benzo[k]fluoranthene	11084				
50-32-8	Benzo[a]pyrene	13828				
191-24-2	Benzo[g,h,i]perylene	10155				
53-70-3	Dibenz[a,h]anthracene	1729				
193-39-5	Indeno[1,2,3-cd]pyrene	7950				
	Total P.A.H.	169591				

Approved by:





GEOCHEM ANALYTICAL SERVICES

Polynuclear Aromatic Hydrocarbons

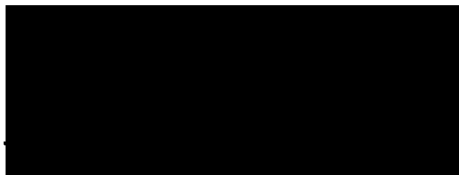
By
G.C.M.S.



Sample Matrix: Soil
Our Reference: 97/1023/02/01
Date Sample Received: 30/4/97
Date Extracted/Prepared: 23/5/97
Extraction procedure: Microwave
Column Extraction: No
Date Analysed: 29/5/97
GC-MS Mode: SIM
Internal Standard: External

CAS Number	Sample No.	194	217			
	Client Ref.	TP27 0.30	TP93 0.90			
	P.Q.L.	10	10			
	Units	µg/kg	µg/kg			
91-20-3	Naphthalene	420	33			
208-96-8	Acenaphthylene	971	23			
83-32-9	Acenaphthene	7962	15			
86-73-7	Fluorene	6387	45			
85-01-8	Phenanthrene	59407	172			
120-12-7	Anthracene	17965	47			
206-44-0	Fluoranthene	79957	606			
129-00-0	Pyrene	62879	575			
56-55-3	Benz[a]anthracene	30171	314			
218-01-9	Chrysene	29060	382			
205-99-2	Benzo[b]fluoranthene	23944	431			
207-08-9	Benzo[k]fluoranthene	23059	401			
50-32-8	Benzo[a]pyrene	29689	485			
191-24-2	Benzo[g,h,i]perylene	22750	548			
53-70-3	Dibenz[a,h]anthracene	3879	82			
193-39-5	Indeno[1,2,3-cd]pyrene	16990	463			
	Total P.A.H.	415490	4623			

Approved by:





GEOCHEM ANALYTICAL SERVICES

Polynuclear Aromatic Hydrocarbons

By
G.C.M.S.



Sample Matrix: Soil
Our Reference: 97/1023/02/01
Date Sample Received: 1/5/97
Date Extracted/Prepared: 23/5/97
Extraction procedure: Microwave
Column Extraction: No
Date Analysed: 29/5/97
GC-MS Mode: SIM
Internal Standard: External

CAS Number	Sample No.	256	261	285		
	Client Ref.	TP14 0.40	TP16 0.10	TP91		
	P.Q.L.	10	10	10		
	Units	µg/kg	µg/kg	µg/kg		
91-20-3	Naphthalene	116	75	412		
208-96-8	Acenaphthylene	67	12	10		
83-32-9	Acenaphthene	102	<10	11		
86-73-7	Fluorene	103	14	118		
85-01-8	Phenanthrene	1418	44	132		
120-12-7	Anthracene	328	13	<10		
206-44-0	Fluoranthene	4212	132	67		
129-00-0	Pyrene	3710	120	44		
56-55-3	Benz[a]anthracene	1721	68	16		
218-01-9	Chrysene	2069	107	31		
205-99-2	Benzo[b]fluoranthene	1839	94	28		
207-08-9	Benzo[k]fluoranthene	1802	84	22		
50-32-8	Benzo[a]pyrene	2201	102	15		
191-24-2	Benzo[g,h,i]perylene	1774	93	29		
53-70-3	Dibenz[a,h]anthracene	304	20	<10		
193-39-5	Indeno[1,2,3-cd]pyrene	1504	92	26		
	Total P.A.H.	23271	1071	961		

Approved by:....



GEOCHEM ANALYTICAL SERVICES

Polynuclear Aromatic Hydrocarbons

By
G.C.M.S.



Sample Matrix: Soil
Our Reference: 97/1023/02/01
Date Sample Received: 2+6/5/1997
Date Extracted/Prepared: 23/5/97
Extraction procedure: Microwave
Column Extraction: No
Date Analysed: 29/5/97
GC-MS Mode: SIM
Internal Standard: External

CAS Number	Sample No.	313	336			
	Client Ref.	TP142 0.20	TP35 0.50			
	P.Q.L.	10	10			
	Units	µg/kg	µg/kg			
91-20-3	Naphthalene	214	103			
208-96-8	Acenaphthylene	26	12			
83-32-9	Acenaphthene	80	45			
86-73-7	Fluorene	197	96			
85-01-8	Phenanthrene	637	851			
120-12-7	Anthracene	64	157			
206-44-0	Fluoranthene	141	913			
129-00-0	Pyrene	104	712			
56-55-3	Benz[a]anthracene	26	294			
218-01-9	Chrysene	61	326			
205-99-2	Benzo[b]fluoranthene	50	240			
207-08-9	Benzo[k]fluoranthene	31	240			
50-32-8	Benzo[a]pyrene	39	293			
191-24-2	Benzo[g,h,i]perylene	53	233			
53-70-3	Dibenz[a,h]anthracene	13	40			
193-39-5	Indeno[1,2,3-cd]pyrene	54	186			
	Total P.A.H.	1788	4740			

Approved by:.....

Quantitation Report

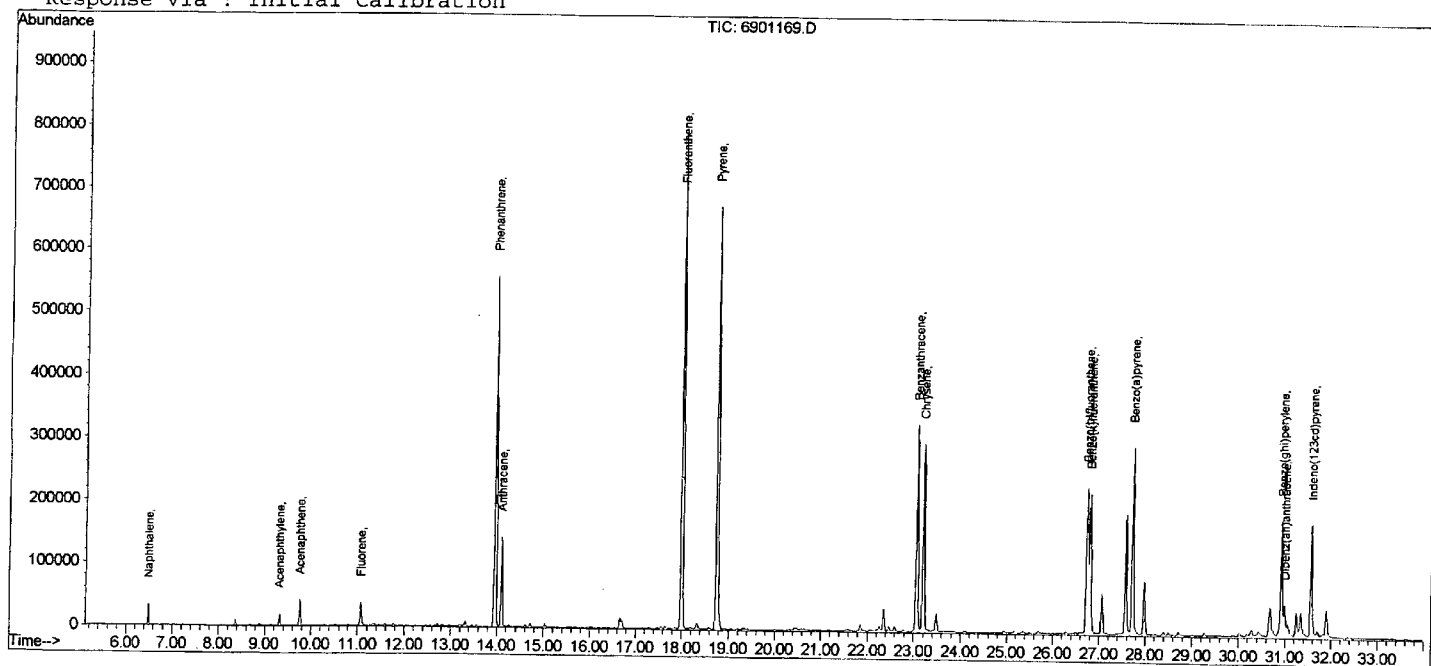
Data File : C:\HPCHEM\1\DATA\290597\6901169.D
 Acq On : 29 May 1997 19:00
 Sample : 1023-105 PAH
 Misc : Aspinwall & Co

Vial: 69
 Operator: Geochem Analytical Services
 Inst : GC/MSD 59
 Multiplr: 1.00
 Sample Amount: 0.00

MS Integration Params: EVENTS.E
 Quant Time: May 30 10:35 1997

Quant Results File: PAH5973.RES

Method : C:\HPCHEM\1\METHODS\PAH5973.M (Chemstation Integrator)
 Title : Poly Aromatic Hydrocarbons
 Last Update : Fri May 30 10:24:27 1997
 Response via : Initial Calibration



6901169.D PAH5973.M

Fri May 30 10:35:28 1997

Quantitation Report

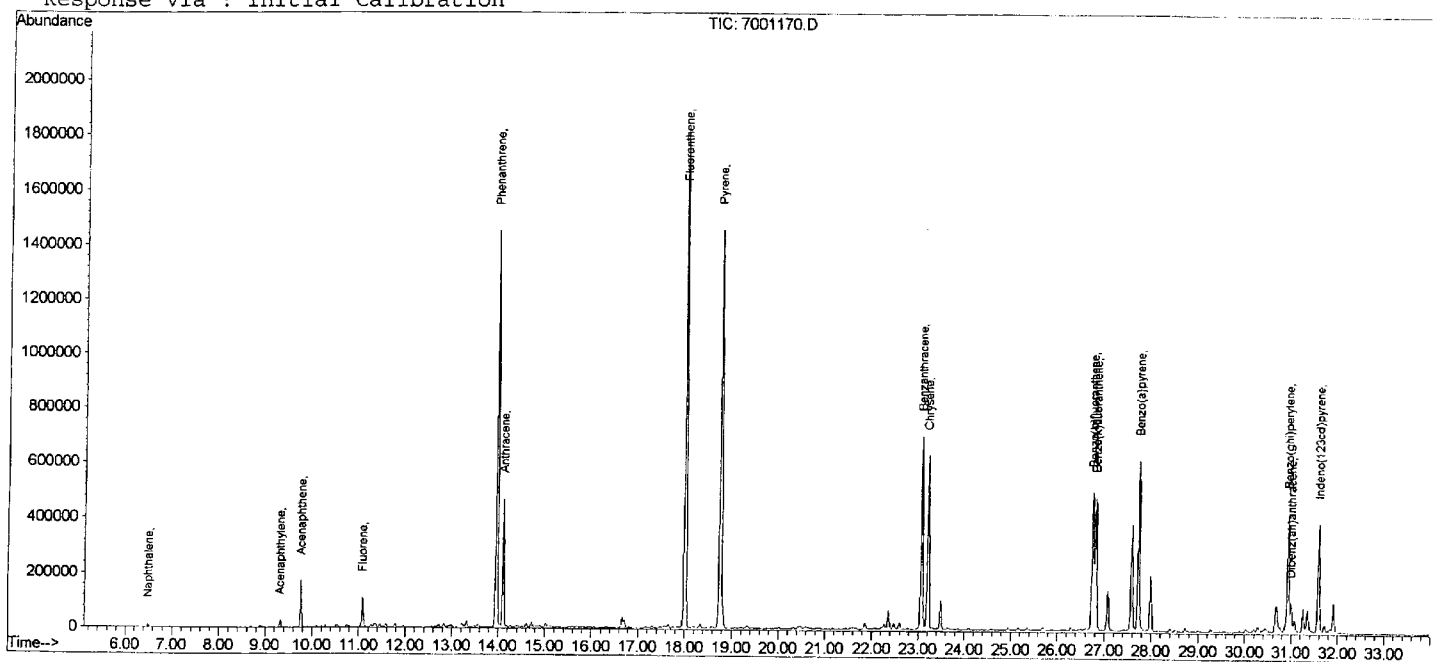
Data File : C:\HPCHEM\1\DATA\290597\7001170.D
 Acq On : 29 May 1997 19:47
 Sample : 1023-194 PAH
 Misc : Aspinwall & Co

Vial: 70
 Operator: Geochem Analytical Services
 Inst : GC/MSD 59
 Multiplr: 1.00
 Sample Amount: 0.00

MS Integration Params: EVENTS.E
 Quant Time: May 30 10:35 1997

Quant Results File: PAH5973.RES

Method : C:\HPCHEM\1\METHODS\PAH5973.M (Chemstation Integrator)
 Title : Poly Aromatic Hydrocarbons
 Last Update : Fri May 30 10:24:27 1997
 Response via : Initial Calibration



7001170.D Dumped PAH5973.M

Fri May 30 10:35:45 1997

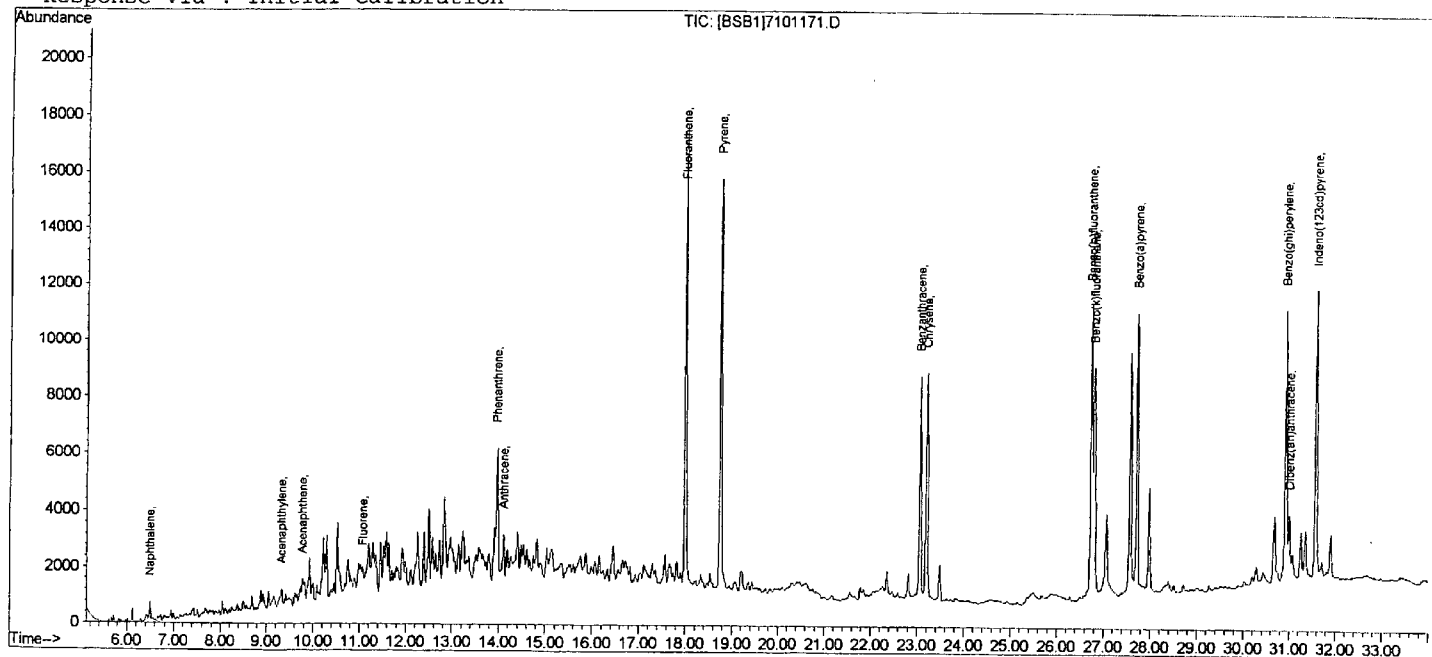
Quantitation Report

Data File : C:\HPCHEM\1\DATA\290597\BSB\7101171.D Vial: 71
 Acq On : 29 May 1997 20:33 Operator: [BSB1]Geochem Analytical Serv
 Sample : 1023-217 PAH Inst : GC/MSD 59
 Misc : Aspinwall & Co Multiplr: 1.00
 Sample Amount: 0.00

MS Integration Params: EVENTS.E
 Quant Time: May 30 10:37 1997

Quant Results File: PAH5973.RES

Method : C:\HPCHEM\1\METHODS\PAH5973.M (Chemstation Integrator)
 Title : Poly Aromatic Hydrocarbons
 Last Update : Fri May 30 10:24:27 1997
 Response via : Initial Calibration



7101171.D PAH5973.RES Fri May 30 10:37:18 1997

Quantitation Report

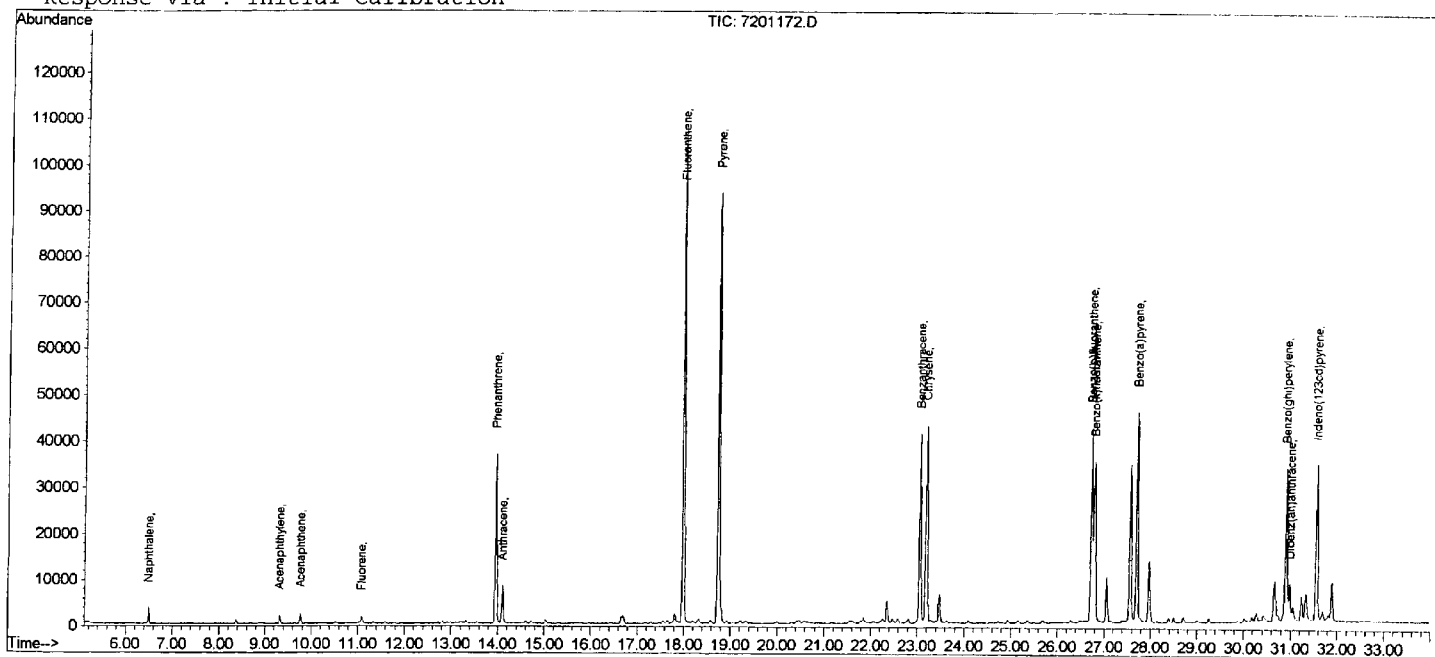
Data File : C:\HPCHEM\1\DATA\290597\7201172.D
 Acq On : 29 May 1997 21:20
 Sample : 1023-256 PAH
 Misc : Aspinwall & Co

Vial: 72
 Operator: Geochem Analytical Services
 Inst : GC/MSD 59
 Multiplr: 1.00
 Sample Amount: 0.00

MS Integration Params: EVENTS.E
 Quant Time: May 30 10:35 1997

Quant Results File: PAH5973.RES

Method : C:\HPCHEM\1\METHODS\PAH5973.M (Chemstation Integrator)
 Title : Poly Aromatic Hydrocarbons
 Last Update : Fri May 30 10:24:27 1997
 Response via : Initial Calibration



7201172.D PAH5973.M

Fri May 30 10:36:12 1997

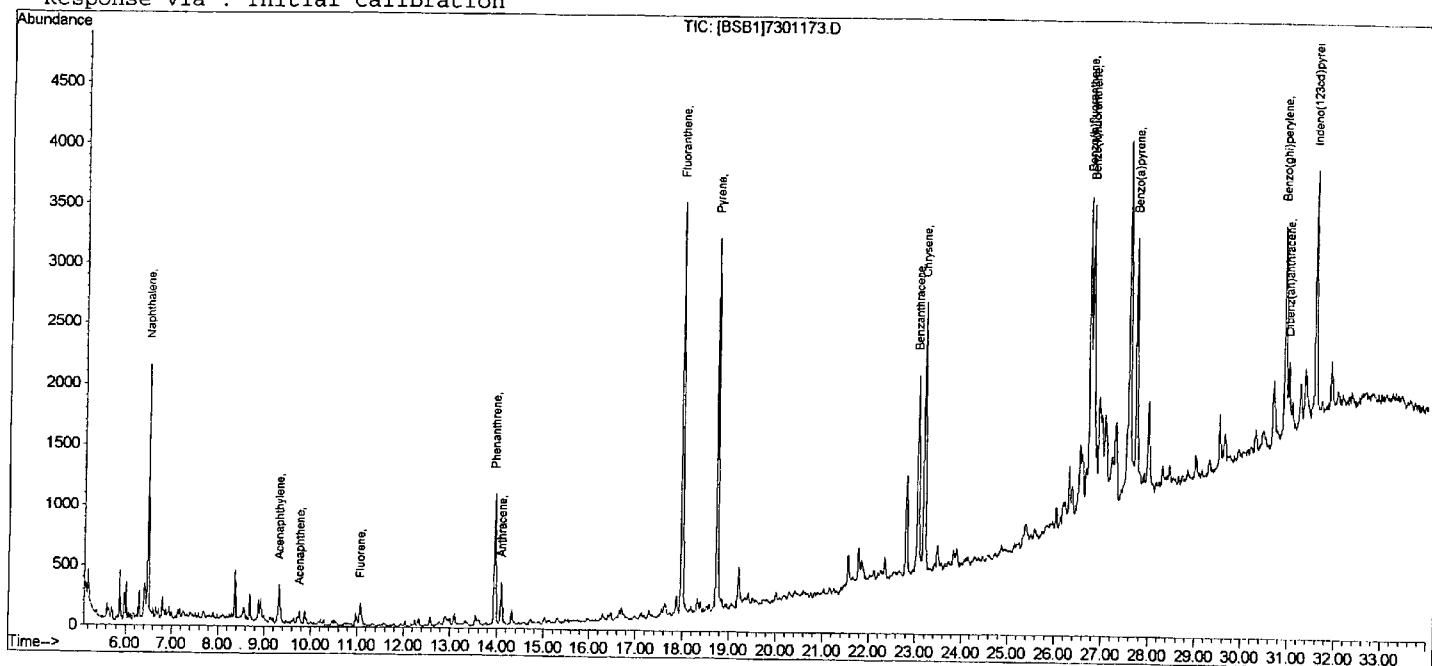
Quantitation Report

Data File : C:\HPCHEM\1\DATA\290597\BSB\7301173.D Vial: 73
 Acq On : 29 May 1997 22:07 Operator: [BSB1]Geochem Analytical Serv
 Sample : 1023-261 PAH Inst : GC/MSD 59
 Misc : Aspinwall & Co Multiplr: 1.00
 Sample Amount: 0.00

MS Integration Params: EVENTS.E
 Quant Time: May 30 10:37 1997

Quant Results File: PAH5973.RES

Method : C:\HPCHEM\1\METHODS\PAH5973.M (Chemstation Integrator)
 Title : Poly Aromatic Hydrocarbons
 Last Update : Fri May 30 10:24:27 1997
 Response via : Initial Calibration



7301173.D PAH5973.M

Fri May 30 10:37:40 1997

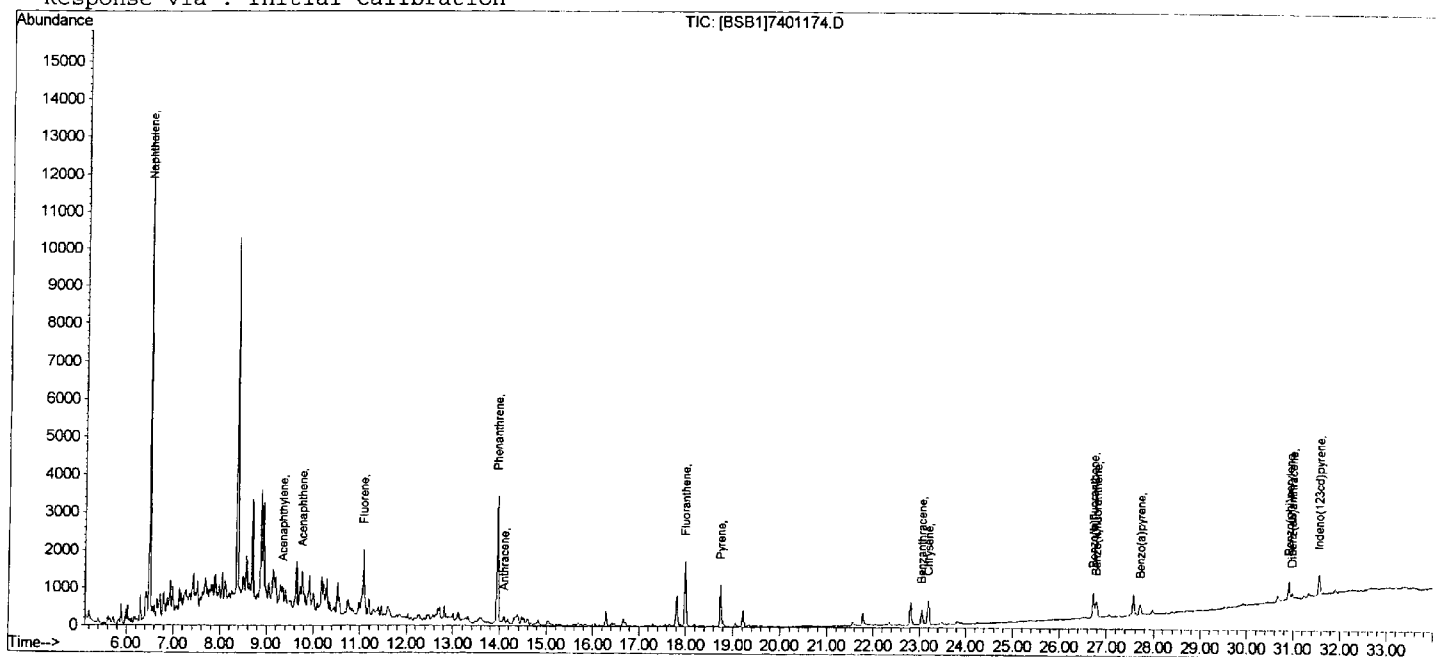
Quantitation Report

Data File : C:\HPCHEM\1\DATA\290597\BSB\7401174.D Vial: 74
 Acq On : 29 May 1997 22:53 Operator: [BSB1]Geochem Analytical Serv
 Sample : 1023-285 PAH Inst : GC/MSD 59
 Misc : Aspinwall & Co Multiplr: 1.00
 Sample Amount: 0.00

MS Integration Params: EVENTS.E
 Quant Time: May 30 10:37 1997

Quant Results File: PAH5973.RES

Method : C:\HPCHEM\1\METHODS\PAH5973.M (Chemstation Integrator)
 Title : Poly Aromatic Hydrocarbons
 Last Update : Fri May 30 10:24:27 1997
 Response via : Initial Calibration



7401174.D Number 290597 01/01

Fri May 30 10:38:02 1997

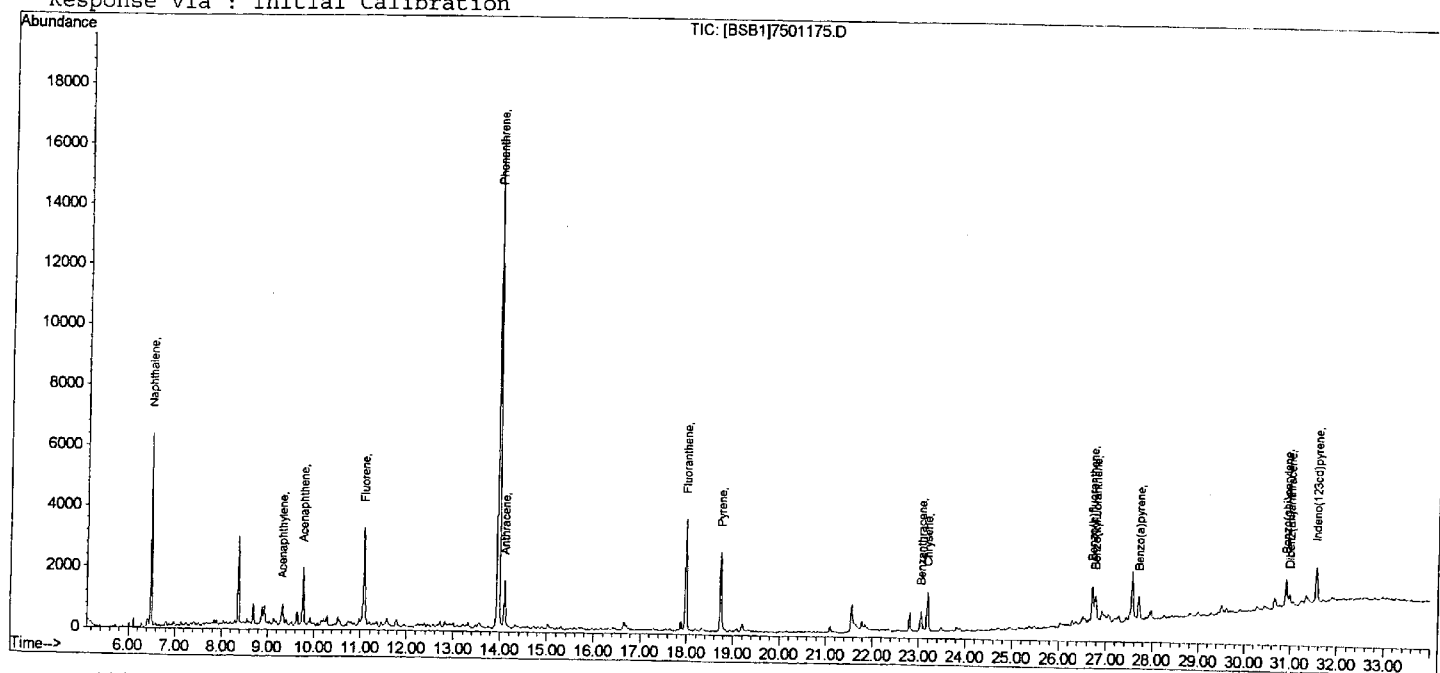
Quantitation Report

Data File : C:\HPCHEM\1\DATA\290597\BSB\7501175.D Vial: 75
 Acq On : 29 May 1997 23:39 Operator: [BSB1]Geochem Analytical Serv
 Sample : 1023-313 PAH Inst : GC/MSD 59
 Misc : Aspinwall & Co Multiplr: 1.00
 Sample Amount: 0.00

MS Integration Params: EVENTS.E
 Quant Time: May 30 10:38 1997

Quant Results File: PAH5973.RES

Method : C:\HPCHEM\1\METHODS\PAH5973.M (Chemstation Integrator)
 Title : Poly Aromatic Hydrocarbons
 Last Update : Fri May 30 10:24:27 1997
 Response via : Initial Calibration



7501175.D PAH5973.M

Fri May 30 10:38:24 1997

Geochem Group Limited
 Page 204 of 205

Page 2

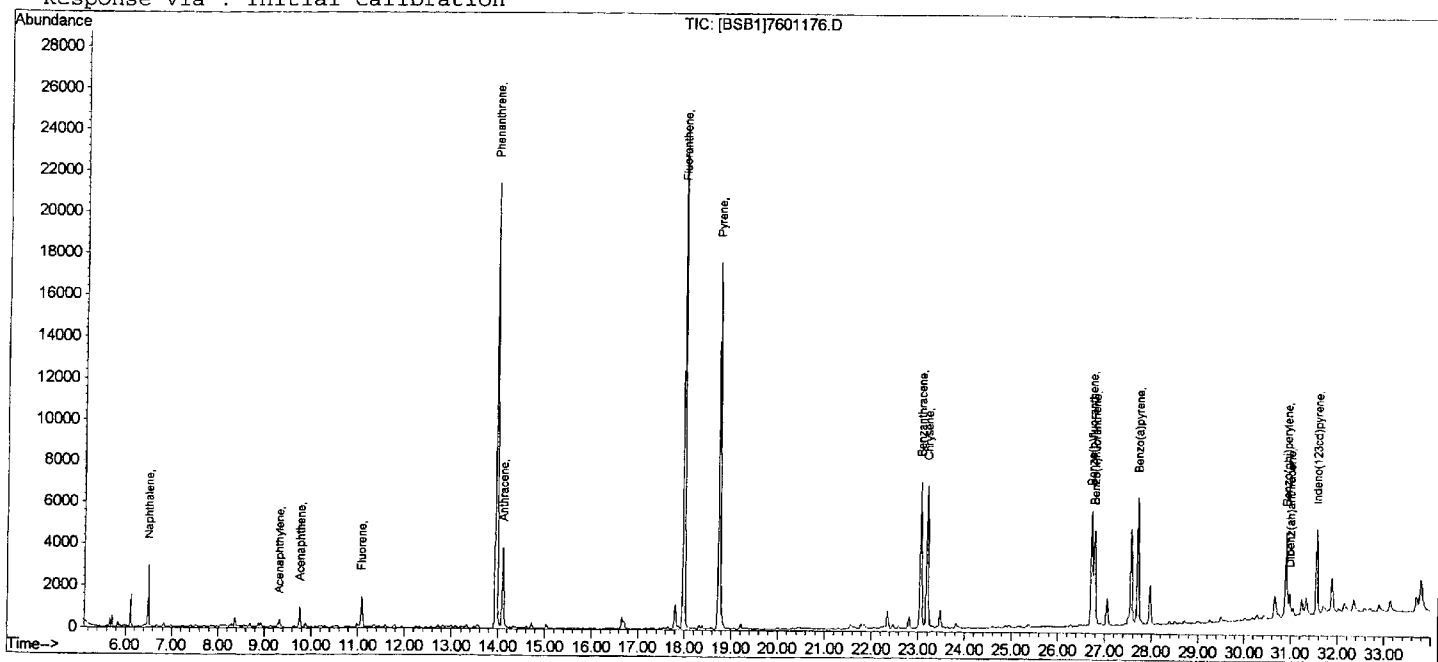
Quantitation Report

Data File : C:\HPCHEM\1\DATA\290597\BSB\7601176.D Vial: 76
 Acq On : 30 May 1997 00:25 Operator: [BSB1]Geochem Analytical Serv
 Sample : 1023-336 PAH Inst : GC/MSD 59
 Misc : Aspinwall & Co Multiplr: 1.00
 Sample Amount: 0.00

MS Integration Params: EVENTS.E
 Quant Time: May 30 10:38 1997

Quant Results File: PAH5973.RES

Method : C:\HPCHEM\1\METHODS\PAH5973.M (Chemstation Integrator)
 Title : Poly Aromatic Hydrocarbons
 Last Update : Fri May 30 10:24:27 1997
 Response via : Initial Calibration



7601176.D Job Number: 971010230201

PAH5973.M Fri May 30 10:38:46 1997



JOE HANALYTICAL SERVICE
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER
Location : RAF UPPER HEYFORD
Client Contact : [REDACTED]
Client Ref. No. : MD3333A



☐ Preliminary

☒ Validated

☐ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	TLC	TLC	TLC	TLC
Detection Limits	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<1	<1	<1	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Boron	Calcium	Cadmium	Chromium	Copper	Mercury	Magnesium	Nickel	Lead	Selenium	Zinc	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC
299	TP 38 W	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	1	<1	3	1
300	TP 91 W	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	2	1	25	3
333	TP138	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	5	1	2	6
334	TP138	UNKNOWN	0.69	<0.05	139.00	1.32	0.64	0.87	<0.05	3.07	1.10	3.15	<0.1	1.30	-	-	-	-
357	TP 106	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	1	<1	6	1



TABLE OF RESULTS

Job Number : 97/01023/02/01

Client : ASPINWALL & COMPANY

Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER

Location : RAF UPPER HEYFORD

Client Contact : [REDACTED]

Client Ref. No. : MD3333A

☐ Preliminary☒ Validated☐ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ms/cm	ppm(CaCO ₃)		ppm	
Detection Method		Spectro	ATU	Colour	Flame P	Flame P	Gravi	IR	KONE	KONE	KONE	KONE	Meter	Meter	Titrat	Titre	
Detection Limits		<10	<0.5	<0.01	<3	<3	<1	<1	<5	<0.5	<0.01	<3	<0.004	<0.01	<1	<1	
Sample Number	Sample Identity	Depth (m)	COD On Unfiltered Sample	BOD in unfiltered water	Ammoniacal Nitrogen in Water	Potassium	Sodium	DCM/MeOH Extract	Tot. Org. Carbon in Water	Chloride (soluble)	Nitrate (soluble)	Phosphate (soluble)	Sulphate (soluble)	Electrical Conductivity	pH Value in Water	Alkalinity Total	Bicarbonate
299	TP 38 W	UNKNOWN	-	-	-	-	-	4	-	-	-	-	-	0.818	7.11	-	-
300	TP 91 W	UNKNOWN	-	-	-	-	-	28	-	-	-	-	-	0.808	6.88	-	-
333	TP138	UNKNOWN	-	-	-	-	-	8	6	-	-	-	-	-	-	-	-
334	TP138	UNKNOWN	701	83.6	0.05	<3	11	-	-	20	7.1	0.03	27	0.526	7.93	340	340
357	TP 106	UNKNOWN	-	-	-	-	-	7	-	-	-	-	-	0.692	7.48	-	-



GEOCHEM ANALYTICAL SERVICES

Volatiles Analysis

by
G.C.M.S.



Job Number 97/1023/02/06		Sample number	333			
		Client Ref	TP138			
		Depth	-			
		Date analysed	19/05/97			
		Matrix	Water			
		Dilution factor (P.Q.L)	2			
Peak	CAS No:	Units	µg/litre			
2T	75-35-4	1,1-Dichloroethene	<2			
3T	75-09-2	Dichloromethane	*88			
4T	156-59-2	trans-1,2-Dichloroethene	<2			
5T	75-34-3	1,1-Dichloroethane	<2			
6T	156-60-5	cis-1,2-Dichloroethene	<2			
7T	67-66-3	Chloroform	<2			
8T	594-20-7	2,2-Dichloropropane	<2			
10T	107-06-2	1,2-Dichloroethane	<2			
11T	71-55-6	1,1,1-Trichloroethane	3			
12T	563-58-6	1,1-Dichloropropene	<2			
13T	71-43-2	Benzene	<2			
14T	56-23-5	Carbon Tetrachloride	<2			
16T	74-95-3	Dibromomethane	<2			
17T	78-87-5	1,2-Dichloropropane	<2			
18T	75-27-4	Bromodichloromethane	<2			
19T	79-01-6	Trichloroethene	<2			
20T	10061-01-6	cis-1,3-Dichloropropene	<2			
21T	10061-02-5	trans-1,3-Dichloropropene	<2			
22T	79-00-5	1,1,2-Trichloroethane	<2			
24T	108-88-3	Toluene	3			
25T	124-48-1	Dibromochloromethane	<2			
26T	106-93-4	1,2-Dibromoethane	<2			
27T	127-18-4	Tetrachloroethene	<2			
29T	108-90-7	Chlorobenzene	<2			
30T	100-41-4	Ethylbenzene	<2			
31T	1330-20-7	Xylenes(meta & para)	<2			
32T	75-25-2	Bromoform	<2			
33T	100-42-5	Styrene	<2			
34T	79-34-5	1,1,2,2-Tetrachloroethane	<2			
35T	95-47-6	o-Xylene	<2			
36T	142-28-9	1,3-Dichloropropane	<2			
38T	98-82-8	Isopropylbenzene	<2			
39T	108-86-1	Bromobenzene	<2			
40T	95-49-8	2-Chlorotoluene	<2			
41T	103-65-1	n-Propylbenzene	<2			
42T	106-43-4	4-Chlorotoluene	<2			
43T	108-67-8	1,3,5-Trimethylbenzene	<2			
44T	25155-15-1	4-Isopropyltoluene	<2			
45T	95-63-6	1,2,4-Trimethylbenzene	<2			
46T	95-50-1	1,2-Dichlorobenzene	<2			
48T	541-73-1	1,3-Dichlorobenzene	<2			
49T	135-98-8	sec-Butylbenzene	<2			
50T	98-06-6	tert-Butylbenzene	<2			
51T	106-46-7	1,4-Dichlorobenzene	<2			
52T	104-51-8	n-Butylbenzene	<2			
		Total Other Volatiles	4			

N.B. Water blank subtracted

High dilution factor

* Out of calibration

Approved by

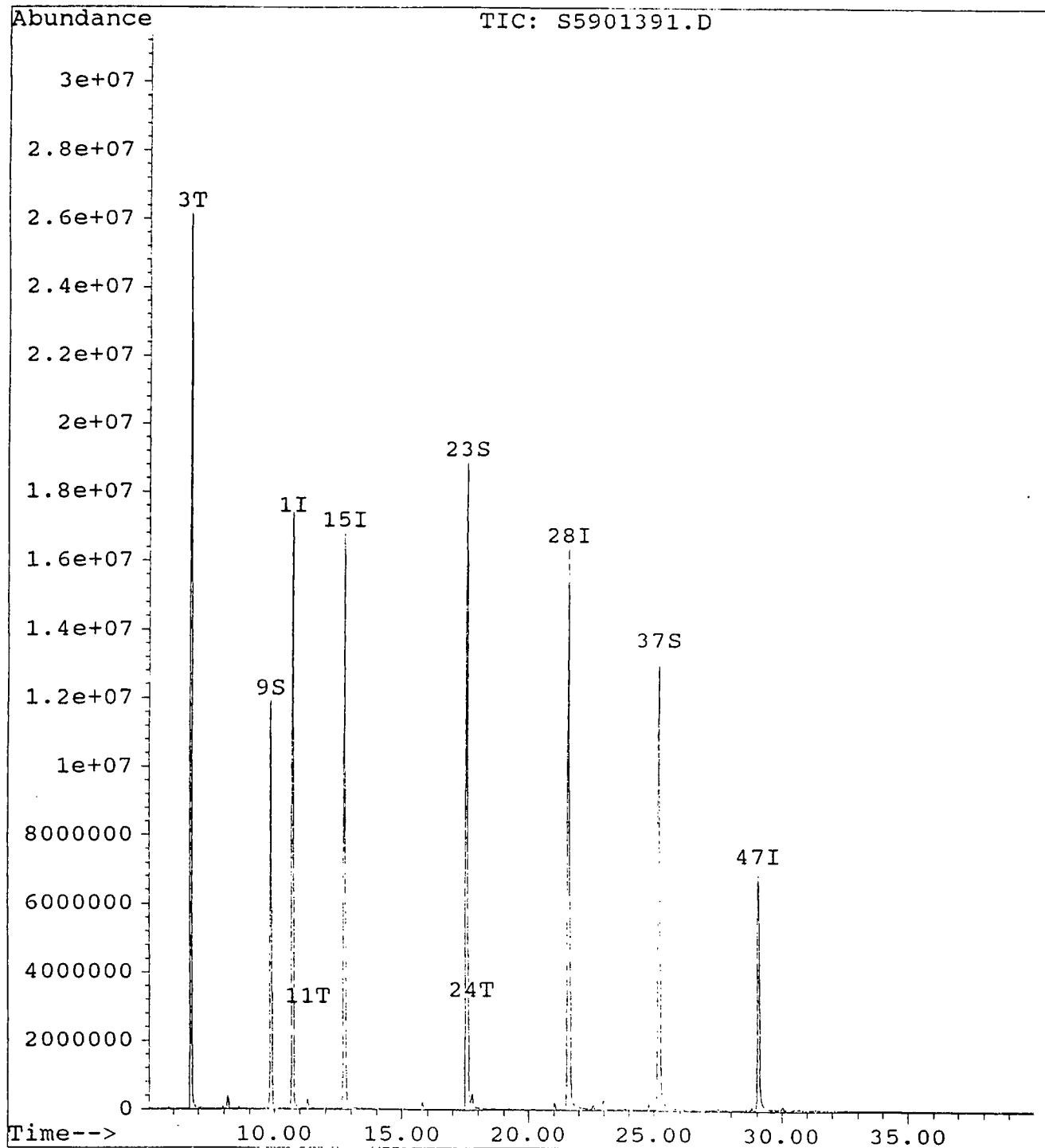
Print name

Quantitation Report

Data File : C:\HPCHEM\1\DATA\S5901391.D
 Acq Time : 19 May 97 7:25 pm
 Sample : 1023/6-333
 Misc : Aspinwall & Company
 Quant Time: May 21 11:37 1997

Operator: Geochem
 Inst : 5971 MS
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\VOLENV.M
 Title : Volatile standards for 5 point calibration
 Last Update : Thu May 15 10:40:37 1997
 Response via : Multiple Level Calibration



Appendix

5

Borehole Logs



ALLIED EXPLORATION & GEOTECHNICS LTD

DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:

Site Investigation at RAF Upper Heyford

DRILLHOLE No

BH-01

Client:

Defence Estate Organisation

Location:

Oxfordshire E449936.30 N226551.90

Method & Equipment:

Openhole using a UMM C10TW

Ground Level(m(AOD)):

116.42

Date:

22-04-97

Sheet:

1 of 6

RUN DETAILS			STRATA						Geology	Instrument	Backfill
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'ed Level	Legend	Depth Thick-ness)	DESCRIPTION					
						Discontinuities	Detail	Main			
			115.94		(0.48) 0.48	0.00-46.50m BGL ... Openhole drilling.		Stiff brown friable sandy gravelly CLAY with many rootlets.			
			115.59		(0.35) 0.83			(1) Grey brown completely weathered LIMESTONE very weak.			
			115.47		(0.12) 0.95			(1) Grey brown moderately weathered LIMESTONE moderately weak.			
			115.08		(0.39) 1.34			(1) Yellow brown completely weathered LIMESTONE very weak.			
					(1.30)			Yellow brown moderately weathered LIMESTONE moderately weak.			
			113.78		2.64						
					(0.47)			Yellow brown completely weathered LIMESTONE very weak.			
			113.31		3.11						
					(3.35)			Grey brown moderately weathered LIMESTONE moderately strong occasionally weak.			
			109.96		6.46						
					(1.79)			Orange brown completely weathered LIMESTONE very weak.			

Drilling Progress and Water Observations

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water (mBGL)		Flush		1) Description derived from drillers daily report. 2) Inspection pit excavated prior to drilling (1.0x1.0x0.45m). 3) Jar sample taken every 1m. 4) Falling head permeability test carried out at 17.00m.
				Strike	RWL	Type	Returns	
22/04/97	0.00	0.00						
22/04/97	17.00	1.45				air	100%	
01/05/97	17.00	1.45						
01/05/97	46.50	16.85				air	100%	

All dimensions in metres
Scale 1:50For Explanation of Symbols and
Abbreviations see Key Sheets

Checked By:

Logged By:

Contract No.
1742

Date Printed:- 04/06/97

Form AEG22



ALLIED EXPLORATION & GEOTECHNICS LTD

DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:		Site Investigation at RAF Upper Heyford		DRILLHOLE No	
Client:		Defence Estate Organisation		BH-01	
Location:		Oxfordshire E449936.30 N226551.90			
Method & Equipment:		Openhole using a UMM C10TW		Ground Level(m(AOD)):	Date:
				116.42	22-04-97
				Sheet:	2 of 6

RUN DETAILS			STRATA				Geo logy	Inst- ment	Backfill
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thick- ness)	DESCRIPTION			
						Discontinuities	Main		
			108.17		8.25		(As sheet 1 of 6)		
					(0.95)		Grey thinly laminated slightly weathered MUDSTONE moderately weak.		
			107.22		9.20				
					(2.02)		Yellow brown silty fine to medium SAND with occasional pockets of soft brown clay.		
			105.20		11.22				
					(1.65)		Orange brown highly weathered LIMESTONE weak.		
			103.55		12.87				
					(2.68)		Yellow brown slightly weathered LIMESTONE moderately strong.		
			100.87		15.55				
							Dark grey highly weathered MUDSTONE weak.		

Drilling Progress and Water Observations								GENERAL REMARKS	
Date		Depth	Casing	Core Dia mm	Water (mBGL) Strike	RWL	Flush Type Returns		
22/04/97		0.00	0.00						
22/04/97		17.00	1.45				air	100%	
01/05/97		17.00	1.45						
01/05/97		46.50	16.85				air	100%	

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	C [REDACTED]	Logged By: [REDACTED]	Contract No. 1742

Date Printed:- 04/06/97

Form AEG22

ALLIED EXPLORATION & GEOTECHNICS LTD

DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:

Site Investigation at RAF Upper Heyford

DRILLHOLE No

BH-01

Client:

Defence Estate Organisation

Location:

Oxfordshire E449936.30 N226551.90

Method & Equipment:

Openhole using a UMM C10TW

Ground Level(m(AOD)):

116.42

Date:

22-04-97

Sheet:

3 of 6

RUN DETAILS			STRATA				Geology	Instrument / Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thickness	DESCRIPTION			
						Discontinuities			Detail
					(2.53)		(As sheet 2 of 6) Dark grey highly weathered MUDSTONE weak.		
			98.34		18.08		Dark grey slightly weathered MUDSTONE moderately weak to moderately strong.		

Drilling Progress and Water Observations								GENERAL REMARKS
Date		Depth	Casing	Core Dia mm	Water (mBGL) Strike	Flush Type	Returns	
22/04/97		0.00	0.00					1) Description derived from drillers daily report. 2) Inspection pit excavated prior to drilling (1.0x1.0x0.45m). 3) Jar sample taken every 1m. 4) Falling head permeability test carried out at 17.00m.
22/04/97		17.00	1.45			air	100%	
01/05/97		17.00	1.45					
01/05/97		46.50	16.85			air	100%	

All dimensions in metres
Scale 1:50

For Explanation of Symbols and Abbreviations see Key Sheets

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Date Printed:- 04/06/97

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**ALLIED EXPLORATION & GEOTECHNICS LTD****DRILLHOLE LOG**

Status:-

FINAL

Date:- 04/06/97

Project: Site Investigation at RAF Upper Heyford		DRILLHOLE No BH-01	
Client: Defence Estate Organisation	Location: Oxfordshire E449936.30 N226551.90		
Method & Equipment: Openhole using a UMM C10TW	Ground Level(m(AOD)): 116.42	Date: 22-04-97	Sheet: 4 of 6

RUN DETAILS			STRATA					Geo logy	Inst ruction - tent / backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thick- ness)	DESCRIPTION				
						Discontinuities	Detail			Main
								(As sheet 3 of 6) Dark grey slightly weathered MUDSTONE moderately weak to moderately strong.		
					15.17)					

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water (mBGL) Strike	RWL	Type	Flush Returns	
22/04/97	0.00	0.00						1) Description derived from drillers daily report. 2) Inspection pit excavated prior to drilling (1.0x1.0x0.45m). 3) Jar sample taken every 1m. 4) Falling head permeability test carried out at 17.00m.
22/04/97	17.00	1.45				air	100%	
01/05/97	17.00	1.45						
01/05/97	46.50	16.85				air	100%	

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By: [Signature]	Logged By: [Signature]	Contract No. 1742

Date Printed:- 04/06/97

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DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project: Site Investigation at RAF Upper Heyford		DRILLHOLE No BH-01
Client: Defence Estate Organisation	Location: Oxfordshire E449936.30 N226551.90	
Method & Equipment: Openhole using a UMM C10TW	Ground Level(m(AOD)): 116.42	Date: 22-04-97
		Sheet: 5 of 6

RUN DETAILS			STRATA					Geology	Instrument
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION			
						Discontinuities	Detail	Main	
								(As sheet 4 of 6) Dark grey slightly weathered MUDSTONE moderately weak to moderately strong.	
			83.17		33.25			Dark grey slightly weathered sandy MUDSTONE moderately weak to moderately strong.	
					(0.76)				
			82.41		34.01			Brown slightly weathered LIMESTONE moderately strong.	
			82.11		(0.30) 34.31			Dark grey slightly weathered sandy MUDSTONE moderately weak to moderately strong.	
					(0.54)				
			81.57		34.85			(1) Moderately weathered SANDSTONE weak.	
					(0.49)	34.85-35.51m ... No returns.		(1) VOID.	
			81.08		35.34			Dark grey slightly weathered MUDSTONE moderately weak to moderately strong.	
			80.91		(0.37) 35.51	35.31-37.70m ... Poor returns.			
					(2.19)				
						37.10-46.50m ... No returns			
			78.72		37.70			(1) Dark grey slightly weathered MUDSTONE moderately strong.	

Drilling Progress and Water Observations									GENERAL REMARKS
Date		Depth	Casing	Core Dia mm	Water (mBGL) Strike	RWL	Flush Type	Returns	
22/04/97		0.00	0.00						1) Description derived from drillers daily report. 2) Inspection pit excavated prior to drilling (1.0x1.0x0.45m). 3) Jar sample taken every 1m. 4) Falling head permeability test carried out at 17.00m.
22/04/97		17.00	1.45				air	100%	
01/05/97		17.00	1.45				air	100%	
01/05/97		46.50	16.85						

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By: [Signature]	Logged By: [Signature]	Contract No. 1742

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DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:

Site Investigation at RAF Upper Heyford

DRILLHOLE No

BH-01

Client:

Defence Estate Organisation

Location:

Oxfordshire E449936.30 N226551.90

Method & Equipment:

Openhole using a UMM C10TW

Ground Level(m(AOD)):

116.42

Date:

22-04-97

Sheet:

6 of 6

RUN DETAILS

STRATA

Geology
Instrument
Backfill

Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thick- ness	DESCRIPTION		
						Discontinuities	Detail	Main
								(As sheet 5 of 6) (1) Dark grey slightly weathered MUDSTONE moderately strong.
					(8.80)			
			69.92		46.50			
								Drillhole complete at 46.50m BGL

Drilling Progress and Water Observations

Date	Depth	Casing	Core Dia mm	Water (mBGL) Strike	FWL	Type	Flush Returns	GENERAL REMARKS
22/04/97	0.00	0.00						
22/04/97	17.00	1.45				air	100%	
01/05/97	17.00	1.45						
01/05/97	46.50	16.85				air	100%	

1) Description derived from drillers daily report.
2) Inspection pit excavated prior to drilling (1.0x1.0x0.45m). 3) Jar sample taken every 1m.
4) Falling head permeability test carried out at 17.00m.

All dimensions in metres
Scale 1:50

For Explanation of Symbols and
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DRILLHOLE LOG

Status:-
FINAL
Date:- 04/06/97

Project: Site Investigation at RAF Upper Heyford		DRILLHOLE No BH-02
Client: Defence Estate Organisation	Location: Oxfordshire E450676.90 N227674.40	
Method & Equipment: Openhole/Rotary using a UMM C10TW	Ground Level(m(AOD)): 137.98	Date: 23-04-97
		Sheet: 1 of 5

RUN DETAILS			STRATA				Geo logy	Inst - Pent - Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thick- ness)	DESCRIPTION			
						Discontinuities			Detail Main
					(0.40)	0.00-40.00m ... Openhole drilling.	Stiff brown friable sandy gravelly CLAY.		
			137.58		0.40		Yellow brown highly weathered LIMESTONE very weak.		
					(0.60)				
			136.98		1.00				
			136.63		(0.35) 1.35		Yellow brown moderately to slightly weathered LIMESTONE very weak to moderately weak.		
					(2.00)		Yellow brown moderately to slightly weathered LIMESTONE very weak to moderately weak.		
			134.63		3.35				
					(0.71)		Light grey moderately weathered LIMESTONE moderately weak.		
			133.92		4.06				
					(1.19)		Light grey slightly weathered LIMESTONE moderately weak to moderately strong.		
			132.73		5.25				
					(2.19)		Yellow brown moderately weathered LIMESTONE weak to moderately weak.		
			130.54		7.44				
							Yellow brown slightly weathered LIMESTONE moderately strong.		

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water (mBGL) Strike	RWL	Type	Flush Returns	
23/04/97	0.00	0.00						1) Description derived from drillers daily report. 2) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.4m). 3) Jar sample taken every 1.00m. 4) 50mm Standpipe installed to 25.00m BGL.
23/04/97	27.00	4.50				air	100%	
25/04/97	27.00	25.86						
25/04/97	40.00	25.86				air	100%	

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By:	Contract No. 1742

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DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:		Site Investigation at RAF Upper Heyford		DRILLHOLE No	
Client:		Defence Estate Organisation		BH-02	
Location:		Oxfordshire E450676.90 N227674.40			
Method & Equipment:		Openhole/Rotary using a UMM C10TW		Ground Level(m(AOD)):	Date:
				137.98	23-04-97
				Sheet:	2 of 5

RUN DETAILS				STRATA			Geology	Instrument
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thickness	DESCRIPTION		
						Discontinuities		
					(1.57)		(As sheet 1 of 5) Yellow brown slightly weathered LIMESTONE moderately strong.	
			128.97		9.01			
			128.77		(0.20) 9.21		(1) Yellow brown moderately weathered LIMESTONE moderately strong.	
			128.49		(0.28) 9.49			
			127.97		(0.52) 10.01		(1) Yellow brown moderately weathered LIMESTONE moderately weak.	
			127.06		(0.91) 10.92		(1) Light brown slightly weathered LIMESTONE moderately strong. Grey fresh LIMESTONE moderately weak.	
			125.44		(1.62) 12.54		Yellow brown fresh LIMESTONE moderately strong.	
			124.77		(0.67) 13.21		(1) Dark brown completely weathered LIMESTONE very weak.	
			122.48		(2.29) 15.50		Orange brown slightly weathered LIMESTONE moderately strong with occasional pockets of soft brown clay.	
							(1) Yellow brown highly weathered LIMESTONE weak.	

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water (mBGL) Strike	RWL	Type	Flush Returns	
23/04/97	0.00	0.00				air	100%	1) Description derived from drillers daily report. 2) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.4m). 3) Jar sample taken every 1.00m. 4) 50mm Standpipe installed to 25.00m BGL.
23/04/97	27.00	4.50				air	100%	
25/04/97	27.00	25.86				air	100%	
25/04/97	40.00	25.86				air	100%	

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By:	Contract No. 1742

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DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:

Site Investigation at RAF Upper Heyford

DRILLHOLE No

BH-02

Client:

Defence Estate Organisation

Location:

Oxfordshire E450676.90 N227674.40

Method & Equipment:

Openhole/Rotary using a UMM C10TW

Ground Level (m (AOD)):

137.98

Date:

23-04-97

Sheet:

3 of 5

RUN DETAILS			STRATA					Geo logy	Instru- ment	Backfill
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thick- ness)	DESCRIPTION				
						Discontinuities	Detail	Main		
					(2.39)			(As sheet 2 of 5) (1) Yellow brown highly weathered LIMESTONE weak.		
			120.09		17.89			Orange brown slightly weathered LIMESTONE moderately strong.		
					(3.00)					
			117.09		20.89					
					(0.42)			(1) Orange brown highly weathered LIMESTONE weak.		
			116.67		21.31			Dark grey thinly laminated slightly weathered MUDSTONE weak.		
					(0.76)			Dark grey thinly laminated fresh MUDSTONE moderately weak.		
			115.91		22.07					

Drilling Progress and Water Observations

Date	Depth	Casing	Core Dia mm	Water (mBGL) Strike	Water (mBGL) RVVL	Type	Flush	Returns
23/04/97	0.00	0.00						
23/04/97	27.00	4.50				air		100%
25/04/97	27.00	25.86						
25/04/97	40.00	25.86				air		100%

GENERAL REMARKS

1) Description derived from drillers daily report.
2) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.4m). 3) Jar sample taken every 1.00m. 4) 50mm Standpipe installed to 25.00m BGL.

All dimensions in metres
Scale 1:50

For Explanation of Symbols and
Abbreviations see Key Sheets

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Contract No.
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Date Printed:- 06/06/97

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DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:

Site Investigation at RAF Upper Heyford

DRILLHOLE No

BH-02

Client:

Defence Estate Organisation

Location:

Oxfordshire E450676.90 N227674.40

Method & Equipment:

Openhole/Rotary using a UMM C10TW

Ground Level(m(AOD)):

137.98

Date:

23-04-97

Sheet:

4 of 5

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Drilling Progress and Water Observations								GENERAL REMARKS
Date		Depth	Casing	Core Dia mm	Water (mBGL) Strike	Flush Type	Returns	
23/04/97		0.00	0.00					1) Description derived from drillers daily report. 2) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.4m). 3) Jar sample taken every 1.00m. 4) 50mm Standpipe installed to 25.00m BGL.
23/04/97		27.00	4.50			air	100%	
25/04/97		27.00	25.86					
25/04/97		40.00	25.86			air	100%	

All dimensions in metres
Scale 1:50

For Explanation of Symbols and Abbreviations see Key Sheets

City:

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Date Printed:- 06/06/97

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ALLIED EXPLORATION & GEOTECHNICS LTD

DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project: Site Investigation at RAF Upper Heyford				DRILLHOLE No BH-02
Client: Defence Estate Organisation		Location: Oxfordshire E450676.90 N227674.40		
Method & Equipment: Openhole/Rotary using a UMM C10TW		Ground Level(m(AOD)): 137.98	Date: 23-04-97	Sheet: 5 of 5

RUN DETAILS				STRATA			Geology	Instrumentation	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thick- ness)	DESCRIPTION			
						Discontinuities			Main
							Dark grey thinly laminated fresh MUDSTONE moderately weak.		
			97.98		40.00		Borehole complete at 40.00m BGL.		

Drilling Progress and Water Observations								GENERAL REMARKS
Date		Depth	Casing	Core Dia mm	Water Strike	(mBGL) RWL	Type Flush Returns	
23/04/97		0.00	0.00					1) Description derived from drillers daily report. 2) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.4m). 3) Jar sample taken every 1.00m. 4) 50mm Standpipe installed to 25.00m BGL.
23/04/97		27.00	4.50				air 100%	
25/04/97		27.00	25.86					
25/04/97		40.00	25.86				air 100%	

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By: [Redacted]	Logged By: [Redacted]	Contract No 1742

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DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:		Site Investigation at RAF Upper Heyford		DRILLHOLE No BH-03
Client:		Location:		
Defence Estate Organisation		Oxfordshire E452454.60 N227337.20		
Method & Equipment:		Ground Level(m(AOD)):	Date:	Sheet:
Openhole using a UMM C10TW		121.71	29-04-97	1 of 1

RUN DETAILS			STRATA				Geo logy	Instru-ment / Backfill
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thick-ness	DESCRIPTION		
						Discontinuities	Detail	Main
			121.51		(0.20)	0.00-4.30m ... Openhole drilling.	(1) Firm to stiff brown sandy CLAY.	
					(0.37)		Yellow brown moderately to slightly weathered LIMESTONE moderately weak.	
			121.14		0.57		Yellow brown moderately weathered LIMESTONE weak to very weak.	
					(0.43)		Yellow moderately weathered LIMESTONE very weak.	
			120.71		1.00			
					(1.21)			
			119.50		2.21			
					(0.39)		(1) Yellow brown moderately weathered LIMESTONE weak.	
			119.11		2.60		(1) Yellow brown moderately weathered LIMESTONE weak.	
					(0.81)			
			118.30		3.41		(1) Grey moderately weathered MUDSTONE weak.	
					(0.55)			
			117.75		3.96		(1) Yellow brown moderately to slightly weathered LIMESTONE weak to moderately weak.	
					(0.34)			
			117.41		4.30		Drillhole complete at 4.30m BGL	

Drilling Progress and Water Observations								GENERAL REMARKS	
Date	Depth	Casing	Core Dia mm	Water Strike	Water (mBGL) RWL	Type	Flush Returns		
29/04/97	0.00	0.00							
29/04/97	4.30	0.00		1.10		air	100%	1) Description derived from drillers daily report. 2) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.20m). 3) Jar samples taken every 1.00m. 4) 50mm diameter standpipes installed to 3.10m and 4.30m.	
All dimensions in metres Scale 1:50			For Explanation of Symbols and Abbreviations see Key Sheets			Logged By:		Contract No. 1742	

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DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:

Site Investigation at RAF Upper Heyford

DRILLHOLE No

BH-04

Client:

Defence Estate Organisation

Location:

Oxfordshire E453354.10 N227054.10

Method & Equipment:

Openhole using a UMM C10TW

Ground Level(m(AOD)):

121.88

Date:

29-04-97

Sheet:

1 of 3

RUN DETAILS			STRATA				Geology	Instrument	Backfill	
Depth	TCR (SCR) ROD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thick-ness)	DESCRIPTION				
						Discontinuities				Detail
			121.68		(0.20)	0.00-19.80m ... Openhole drilling.		Firm to stiff brown sandy CLAY.		
					(0.40)			Yellow brown highly weathered LIMESTONE weak to very weak. (Boulders)		
			121.28		(0.60)			Firm brown sandy CLAY.		
			121.18		(0.79)			Yellow brown highly weathered LIMESTONE weak to very weak.		
			120.82		(1.06)			Yellow brown slightly to moderately weathered LIMESTONE moderately weak to moderately strong.		
					(1.47)					
			119.35		(2.53)					
					(0.39)			Yellow brown moderately weathered LIMESTONE weak.		
			118.96		(2.92)			Yellow brown moderately to slightly weathered LIMESTONE moderately weak.		
					(1.17)					
			117.79		(4.09)					
					(0.28)			Grey moderately weathered MUDSTONE weak.		
			117.51		(4.37)			Grey moderately to slightly weathered MUDSTONE moderately weak.		
					(1.18)					
			116.33		(5.55)					
					(0.88)			Grey moderately weathered MUDSTONE weak.		
			115.45		(6.43)			Grey moderately to slightly weathered MUDSTONE weak.		

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water (mBGL) Strike	Water (mBGL) RWL	Flush Type	Returns	
29/04/97	0.00	0.00						
29/04/97	19.80	0.00		16.82		air	100%	1) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.20m). 2) Jar samples taken every 1.00m. 3) 50mm diameter standpipe installed to 19.80m.

All dimensions in metres
Scale 1:50

For Explanation of Symbols and
Abbreviations see Key Sheets

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DRILLHOLE LOG

Status:-

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Date:- 04/06/97

Project: Site Investigation at RAF Upper Heyford		DRILLHOLE No BH-04
Client: Defence Estate Organisation	Location: Oxfordshire E453354.10 N227054.10	
Method & Equipment: Openhole using a UMM C10TW	Ground Level(m(AOD)): 121.88	Date: 29-04-97
		Sheet: 2 of 3

RUN DETAILS			STRATA				Geo logy	Inst. - ment Backfill
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thick- ness	DESCRIPTION		
						Discontinuities	Detail	Main
					(4.53)		(As sheet 1 of 3) Grey moderately to slightly weathered MUDSTONE weak. between c.8.00-10.00m BGL ... greenish grey.	
			110.92		10.96			
					(0.37)			
			110.55		11.33		Grey moderately to slightly weathered sandy MUDSTONE moderately weak to weak.	
					(0.24)			
			110.31		11.57		Grey fine grained moderately to slightly weathered SANDSTONE moderately weak to weak.	
					(1.25)		Grey moderately to slightly weathered sandy MUDSTONE weak to moderately weak.	
			109.06		12.82			
			108.86		13.02		Grey fine grained moderately to slightly weathered SANDSTONE moderately weak.	
					(0.58)			
			108.28		13.60		Grey moderately to slightly weathered sandy MUDSTONE weak to moderately weak.	
					(0.48)			
			107.80		14.08		Grey fine grained moderately to slightly weathered SANDSTONE weak to moderately weak.	
					(1.85)		Grey slightly weathered MUDSTONE weak to moderately weak.	
			105.95		15.93			

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water (mBGL) Strike	RWL	Type	Flush Returns	
29/04/97	0.00	0.00						1) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.20m). 2) Jar samples taken every 1.00m. 3) 50mm diameter standpipe installed to 19.80m.
29/04/97	19.80	0.00		16.82		air	100%	

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Logged By:	Contract No. 1742

Date Printed:- 04/06/97

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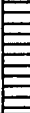
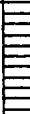
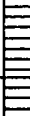
DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:		Site Investigation at RAF Upper Heyford		DRILLHOLE No BH-04
Client:		Location:		
Defence Estate Organisation		Oxfordshire E453354.10 N227054.10		
Method & Equipment:		Ground Level(m(AOD)):	Date:	Sheet:
Openhole using a UMM C10TW		121.88	29-04-97	3 of 3

RUN DETAILS			STRATA				Geology	Instrument Backfill			
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth (Thick- ness)	DESCRIPTION					
						Discontinuities			Detail	Main	
			105.06		(0.89) 16.82			Dark grey brown moderately weathered MUDSTONE weak.			
								Dark grey moderately weathered MUDSTONE weak.			
								Grey moderately weathered sandy MUDSTONE weak to moderately weak.			
			103.82		(1.24) 18.06						
			102.08		(1.74) 19.80						

Drilling Progress and Water Observations								GENERAL REMARKS
Date		Depth	Casing	Core Dia mm	Water (mBGL) Strike	RWL	Flush Type Returns	
29/04/97		0.00	0.00					
29/04/97		19.80	0.00		16.82		air 100%	1) inspection pit excavated prior to drilling (1.0 x 1.0 x 0.20m). 2) Jar samples taken every 1.00m. 3) 50mm diameter standpipe installed to 19.80m.

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By:	Contract No. 1742

Date Printed:- 04/06/97

Form AEG22



ALLIED EXPLORATION & GEOTECHNICS LTD

DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:		Site Investigation at RAF Upper Heyford		DRILLHOLE No	
Client:		Defence Estate Organisation		BH-05	
Location:		Oxfordshire E451845.20 N226168.80			
Method & Equipment:			Ground Level(m(AOD)):	Date:	Sheet:
Openhole using a UMM C10TW			120.20	05-05-97	1 of 1

RUN DETAILS			STRATA				Geology	Instrument / Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION			
						Discontinuities			Detail Main
			119.90		(0.30) 0.30	0.00-3.50m ... Openhole drilling.	Firm to stiff sandy gravelly CLAY.		
					(0.70)		(1) Yellow brown moderately weathered LIMESTONE weak to very weak. (Boulder).		
			119.20		1.00				
			118.96		(0.24) 1.24		Firm to stiff sandy CLAY.		
					(0.72)		Yellow brown moderately weathered LIMESTONE weak.		
			118.24		1.96				
					(0.54)		(1) Yellow brown moderately weathered LIMESTONE weak to moderately weak.		
			117.70		2.50				
			117.45		(0.25) 2.75		(1) Yellow brown moderately weathered LIMESTONE weak.		
					(0.64)		(1) Yellow brown moderately weathered LIMESTONE moderately weak.		
			116.81		3.39				
			116.70		3.50		Grey moderately weathered MUDSTONE weak. Drillhole complete at 3.50m BGL.		

Drilling Progress and Water Observations								GENERAL REMARKS
Date		Depth	Casing	Core Dia mm	Water (mBGL) Strike	Flush Type	Returns	
05/05/97		0.00	0.00					1) Description derived from drillers daily report. 2) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.20m). 3) Jar samples taken every 1.00m. 4) 50mm diameter standpipe installed to 3.50m.
05/05/97		3.50	0.00		1.96	air	100%	

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By:	Contract No. 1742

Date Printed:- 06/06/97

Form AEG22



ALLIED EXPLORATION & GEOTECHNICS LTD

DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project: Site Investigation at RAF Upper Heyford		DRILLHOLE No BH-06	
Client: Defence Estate Organisation	Location: Oxfordshire E450556.40 N225597.10		
Method & Equipment: Openhole using a UMM C10TW	Ground Level(m(AOD)): 121.56	Date: 02-05-97	Sheet: 1 of 2

RUN DETAILS			STRATA				Geo logy	Instru-ment	Backfill
Depth	TCR (SCR) ROD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thick-ness	DESCRIPTION			
						Discontinuities	Detail	Main	
			121.26		(0.30) 0.30	0.00-16.00m ... Openhole drilling.	Firm to stiff brown sandy CLAY with moderate hydrocarbon odour.		
			120.76		(0.50) 0.80		Yellow brown moderately weathered LIMESTONE moderately weak to weak. (Boulder).		
					(1.06)		Firm brown sandy CLAY with moderate hydrocarbon odour.		
			119.70		1.86		Yellow brown moderately weathered LIMESTONE moderately weak to weak. (Boulder).		
					(0.64)		Firm brown sandy CLAY with faint hydrocarbon odour.		
			119.06		2.50		Yellow brown moderately weathered LIMESTONE weak.		
					(0.46)		Firm brown sandy CLAY with faint hydrocarbon odour.		
			118.60		2.96		Yellow brown moderately weathered LIMESTONE weak.		
					(0.42)		Yellow brown moderately to highly weathered LIMESTONE weak to very weak.		
			118.18		3.38		Yellow brown moderately to highly weathered LIMESTONE weak to very weak.		
					(0.33)		Yellow brown moderately to highly weathered LIMESTONE weak to very weak.		
			117.85		3.71		Yellow brown moderately to highly weathered LIMESTONE weak to very weak.		
					(0.78)		Yellow brown moderately to highly weathered LIMESTONE weak to very weak.		
			117.07		4.49		Yellow brown moderately weathered LIMESTONE weak to moderately weak.		
					(0.40)		Dark grey moderately weathered MUDSTONE moderately weak.		
			116.67		4.89		Yellow brown moderately weathered LIMESTONE weak to moderately weak.		
					(0.79)		Dark grey moderately weathered MUDSTONE moderately weak.		
			115.88		5.68		Yellow brown moderately weathered LIMESTONE weak to moderately weak.		
					(0.91)		Yellow brown moderately weathered LIMESTONE weak.		
			114.97		6.59		Dark grey moderately weathered MUDSTONE weak.		
			114.81		6.75		Dark grey moderately weathered MUDSTONE weak.		
					(1.55)		Dark grey moderately weathered MUDSTONE weak.		

Drilling Progress and Water Observations								GENERAL REMARKS	
Date		Depth	Casing	Core Dia mm	Water (mBGL) Strike	RWL	Flush Type Returns		
02/05/97		0.00	0.00		12.55		air	100%	1) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.30m). 2) Jar samples taken every 1.00m. 3) 50mm diameter standpipe installed to 16.00m BGL.
02/05/97		16.00	0.00						

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By:	Contract No. 1742

Date Printed:- 06/06/97

Form AEG22



ALLIED EXPLORATION & GEOTECHNICS LTD

DRILLHOLE LOG

Status:-	FINAL
Date:-	04/06/97

Project:		Site Investigation at RAF Upper Heyford		DRILLHOLE No BH-06
Client:	Defence Estate Organisation	Location:	Oxfordshire E450556.40 N225597.10	
Method & Equipment:		Ground Level(m(AOD)):	Date:	Sheet:
Openhole using a UMM C10TW		121.56	02-05-97	2 of 2

RUN DETAILS			STRATA				Geology	Instrument Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thick-ness)	DESCRIPTION			
						Discontinuities	Detail	Main	
			113.26		8.30				
					(0.48)		Grey fine grained moderately weathered SANDSTONE weak.		
			112.78		8.78				
					(0.51)		Grey fine grained moderately weathered SANDSTONE moderately weak.		
			112.27		9.29				
			112.06		9.50		Grey moderately weathered MUDSTONE moderately weak.		
			111.80		9.76		Grey moderately weathered sandy MUDSTONE moderately weak.		
					(0.58)		Grey moderately weathered MUDSTONE moderately weak.		
			111.22		10.34		Grey moderately weathered sandy MUDSTONE moderately weak.		
					(0.71)				
			110.51		11.05				
					(1.50)		Grey fine grained moderately weathered SANDSTONE moderately weak to moderately strong.		
			109.01		12.55				
					(3.45)		Grey moderately weathered to slightly weathered MUDSTONE moderately weak.		
			105.56		16.00				
							Drillhole complete at 16.00m BGL.		

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water (mBGL) Strike	Water (mBGL) RWL	Type	Flush Returns	
02/05/97	0.00	0.00		12.55		air	100%	1) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.30m). 2) Jar samples taken every 1.00m. 3) 50mm diameter standpipe installed to 16.00m BGL.
02/05/97	16.00	0.00						

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By: [Signature]	Logged By: [Signature]	Contract No. 1742

Date Printed:- 06/06/97

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ALLIED EXPLORATION & GEOTECHNICS LTD

DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:

Site Investigation at RAF Upper Heyford

DRILLHOLE No

BH-07

Client:

Defence Estate Organisation

Location:

Oxfordshire E451463.00 N226810.10

Method & Equipment:

Openhole using a UMM C10TW

Ground Level(m(AOD)):

131.01

Date:

30-04-97

Sheet:

1 of 2

RUN DETAILS			STRATA					Geology	Instrument / Backfill
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth Thick-ness)	DESCRIPTION			
						Discontinuities	Detail		
					(0.40)	0.00-8.00m ... Openhole drilling.		Stiff brown sandy CLAY with occasional rootlets.	
			130.61		0.40				
					(0.34)			Yellow brown moderately weathered LIMESTONE weak. (Boulder).	
			130.27		0.74				
					(0.46)			Stiff brown sandy CLAY.	
			129.81		1.20				
			129.66		0.15			Yellow brown moderately weathered LIMESTONE weak. (Boulder).	
			129.57		1.44			Stiff brown sandy CLAY.	
								Yellow brown moderately to slightly weathered LIMESTONE weak to moderately weak.	
					(3.21)				
			126.36		4.65				
			126.19		4.82				
					(0.33)			Yellow brown moderately to slightly weathered LIMESTONE moderately weak.	
			125.86		5.15				
					(0.90)			Yellow brown moderately weathered LIMESTONE weak to moderately weak.	
			124.96		6.05			Yellow brown moderately to slightly weathered LIMESTONE moderately weak.	
					(1.50)			Dark grey moderately to slightly weathered MUDSTONE moderately weak.	
			123.46		7.55				
					(0.38)			Grey to brown moderately to slightly weathered SANDSTONE	
			123.08		0.07				

Drilling Progress and Water Observations									GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water Strike	Water (mBGL) RWL	Flush Type	Returns		
30/04/97	0.00	0.00							1) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.40m) 2) Jar samples taken every 1.00m. 3) 50mm diameter standpipe installed to 5.50m BGL.
30/04/97	8.00	0.00		4.65		air	100%		

All dimensions in metres
Scale 1:50

For Explanation of Symbols and Abbreviations see Key Sheets

Checked By:

Logged By:

Contract No.

1742

Date Printed:- 04/06/97

Form AEG22



ALLIED EXPLORATION & GEOTECHNICS LTD

DRILLHOLE LOG

Status:-

FINAL

Date:- 04/06/97

Project:		Site Investigation at RAF Upper Heyford		DRILLHOLE No	
Client:		Defence Estate Organisation		BH-07	
Location:		Oxfordshire E451463.00 N226810.10			
Method & Equipment:		Openhole using a UMM C10TW		Ground Level(m(AOD)):	Date:
				131.01	30-04-97
				Sheet:	2 of 2

RUN DETAILS			STRATA				Geo logy	Instru-ment / Backfill	
Depth	TCR (SCR) RQD	(SPT) Fracture Index	Red'cd Level	Legend	Depth (Thick-ness)	DESCRIPTION			
						Discontinuities			Main
			123.01		8.00		moderately weak. Dark grey moderately to slightly weathered MUDSTONE moderately weak. Drillhole complete at 8.00m BGL		

Drilling Progress and Water Observations								GENERAL REMARKS
Date	Depth	Casing	Core Dia mm	Water (mBGL) Strike	RWL	Type	Flush Returns	
30/04/97	0.00	0.00						1) Inspection pit excavated prior to drilling (1.0 x 1.0 x 0.40m) 2) Jar samples taken every 1.00m. 3) 50mm diameter standpipe installed to 5.50m BGL.
30/04/97	8.00	0.00		4.65		air	100%	

All dimensions in metres Scale 1:50	For Explanation of Symbols and Abbreviations see Key Sheets	Checked By:	Logged By:	Contract No. 1742

Date Printed:- 04/06/97

Form AEG22

Appendix

6

Permeability (Slug) Testing Analysis

SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	1A
Test Number	3
Test Type (falling/rising)	F

BOREHOLE DETAILS	
Tested Interval (m bgl)	36.6 to 42.6
Borehole Depth (m)	42.64
Water Level (m b TOC)	34.98
Casing Radius (m)	rc 0.025
Gravel Pack Radius (m)	rw 0.06
Well Penetration (m)	H 7.66
Screen Length (m)	L 7.66
Aquifer Thickness (m)	D 7.66

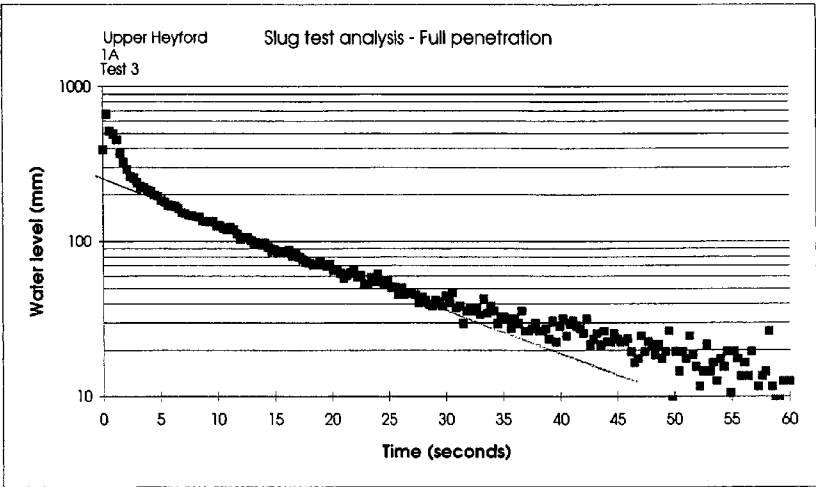
CALCULATIONS	
L/rw =	127.67
C =	5.1
INITIAL EXCESS HEAD (m) =	250
TIME t (seconds) =	35
HEAD AT TIME t (m) =	30
ln Re/rw =	3.75
Effective radius of test =	2.55 m

HYDRAULIC CONDUCTIVITY k =	0.80 m/d

CALCULATION CHECKS

Porosity =
rc for test within well screen =

FORMULAE USED

$$\ln(Re/rw) = 1 / ((1.1 / \ln(H/rw)) + (C / (L/rw)))$$
$$k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt)$$


SLUG TEST ANALYSIS - FULL PENETRATION

Client Defense Estate Organisation
Site Upper Heyford
Borehole Number BH1A
Test Number 4
Test Type (falling/rising) R

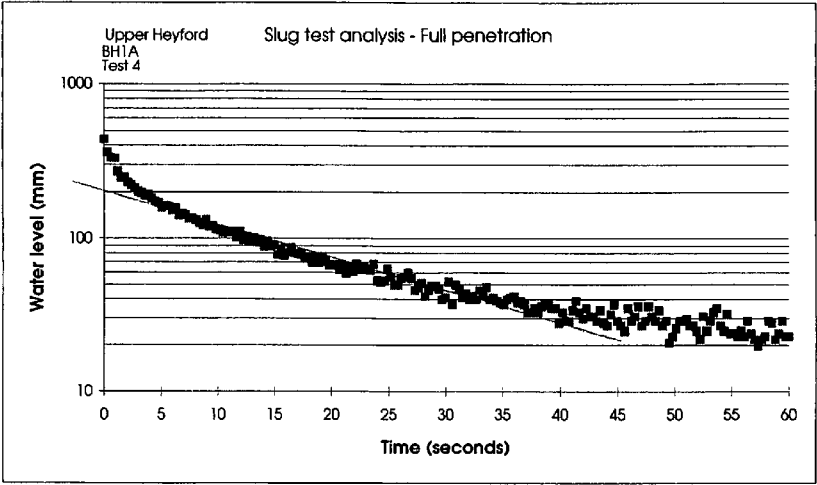
BOREHOLE DETAILS
Tested Interval (m bgl) 36.6 to 42.6
Borehole Depth (m) 42.64
Water Level (m b TOC) 34.98
Casing Radius (m) rc 0.025
Gravel Pack Radius (m) rw 0.06
Well Penetration (m) H 7.66
Screen Length (m) L 7.66
Aquifer Thickness (m) D 7.66

CALCULATIONS
L/rw = 127.67
C = 5.1
INITIAL EXCESS HEAD (m) = 200
TIME t (seconds) = 33
HEAD AT TIME t (m) = 40
ln Re/rw = 3.75
Effective radius of test = 2.55 m

HYDRAULIC CONDUCTIVITY k = 0.64 m/d

CALCULATION CHECKS
Porosity =
rc for test within =
well screen

FORMULAE USED
 $\ln(Re/rw) = 1/((1/\ln(H/rw)) + (C/(L/rw)))$
 $k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(y_0/y_t)$



FALLING HEAD TEST DATA

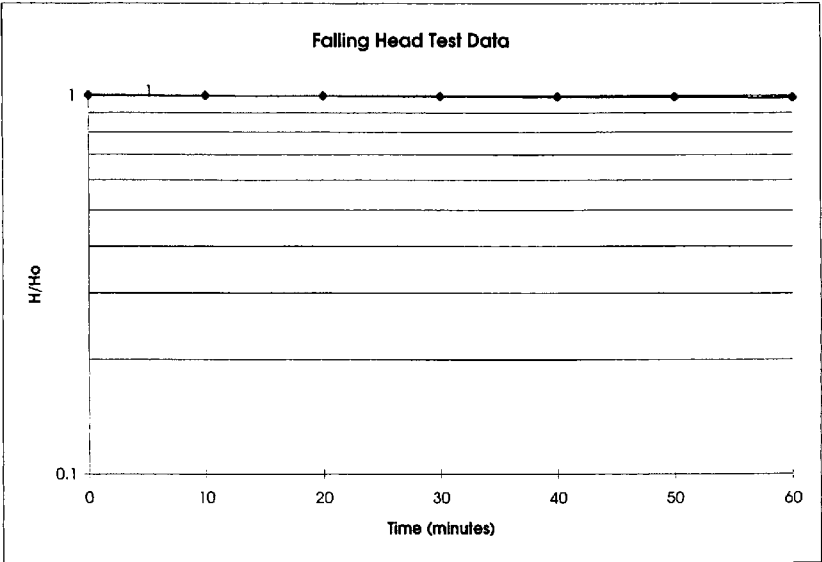
Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	1
Test Type (falling/rising)	Falling

BOREHOLE DETAILS	
Tested Interval (L)	0.15 m
Borehole Depth	17.00 m
Casing Depth	16.85 m
Depth to Rest Water Level	15.20 m
Water Level at start of test	0.00 m
Borehole diameter (D) (screen)	0.13 m
Borehole diameter (d) (head variation)	0.13 m

CALCULATIONS	
Permeability Transformation Ratio (m)	10
Initial Time t1	30 min
Initial Head h1	15.1 m
Time t2	60 min
Head h2	15.02 m
mL/D	12

PERMEABILITY OF SECTION TESTED = 0.011 m/day

TEST APPLIED: Hvorslev (1951)
FORMULA APPLIED: $k = \frac{(d^2) \ln(2mL/D)}{(8 \cdot L \cdot (t_2 - t_1)) \ln(h_1/h_2)}$



SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH1B
Test Number	3
Test Type (falling/rising)	F

BOREHOLE DETAILS	
Tested Interval (m bgl)	13.4 to 16.4
Borehole Depth (m)	16.39
Water Level (m b TOC)	12.75
Casing Radius (m)	rc 0.025
Gravel Pack Radius (m)	rw 0.086
Well Penetration (m)	H 3.64
Screen Length (m)	L 3
Aquifer Thickness (m)	D 3.64

CALCULATIONS	
L/rw	= 34.88
C	= 2.3
INITIAL EXCESS HEAD (m)	= 500
TIME t (seconds)	= 5
HEAD AT TIME t (m)	= 3
ln Re/rw	= 2.78
Effective radius of test	= 1.39 m

HYDRAULIC CONDUCTIVITY k	= 26 m/d

CALCULATION CHECKS

Porosity =

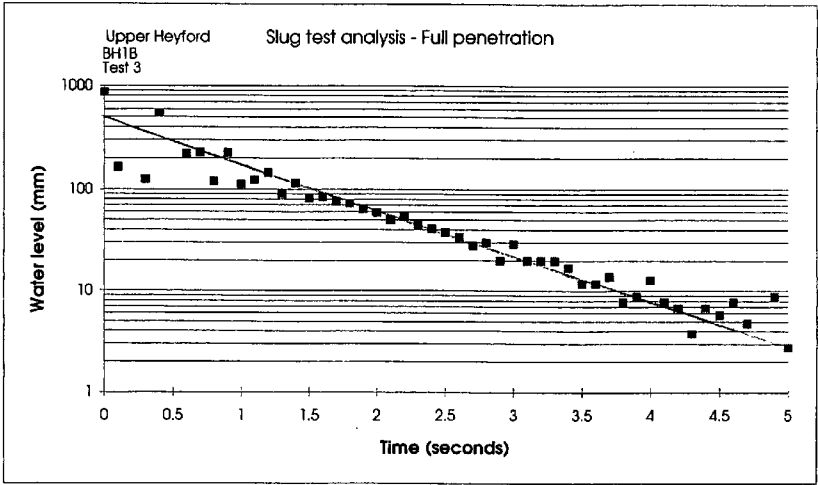
rc for test within =

well screen

FORMULAE USED

$\ln(Re/rw) = 1 / ((1.1 / \ln(H/rw)) + (C / (L/rw)))$

$k = ((rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt))$



SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH18
Test Number	4
Test Type (falling/rising)	R

BOREHOLE DETAILS	
Tested Interval (m bgl)	13.4 to 16.4
Borehole Depth (m)	16.39
Water Level (m b TOC)	12.75
Casing Radius (m)	rc 0.025
Gravel Pack Radius (m)	rw 0.086
Well Penetration (m)	H 3.64
Screen Length (m)	L 3
Aquifer Thickness (m)	D 3.64

CALCULATIONS	
L/rw	= 34.88
C	= 2.3
INITIAL EXCESS HEAD (m)	= 200
TIME t (seconds)	= 4.9
HEAD AT TIME t (m)	= 6.5
ln Re/rw	= 2.78
Effective radius of test	= 1.39 m

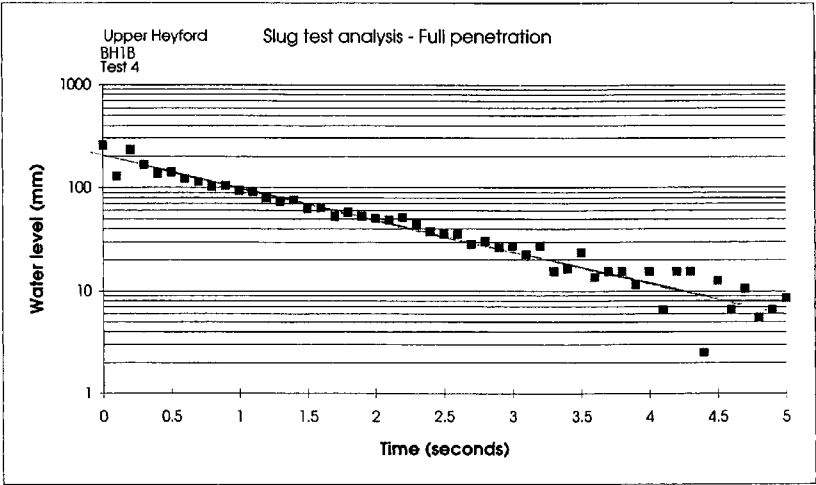
HYDRAULIC CONDUCTIVITY k	= 18 m/d

CALCULATION CHECKS

Porosity	=
rc for test within well screen	=

FORMULAE USED

$\ln(Re/rw) = 1 / ((1.1 / \ln(H/rw)) + (C / (L/rw)))$
 $k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt)$



RISING HEAD TEST DATA

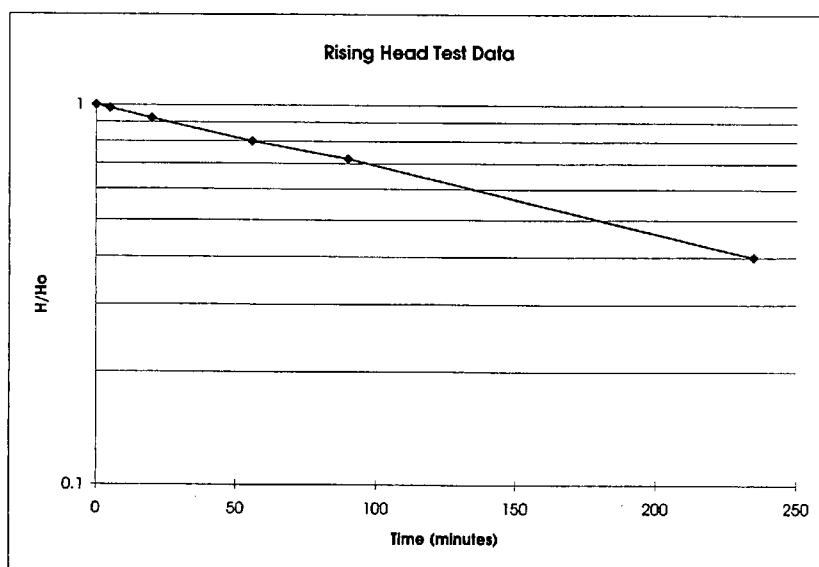
Client Defense Estate Organisation
 Site Upper Heyford
 Borehole Number BH2
 Test Type (falling/rising) Rising

BOREHOLE DETAILS
 Tested Interval (L) 0.29 m
 Borehole Depth 25.06 m
 Casing Depth n/a
 Depth to Rest Water Level 24.77 m
 Water Level at start of test 25.02 m
 Borehole diameter (D) (screen) 0.17 m
 Borehole diameter (d) (head variation) 0.17 m

CALCULATIONS
 Permeability Transformation Ratio (m) 10
 Initial Time t1 5 min
 Initial Head h1 0.245 m
 Time t2 235 min
 Head h2 0.1 m
 mL/D 17

PERMEABILITY OF SECTION TESTED = 0.25 m/day

TEST APPLIED: Hvorslev (1951)
 FORMULA APPLIED: $k = \frac{(d^2) \ln(2mL/D)}{(8 \cdot L \cdot (t_2 - t_1)) \ln(h_1/h_2)}$



SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH3A
Test Number	5
Test Type (falling/rising)	F

BOREHOLE DETAILS	
Tested Interval (m bgl)	4.1 to 4.3 m
Borehole Depth (m)	4.29
Water Level (m b TOC)	1.65
Casing Radius (m)	rc 0.025
Gravel Pack Radius (m)	rw 0.086
Well Penetration (m)	H 0.3
Screen Length (m)	L 0.2
Aquifer Thickness (m)	D 0.3

CALCULATIONS	
L/rw	= 2.33
C	= 0.5
INITIAL EXCESS HEAD (m)	= 230
TIME t (seconds)	= 6
HEAD AT TIME t (m)	= 35.5
ln Re/rw	= 0.91
Effective radius of test	= 0.21 m

HYDRAULIC CONDUCTIVITY k	= 38 m/d

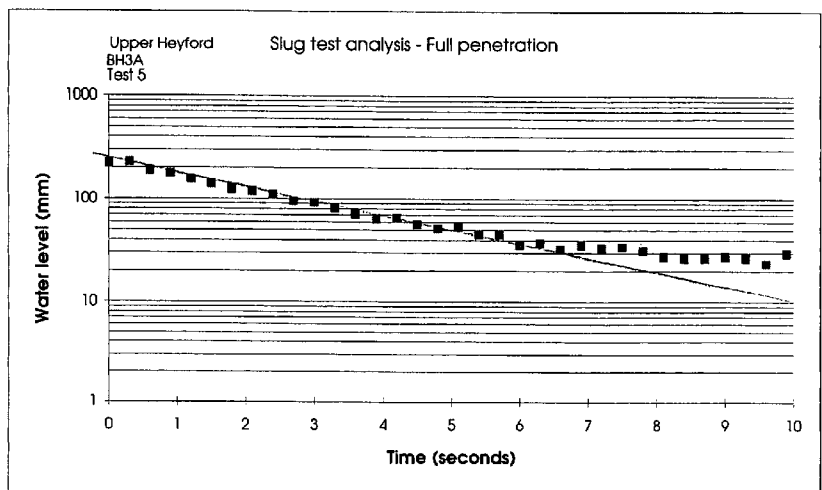
CALCULATION CHECKS

Porosity =

rc for test within well screen =

FORMULAE USED

$$\ln(Re/rw) = 1 / ((1.1 / \ln(H/rw)) + (C / (L/rw)))$$

$$k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt)$$


SLUG TEST ANALYSIS - FULL PENETRATION

Client Defense Estate Organisation
Site Upper Heyford
Borehole Number BH3A
Test Number 6
Test Type (falling/rising) R

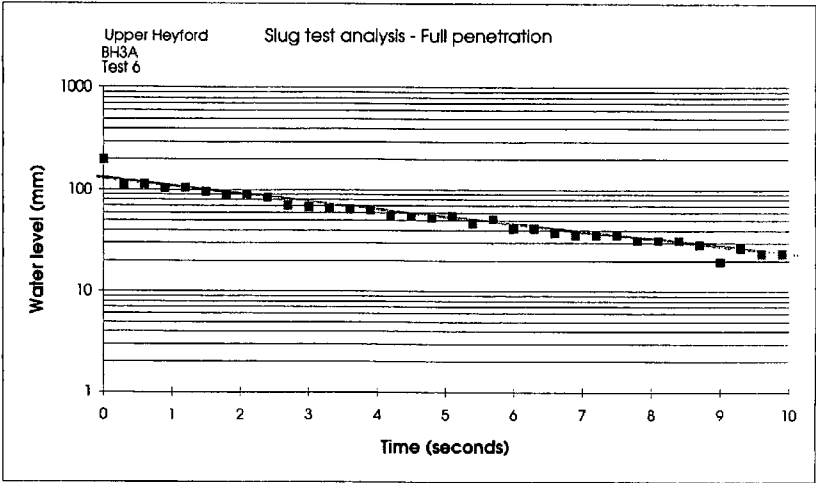
BOREHOLE DETAILS
Tested Interval (m bgl) 4.1 to 4.3 m
Borehole Depth (m) 4.29
Water Level (m b TOC) 1.69
Casing Radius (m) rc 0.025
Gravel Pack Radius (m) rw 0.086
Well Penetration (m) H 0.3
Screen Length (m) L 0.2
Aquifer Thickness (m) D 0.3

CALCULATIONS
L/rw = 2.33
C = 0.5
INITIAL EXCESS HEAD (m) = 110
TIME t (seconds) = 10
HEAD AT TIME t (m) = 21
ln Re/rw = 0.91
Effective radius of test = 0.21 m

HYDRAULIC CONDUCTIVITY k = 20 m/d

CALCULATION CHECKS
Porosity =
rc for test within =
well screen

FORMULAE USED
 $\ln(R_0/r_w) = 1/((1.1/\ln(H/r_w)) + (C/(L/r_w)))$
 $k = (rc^2 \ln(R_0/r_w) / (2 \cdot L \cdot t)) \cdot \ln(y_0/y_t)$



SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH3B
Test Number	3
Test Type (falling/rising)	F

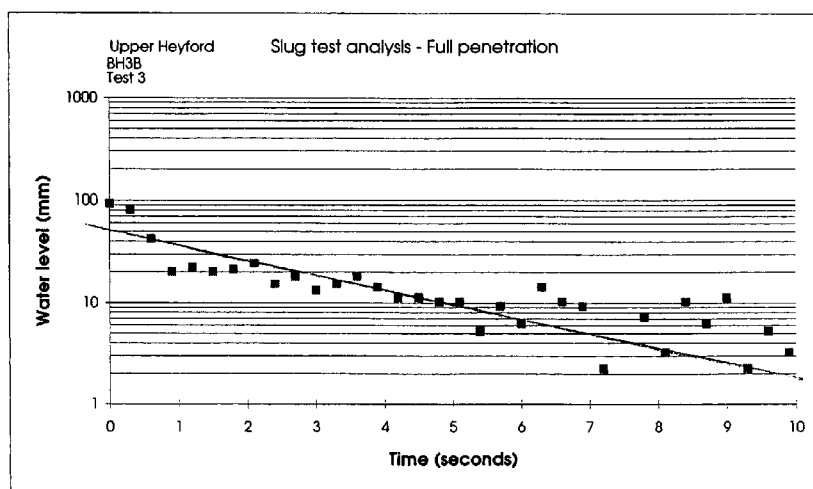
BOREHOLE DETAILS	
Tested Interval (m bgl)	1.6 to 3.0
Borehole Depth (m)	2.99
Water Level (m b TOC)	1.65
Casing Radius (m) r_c	0.025
Gravel Pack Radius (m) r_w	0.086
Well Penetration (m) H	1.34
Screen Length (m) L	1.34
Aquifer Thickness (m) D	1.34

CALCULATIONS	
L/r_w	= 15.58
C	= 1.5
INITIAL EXCESS HEAD (m) =	50
TIME t (seconds) =	4.8
HEAD AT TIME t (m) =	10
$\ln R_0/r_w$	= 2.01
Effective radius of test =	0.64 m

HYDRAULIC CONDUCTIVITY k =	14 m/d

CALCULATION CHECKS	
Porosity =	0.3
r_c for test within well screen =	0.052

FORMULAE USED

$$\ln(R_0/r_w) = 1 / ((1.1 / \ln(H/r_w)) + (C / (L/r_w)))$$
$$k = (rc^2 \ln(R_0/r_w) / (2 * L * t)) * \ln(y_0/y_t)$$


SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH3B
Test Number	3
Test Type (falling/rising)	F

BOREHOLE DETAILS	
Tested Interval (m bgl)	1.6 to 3.0
Borehole Depth (m)	2.99
Water Level (m b TOC)	1.65
Casing Radius (m) rc	0.052
Gravel Pack Radius (m) rw	0.086
Well Penetration (m) H	1.34
Screen Length (m) L	1.34
Aquifer Thickness (m) D	1.34

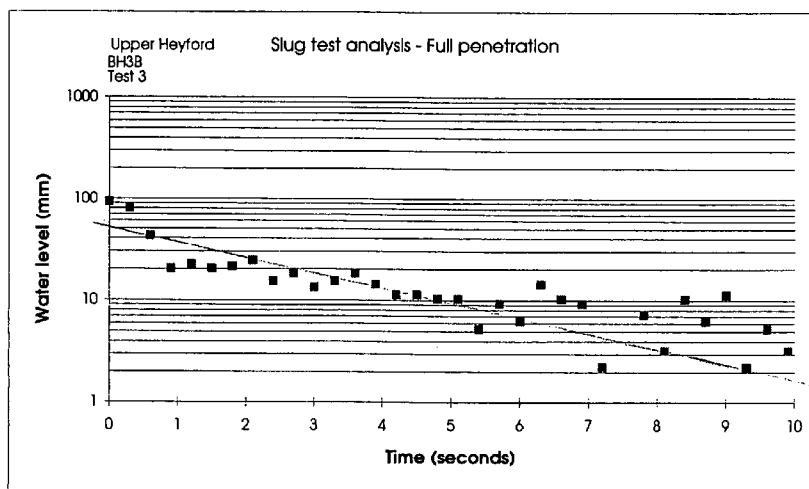
CALCULATIONS	
L/rw =	15.58
C =	1.5
INITIAL EXCESS HEAD (m) =	50
TIME t (seconds) =	4.8
HEAD AT TIME t (m) =	10
ln Re/rw =	2.01
Effective radius of test =	0.64 m

HYDRAULIC CONDUCTIVITY k =	59 m/d

CALCULATION CHECKS	
Porosity =	0.3
rc for test within well screen =	0.052

FORMULAE USED

$$\ln(Re/rw) = 1 / ((1.1 / \ln(H/rw)) + (C / (L/rw)))$$

$$k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt)$$


SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH3B
Test Number	6
Test Type (falling/rising)	R

BOREHOLE DETAILS	
Tested Interval (m bgl)	1.6 to 3.0
Borehole Depth (m)	2.99
Water Level (m b TOC)	1.65
Casing Radius (m)	rc 0.025
Gravel Pack Radius (m)	rw 0.086
Well Penetration (m)	H 1.34
Screen Length (m)	L 1.34
Aquifer Thickness (m)	D 1.34

CALCULATIONS	
L/rw	= 15.58
C	= 1.5
INITIAL EXCESS HEAD (m)	= 270
TIME t (seconds)	= 2
HEAD AT TIME t (m)	= 8.2
ln Re/rw	= 2.01
Effective radius of test	= 0.64 m

HYDRAULIC CONDUCTIVITY k =	71 m/d

CALCULATION CHECKS

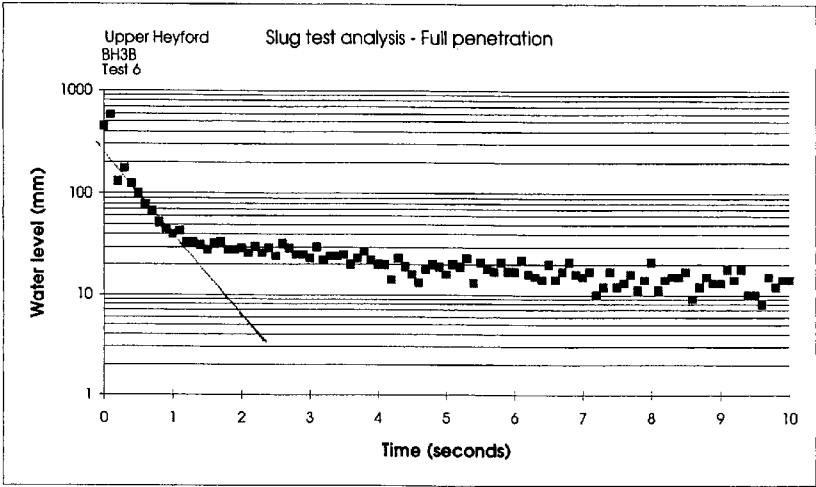
Porosity =

rc for test within well screen =

FORMULAE USED

$\ln(Re/rw) = 1 / ((1.1 / \ln(H/rw)) + (C / (L/rw)))$

$k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt)$



SLUG TEST ANALYSIS - FULL PENETRATION

Client

Site

Borehole Number

Test Number

Test Type (falling/rising)

Defense Estate Organisation

Upper Heyford

BH3B

6

R

BOREHOLE DETAILS

Tested Interval (m bgl)

Borehole Depth (m)

Water Level (m b TOC)

Casing Radius (m)

Gravel Pack Radius (m)

Well Penetration (m)

Screen Length (m)

Aquifer Thickness (m)

1.6 to 3.0

2.99

1.65

rc0.052

rw0.086

H1.34

L1.34

D1.34

CALCULATIONS

L/rw

C

INITIAL EXCESS HEAD (m)

TIME t (seconds)

HEAD AT TIME t (m)

ln Re/rw

Effective radius of test

=

=

=

=

=

=

15.58

1.5

270

2

8.2

2.01

0.64 m

HYDRAULIC CONDUCTIVITY k =

307 m/d

CALCULATION CHECKS

Porosity

rc for test within well screen

=

=

=

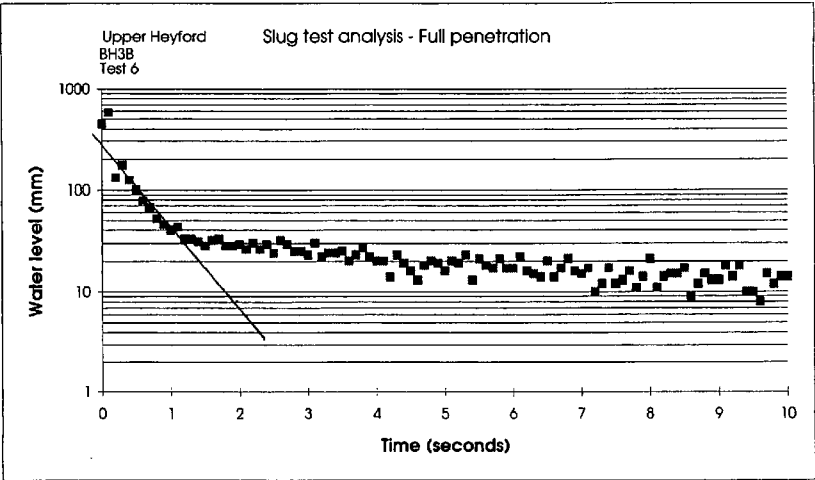
0.3

0.052

FORMULAE USED

$$\ln(R_e/r_w) = 1/((1/\ln(H/r_w)) + (C/(L/r_w)))$$

$$k = (rc^2 \ln(R_e/r_w) / (2 * L * t)) * \ln(y_o/y_t)$$



SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH4
Test Number	5
Test Type (falling/rising)	F

BOREHOLE DETAILS	
Tested Interval (m bgl)	10.8 to 19.8
Borehole Depth (m)	19.7
Water Level (m b TOC)	12.25
Casing Radius (m)	rc 0.025
Gravel Pack Radius (m)	rw 0.086
Well Penetration (m)	H 7.45
Screen Length (m)	L 7.45
Aquifer Thickness (m)	D 7.45

CALCULATIONS	
L/rw	= 86.63
C	= 3.8
INITIAL EXCESS HEAD (m)	= 55
TIME t (seconds)	= 5.5
HEAD AT TIME t (m)	= 10
ln Re/rw	= 3.44
Effective radius of test	= 2.69 m

HYDRAULIC CONDUCTIVITY k	= 4 m/d

CALCULATION CHECKS

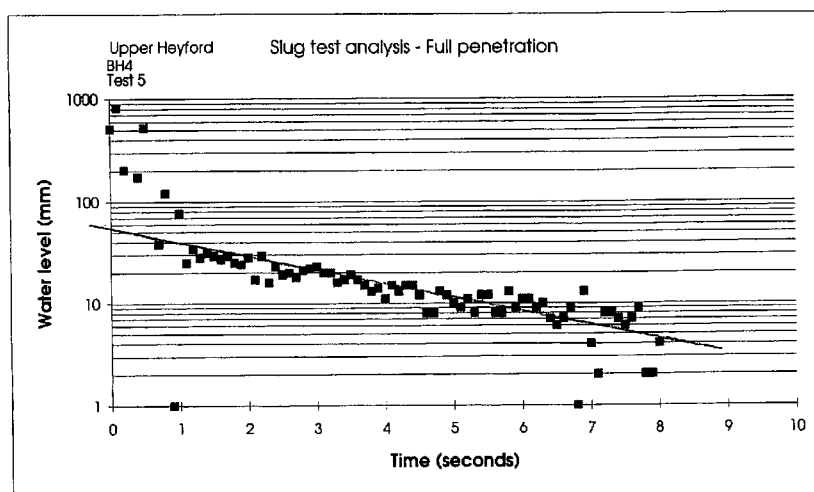
Porosity =

rc for test within =

well screen

FORMULAE USED

$$\ln(R_e/r_w) = 1 / ((1.1 / \ln(H/r_w)) + (C / (L/r_w)))$$

$$k = (rc^2 \ln(R_e/r_w) / (2 * L * t)) * \ln(y_0/y_t)$$


SLUG TEST ANALYSIS - FULL PENETRATION

Client Defense Estate Organisation
Site Upper Heyford
Borehole Number BH4
Test Number 5
Test Type (falling/rising) F

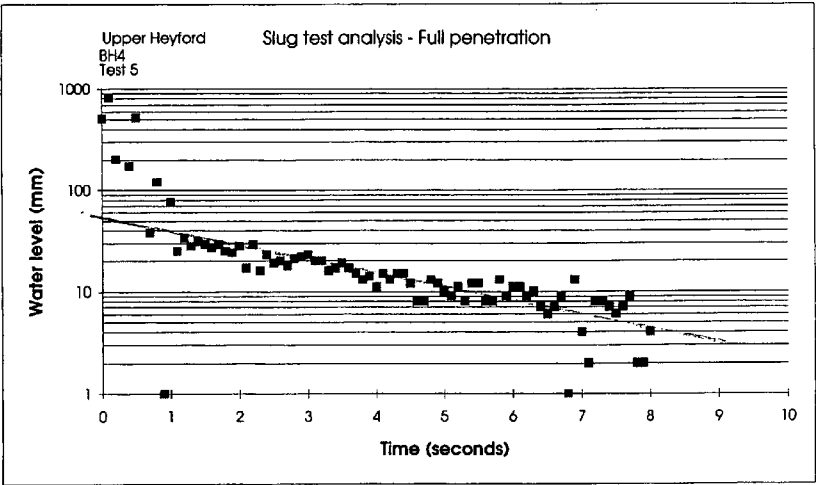
BOREHOLE DETAILS
Tested Interval (m bgl) 10.8 to 19.8
Borehole Depth (m) 19.7
Water Level (m b TOC) 12.25
Casing Radius (m) rc 0.052
Gravel Pack Radius (m) rw 0.086
Well Penetration (m) H 7.45
Screen Length (m) L 7.45
Aquifer Thickness (m) D 7.45

CALCULATIONS
L/rw = 86.63
C = 3.8
INITIAL EXCESS HEAD (m) = 55
TIME t (seconds) = 5.5
HEAD AT TIME t (m) = 10
ln Re/rw = 3.44
Effective radius of test = 2.69 m

HYDRAULIC CONDUCTIVITY k = 17 m/d

CALCULATION CHECKS
Porosity = 0.3
rc for test within well screen = 0.052

FORMULAE USED
 $\ln(R_e/r_w) = 1 / ((1.1 / \ln(H/r_w)) + (C / (L/r_w)))$
 $k = (rc^2 \ln(R_e/r_w) / (2 * L * t)) * \ln(y_o/y_t)$



SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH4
Test Number	6
Test Type (falling/rising)	R

BOREHOLE DETAILS	
Tested Interval (m bgl)	10.8 to 19.8
Borehole Depth (m)	19.7
Water Level (m b TOC)	12.25
Casing Radius (m)	rc 0.025
Gravel Pack Radius (m)	rw 0.086
Well Penetration (m)	H 7.45
Screen Length (m)	L 7.45
Aquifer Thickness (m)	D 7.45

CALCULATIONS	
L/rw	= 86.63
C	= 3.8
INITIAL EXCESS HEAD (m)	= 250
TIME t (seconds)	= 1
HEAD AT TIME t (m)	= 50
$\ln Re/rw$	= 3.44
Effective radius of test	= 2.69 m

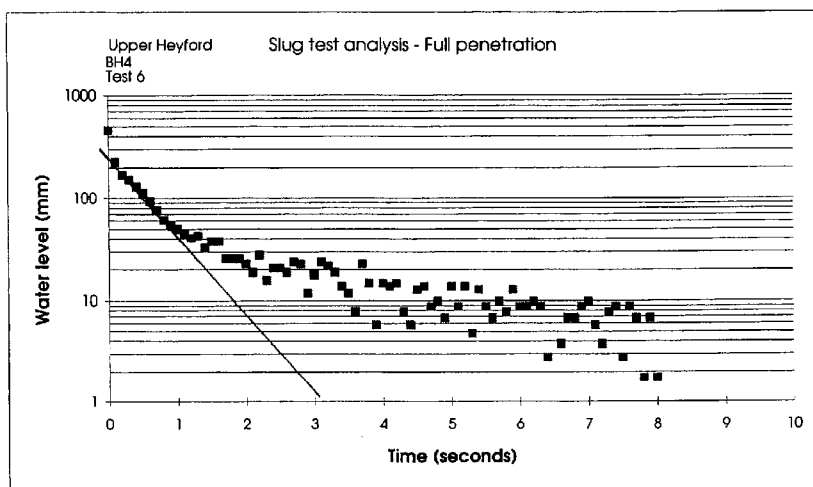
HYDRAULIC CONDUCTIVITY k	= 20 m/d

CALCULATION CHECKS

Porosity	=
rc for test within well screen	=

FORMULAE USED

$\ln(Re/rw) = 1 / ((1.1 / \ln(H/rw)) + (C / (L/rw)))$
 $k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt)$



SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH4
Test Number	6
Test Type (falling/rising)	R

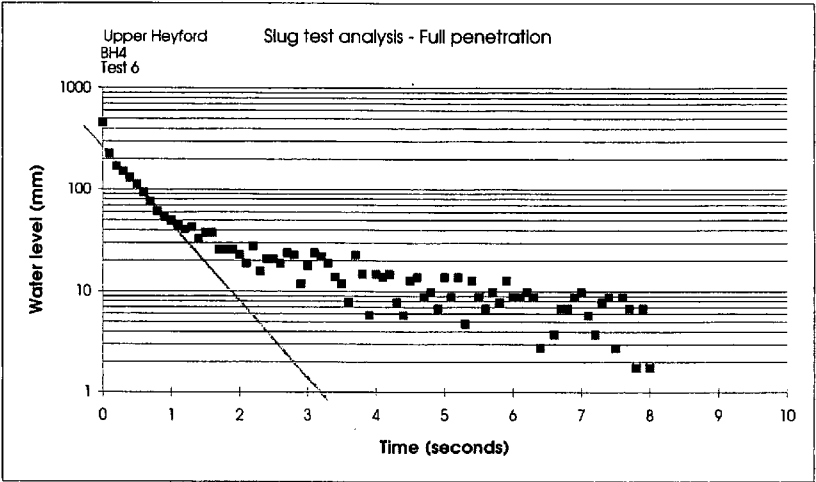
BOREHOLE DETAILS	
Tested Interval (m bgl)	10.8 to 19.8
Borehole Depth (m)	19.7
Water Level (m b TOC)	12.25
Casing Radius (m)	rc 0.052
Gravel Pack Radius (m)	rw 0.086
Well Penetration (m)	H 7.45
Screen Length (m)	L 7.45
Aquifer Thickness (m)	D 7.45

CALCULATIONS	
L/rw	= 86.63
C	= 3.8
INITIAL EXCESS HEAD (m)	= 250
TIME t (seconds)	= 1
HEAD AT TIME t (m)	= 50
ln Re/rw	= 3.44
Effective radius of test	= 2.69 m

HYDRAULIC CONDUCTIVITY k	= 87 m/d

CALCULATION CHECKS	
Porosity	= 0.3
rc for test within well screen	= 0.052

FORMULAE USED

$$\ln(Re/rw) = 1 / ((1.1 / \ln(H/rw)) + (C / (L/rw)))$$
$$k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt)$$


SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH5
Test Number	1
Test Type (falling/rising)	F

BOREHOLE DETAILS	
Tested Interval (m bgl)	1.0 to 3.5
Borehole Depth (m)	3.5
Water Level (m b TOC)	1.19
Casing Radius (m)	rc 0.025
Gravel Pack Radius (m)	rw 0.086
Well Penetration (m)	H 2.31
Screen Length (m)	L 2.34
Aquifer Thickness (m)	D 2.34

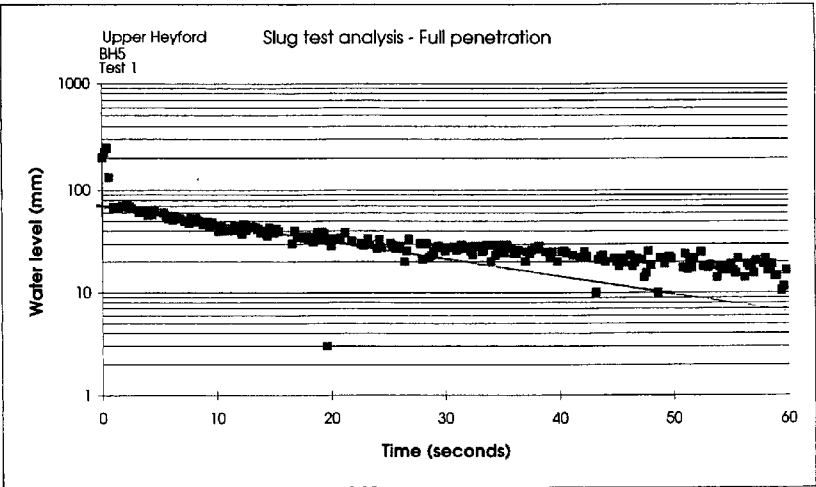
CALCULATIONS	
L/rw =	27.21
C =	2
INITIAL EXCESS HEAD (m) =	70
TIME t (seconds) =	50
HEAD AT TIME t (m) =	10
ln Re/rw =	2.45
Effective radius of test =	1.00 m

HYDRAULIC CONDUCTIVITY k =	1.1 m/d

CALCULATION CHECKS

Porosity =
rc for test within =
well screen

FORMULAE USED

$$\ln(R_0/r_w) = 1/((1.1/\ln(H/r_w)) + (C/(L/r_w)))$$
$$k = (rc^2 \ln(R_0/r_w) / (2 * L * t)) * \ln(y_0/y_t)$$


SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH5
Test Number	1
Test Type (falling/rising)	F

BOREHOLE DETAILS	
Tested Interval (m bgl)	1.0 to 3.5
Borehole Depth (m)	3.5
Water Level (m b TOC)	1.19
Casing Radius (m)	r_c 0.052
Gravel Pack Radius (m)	r_w 0.086
Well Penetration (m)	H 2.31
Screen Length (m)	L 2.34
Aquifer Thickness (m)	D 2.34

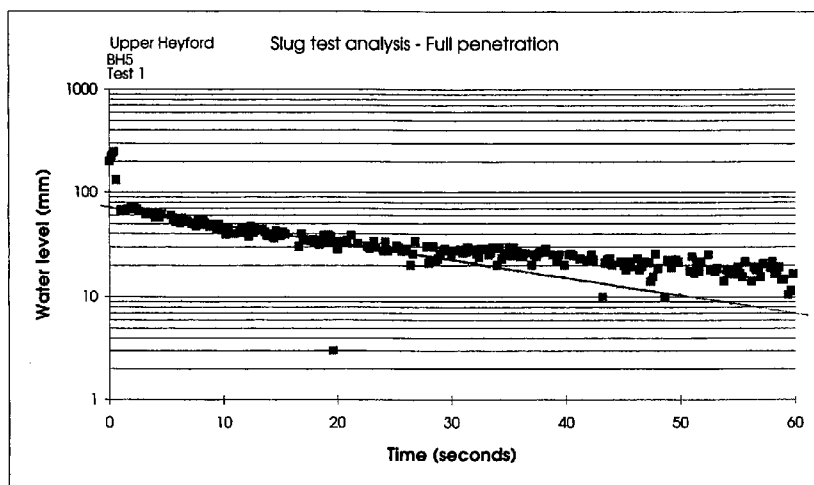
CALCULATIONS	
L/r_w	= 27.21
C	= 2
INITIAL EXCESS HEAD (m)	= 70
TIME t (seconds)	= 50
HEAD AT TIME t (m)	= 10
$\ln R_e/r_w$	= 2.45
Effective radius of test	= 1.00 m

HYDRAULIC CONDUCTIVITY k	= 4.8 m/d

CALCULATION CHECKS	
Porosity	= 0.3
r_c for test within well screen	= 0.052

FORMULAE USED

$$\ln(R_e/r_w) = 1 / ((1 / \ln(H/r_w)) + (C / (L/r_w)))$$
$$k = (r_c^2 \ln(R_e/r_w) / (2 * L * t)) * \ln(y_0/y_t)$$



SLUG TEST ANALYSIS - FULL PENETRATION

Client Defense Estate Organisation
 Site Upper Heyford
 Borehole Number BH5
 Test Number 2
 Test Type (falling/rising) R

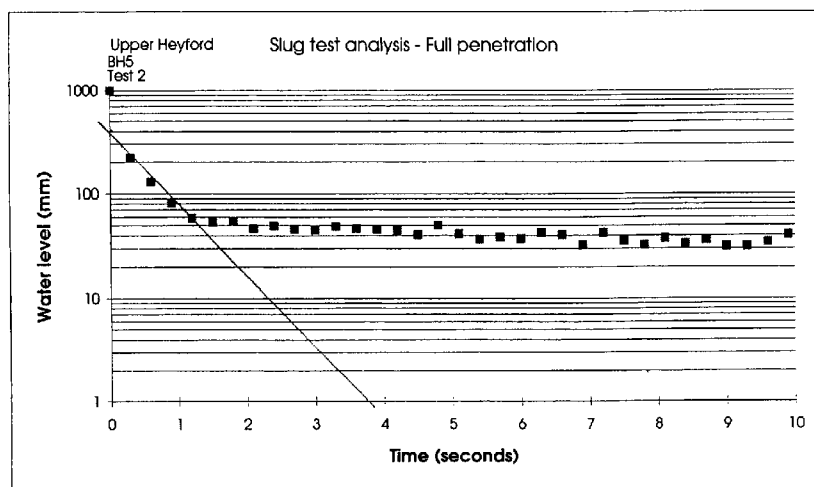
BOREHOLE DETAILS
 Tested Interval (m bgl) 1.0 to 3.5
 Borehole Depth (m) 3.5
 Water Level (m b TOC) 1.19
 Casing Radius (m) r_c 0.025
 Gravel Pack Radius (m) r_w 0.086
 Well Penetration (m) H 2.31
 Screen Length (m) L 2.34
 Aquifer Thickness (m) D 2.34

CALCULATIONS
 $L/r_w =$ 27.21
 $C =$ 2
 INITIAL EXCESS HEAD (m) = 400
 TIME t (seconds) = 3.7
 HEAD AT TIME t (m) = 1
 $\ln R_0/r_w =$ 2.45
 Effective radius of test = 1.00 m

HYDRAULIC CONDUCTIVITY $k =$ 46 m/d

CALCULATION CHECKS
 Porosity =
 r_c for test within =
 well screen

FORMULAE USED
 $\ln(R_0/r_w) = 1/((1.1/\ln(H/r_w)) + (C/(L/r_w)))$
 $k = (r_c^2 \ln(R_0/r_w) / (2 * L * t)) * \ln(y_0/y_t)$



SLUG TEST ANALYSIS - FULL PENETRATION

Client Defense Estate Organisation
Site Upper Heyford
Borehole Number BH5
Test Number 2
Test Type (falling/rising) R

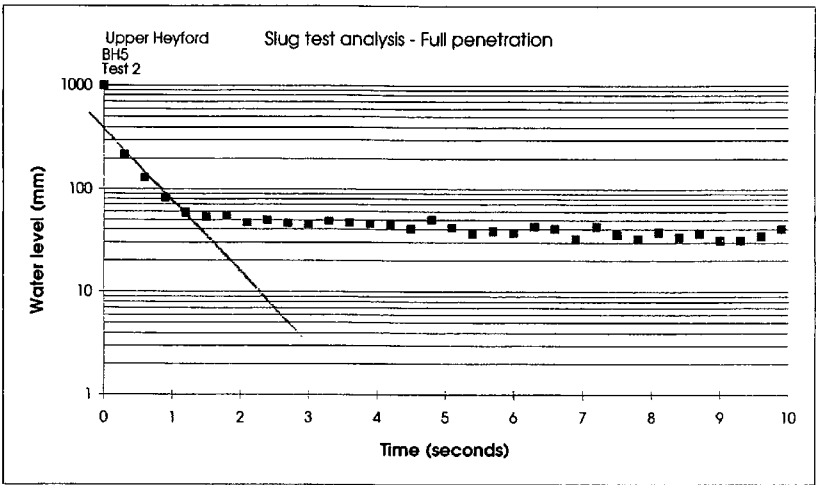
BOREHOLE DETAILS
Tested Interval (m bgl) 1.0 to 3.5
Borehole Depth (m) 3.5
Water Level (m b TOC) 1.19
Casing Radius (m) rc 0.052
Gravel Pack Radius (m) rw 0.086
Well Penetration (m) H 2.31
Screen Length (m) L 2.34
Aquifer Thickness (m) D 2.34

CALCULATIONS
L/rw = 27.21
C = 2
INITIAL EXCESS HEAD (m) = 400
TIME t (seconds) = 3.7
HEAD AT TIME t (m) = 1
ln Re/rw = 2.45
Effective radius of test = 1.00 m

HYDRAULIC CONDUCTIVITY k = 198 m/d

CALCULATION CHECKS
Porosity = 0.3
rc for test within well screen = 0.052

FORMULAE USED
 $\ln(Re/rw) = 1 / ((1 / \ln(H/rw)) + (C / (L/rw)))$
 $k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt)$



SLUG TEST ANALYSIS - FULL PENETRATION

Client Defense Estate Organisation
 Site Upper Heyford
 Borehole Number BH6
 Test Number 1
 Test Type (falling/rising) F

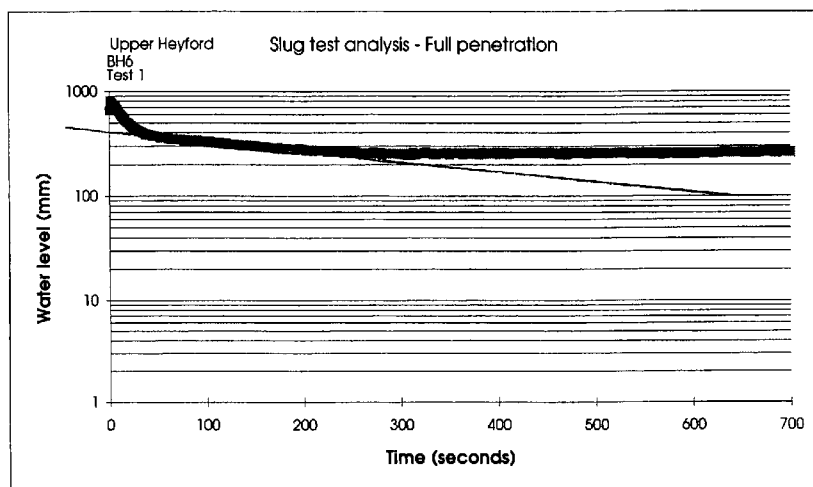
BOREHOLE DETAILS
 Tested Interval (m bgl) 12.9 to 15.9
 Borehole Depth (m) 15.89
 Water Level (m b TOC) 9.29
 Casing Radius (m) rc 0.025
 Gravel Pack Radius (m) rw 0.086
 Well Penetration (m) H 6.6
 Screen Length (m) L 3
 Aquifer Thickness (m) D 6

CALCULATIONS
 L/rw = 34.88
 C = 2.3
 INITIAL EXCESS HEAD (m) = 400
 TIME t (seconds) = 200
 HEAD AT TIME t (m) = 280
 ln Re/rw = 3.13
 Effective radius of test = 1.97 m

HYDRAULIC CONDUCTIVITY k = 0.050 m/d

CALCULATION CHECKS
 Porosity =
 rc for test within =
 well screen

FORMULAE USED
 $\ln(R_e/r_w) = 1 / ((1.1 / \ln(H/r_w)) + (C / (L/r_w)))$
 $k = (rc^2 \ln(R_e/r_w) / (2 * L * t)) * \ln(y_o/y_f)$



SLUG TEST ANALYSIS - FULL PENETRATION

Client Defense Estate Organisation
Site Upper Heyford
Borehole Number BH6
Test Number 1
Test Type (falling/rising) F

BOREHOLE DETAILS
Tested Interval (m bgl) 12.9 to 15.9
Borehole Depth (m) 15.89
Water Level (m b TOC) 9.29
Casing Radius (m) rc 0.025
Gravel Pack Radius (m) rw 0.086
Well Penetration (m) H 6.6
Screen Length (m) L 3
Aquifer Thickness (m) D 6

CALCULATIONS
L/rw = 34.88
C = 2.3
INITIAL EXCESS HEAD (m) = 840
TIME t (seconds) = 200
HEAD AT TIME t (m) = 6.5
ln Re/rw = 3.13
Effective radius of test = 1.97 m

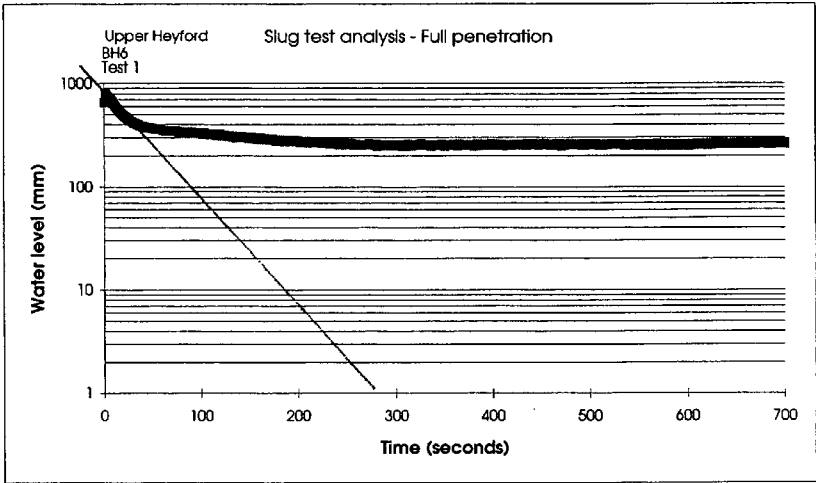
HYDRAULIC CONDUCTIVITY k = 0.685 m/d

CALCULATION CHECKS

Porosity =
rc for test within =
well screen

FORMULAE USED

$$\ln(Re/rw) = 1 / ((1.1 / \ln(H/rw)) + (C / (L/rw)))$$
$$k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt)$$



SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH6
Test Number	2
Test Type (falling/rising)	R

BOREHOLE DETAILS	
Tested Interval (m bgl)	12.9 to 15.9
Borehole Depth (m)	15.89
Water Level (m b TOC)	9.29
Casing Radius (m)	rc 0.025
Gravel Pack Radius (m)	rw 0.086
Well Penetration (m)	H 6.6
Screen Length (m)	L 3
Aquifer Thickness (m)	D 6

CALCULATIONS	
L/rw =	34.88
C =	2.3
INITIAL EXCESS HEAD (m) =	400
TIME t (seconds) =	500
HEAD AT TIME t (m) =	120
ln Re/rw =	3.13
Effective radius of test =	1.97 m

HYDRAULIC CONDUCTIVITY k =	0.068 m/d

CALCULATION CHECKS

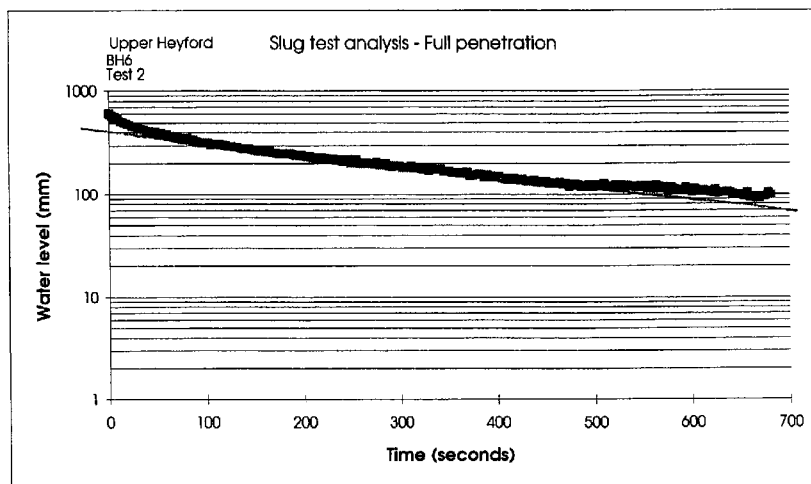
Porosity =

rc for test within =

well screen

FORMULAE USED

$$\ln(Re/rw) = 1 / ((1.1 / \ln(H/rw)) + (C / (L/rw)))$$

$$k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt)$$


SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH7
Test Number	5
Test Type (falling/rising)	F

BOREHOLE DETAILS	
Tested Interval (m bgl)	2.5 to 5.5
Borehole Depth (m)	5.34
Water Level (m b TOC)	3.22
Casing Radius (m)	rc 0.025
Gravel Pack Radius (m)	rw 0.086
Well Penetration (m)	H 2.12
Screen Length (m)	L 2.12
Aquifer Thickness (m)	D 2.12

CALCULATIONS	
L/rw	= 24.65
C	= 1.8
INITIAL EXCESS HEAD (m)	= 50
TIME t (seconds)	= 16
HEAD AT TIME t (m)	= 30
ln Re/rw	= 2.40
Effective radius of test	= 0.95 m

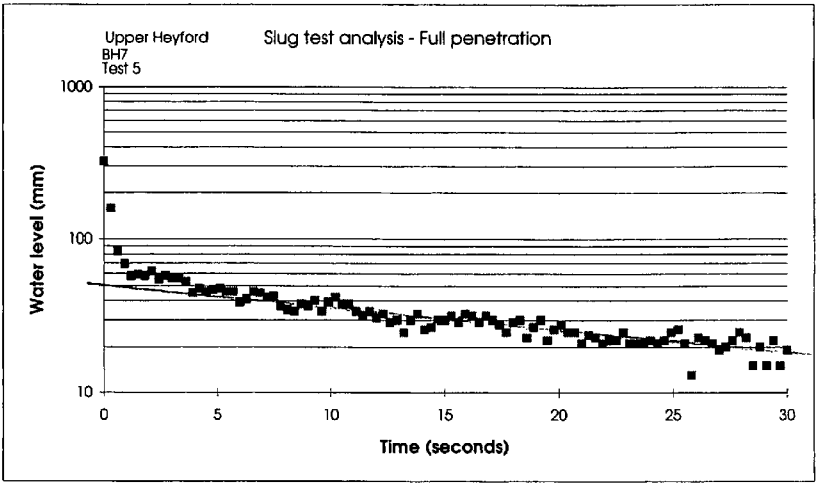
HYDRAULIC CONDUCTIVITY k	= 1.0 m/d

CALCULATION CHECKS

Porosity	=
rc for test within	=
well screen	

FORMULAE USED

$$\ln(Re/rw) = 1 / ((1.1 / \ln(H/rw)) + (C / (L/rw)))$$
$$k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt)$$



SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH7
Test Number	5
Test Type (falling/rising)	F

BOREHOLE DETAILS	
Tested Interval (m bgl)	2.5 to 5.5
Borehole Depth (m)	5.34
Water Level (m b TOC)	3.22
Casing Radius (m) r_c	0.052
Gravel Pack Radius (m) r_w	0.086
Well Penetration (m) H	2.12
Screen Length (m) L	2.12
Aquifer Thickness (m) D	2.12

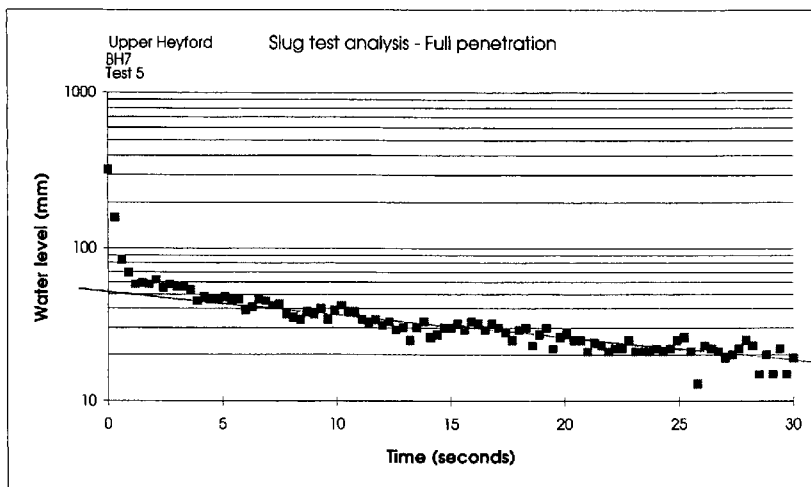
CALCULATIONS	
L/r_w	= 24.65
C	= 1.8
INITIAL EXCESS HEAD (m)	= 50
TIME t (seconds)	= 16
HEAD AT TIME t (m)	= 30
$\ln R_0/r_w$	= 2.40
Effective radius of test	= 0.95 m

HYDRAULIC CONDUCTIVITY k	= 4.2 m/d

CALCULATION CHECKS	
Porosity	= 0.3
r_c for test within well screen	= 0.052

FORMULAE USED

$$\ln(R_0/r_w) = 1 / ((1.1 / \ln(H/r_w)) + (C / (L/r_w)))$$

$$k = (r_c^2 \ln(R_0/r_w) / (2 * L * t)) * \ln(y_0/y_t)$$


SLUG TEST ANALYSIS - FULL PENETRATION

Client Defense Estate Organisation
Site Upper Heyford
Borehole Number BH7
Test Number 6
Test Type (falling/rising) R

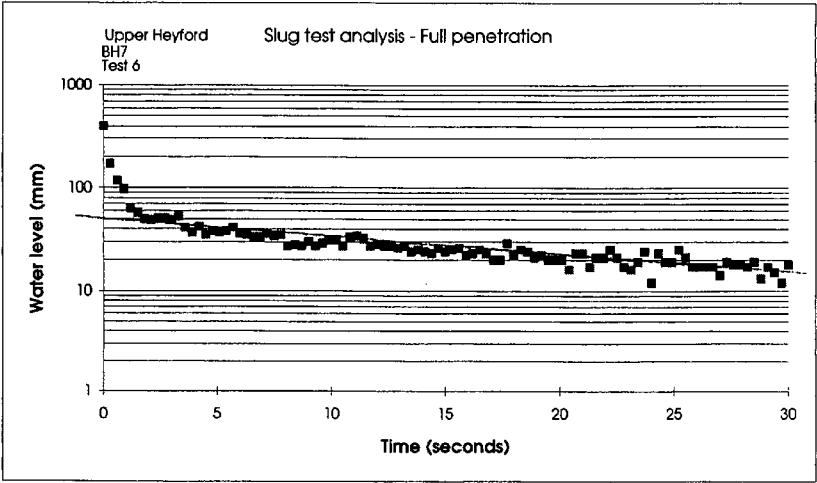
BOREHOLE DETAILS
Tested Interval (m bgl) 2.5 to 5.5
Borehole Depth (m) 5.34
Water Level (m b TOC) 3.22
Casing Radius (m) rc 0.025
Gravel Pack Radius (m) rw 0.086
Well Penetration (m) H 2.12
Screen Length (m) L 2.12
Aquifer Thickness (m) D 2.12

CALCULATIONS
L/rw = 24.65
C = 1.8
INITIAL EXCESS HEAD (m) = 50
TIME t (seconds) = 23
HEAD AT TIME t (m) = 20
ln Re/rw = 2.40
Effective radius of test = 0.95 m

HYDRAULIC CONDUCTIVITY k = 1.2 m/d

CALCULATION CHECKS
Porosity =
rc for test within =
well screen

FORMULAE USED
 $\ln(Re/rw) = 1/((1.1/\ln(H/rw)) + (C/(L/rw)))$
 $k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(yo/yt)$



SLUG TEST ANALYSIS - FULL PENETRATION

Client	Defense Estate Organisation
Site	Upper Heyford
Borehole Number	BH7
Test Number	6
Test Type (falling/rising)	R

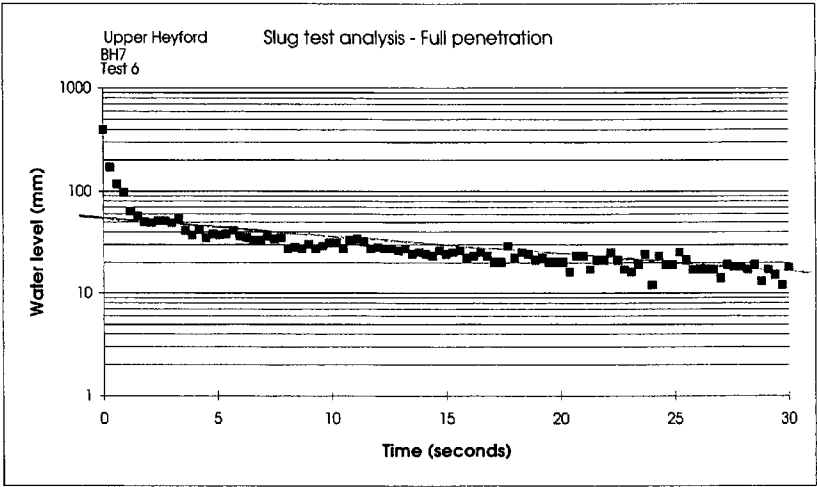
BOREHOLE DETAILS	
Tested Interval (m bgl)	2.5 to 5.5
Borehole Depth (m)	5.34
Water Level (m b TOC)	3.22
Casing Radius (m) rc	0.052
Gravel Pack Radius (m) rw	0.086
Well Penetration (m) H	2.12
Screen Length (m) L	2.12
Aquifer Thickness (m) D	2.12

CALCULATIONS	
L/rw =	24.65
C =	1.8
INITIAL EXCESS HEAD (m) =	50
TIME t (seconds) =	23
HEAD AT TIME t (m) =	20
ln Re/rw =	2.40
Effective radius of test =	0.95 m

HYDRAULIC CONDUCTIVITY k =	5.3 m/d

CALCULATION CHECKS	
Porosity =	0.3
rc for test within well screen =	0.052

FORMULAE USED

$$\ln(Re/rw) = 1/((1.1/\ln(H/rw)) + (C/(L/rw)))$$
$$k = (rc^2 \ln(Re/rw) / (2 * L * t)) * \ln(y0/y1)$$


Appendix

7

Details of Purging Completed at Boreholes 1 - 7

Borehole 1A - Purging

Borehole 1A purged using a bailer due to sediment clogging electric submersible pump.

Time	Time secs	Temp deg C	pH	DO %	EC uS/cm	turbid NTU	redox mV	discharge l/s
		10.7	7.2	20.5	894	> 100	-1.2	n/a

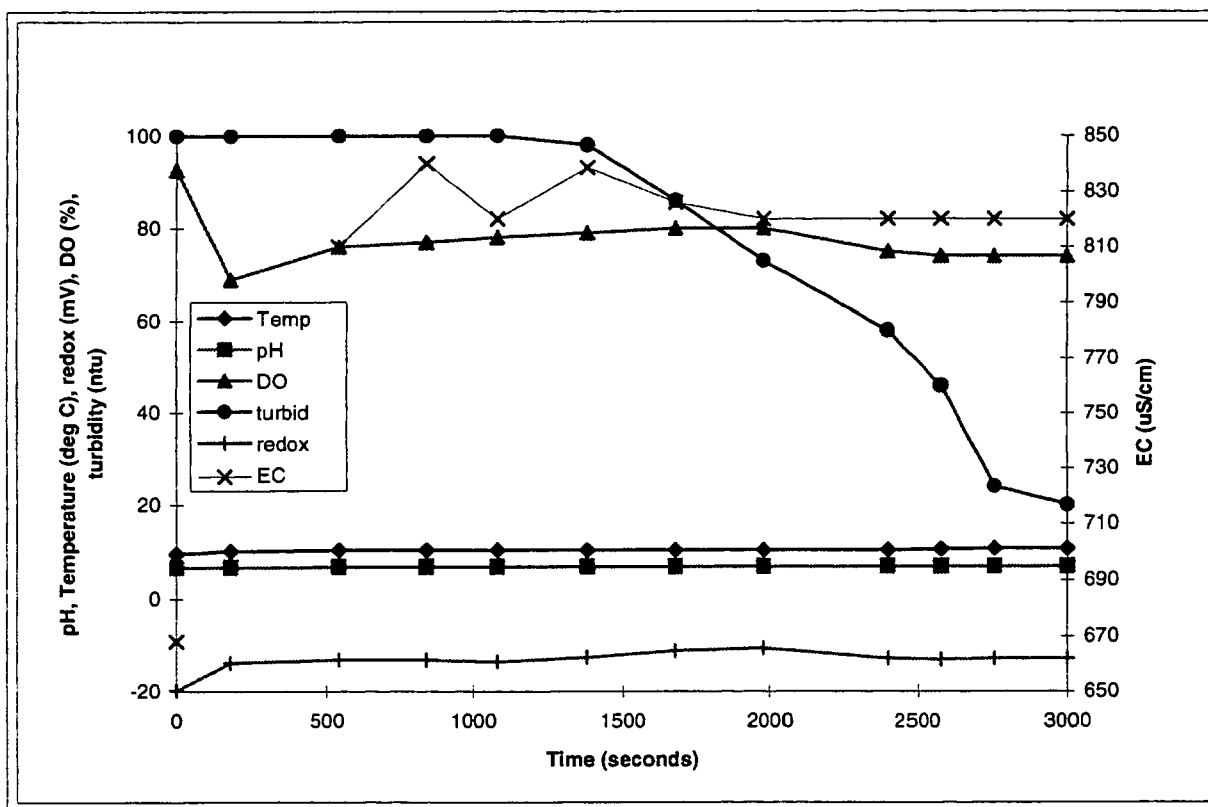
total discharge = 25 litres

Borehole 1B - Purging

Time	Time secs	Temp deg C	pH	DO %	EC uS/cm	turbid NTU	redox mV	discharge l/s
10:00	0	9.5	6.73	92.6	668	> 100	-19.8	0.25
10:03	180	10.1	6.79	69		> 100	-13.8	0.25
10:09	540	10.3	6.8	76	810	> 100	-13.2	0.25
10:14	840	10.3	6.83	77	840	> 100	-13.2	0.25
10:18	1080	10.3	6.84	78	820	> 100	-13.6	0.25
10:23	1380	10.3	6.84	79	839	98	-12.6	0.25
10:28	1680	10.3	6.84	80	826	86	-11.2	0.25
10:33	1980	10.3	6.84	80	820	73	-10.6	0.25
10:40	2400	10.3	6.87	75	820	58	-12.8	0.05
10:43	2580	10.5	6.89	74	820	46	-13	0.05
10:46	2760	10.6	6.89	74	820	24	-12.8	0.05
10:50	3000	10.6	6.89	74	820	20	-12.8	0.05

10:35 - discharge reduced

total discharge = 546 litres



Borehole 2 - Purging

Borehole 2 purged using a bailer due to insufficient inflow to borehole for submersible pump.

Time	Time secs	Temp deg C	pH	DO %	EC uS/cm	turbid NTU	redox mV	discharge l/s
		11.8	9.02	36.2	1014	> 100	-0.6	n/a

total discharge = 2 litres

Borehole 3A - Purging

Borehole 3A purged using a bailer due to insufficient inflow to borehole for submersible pump.

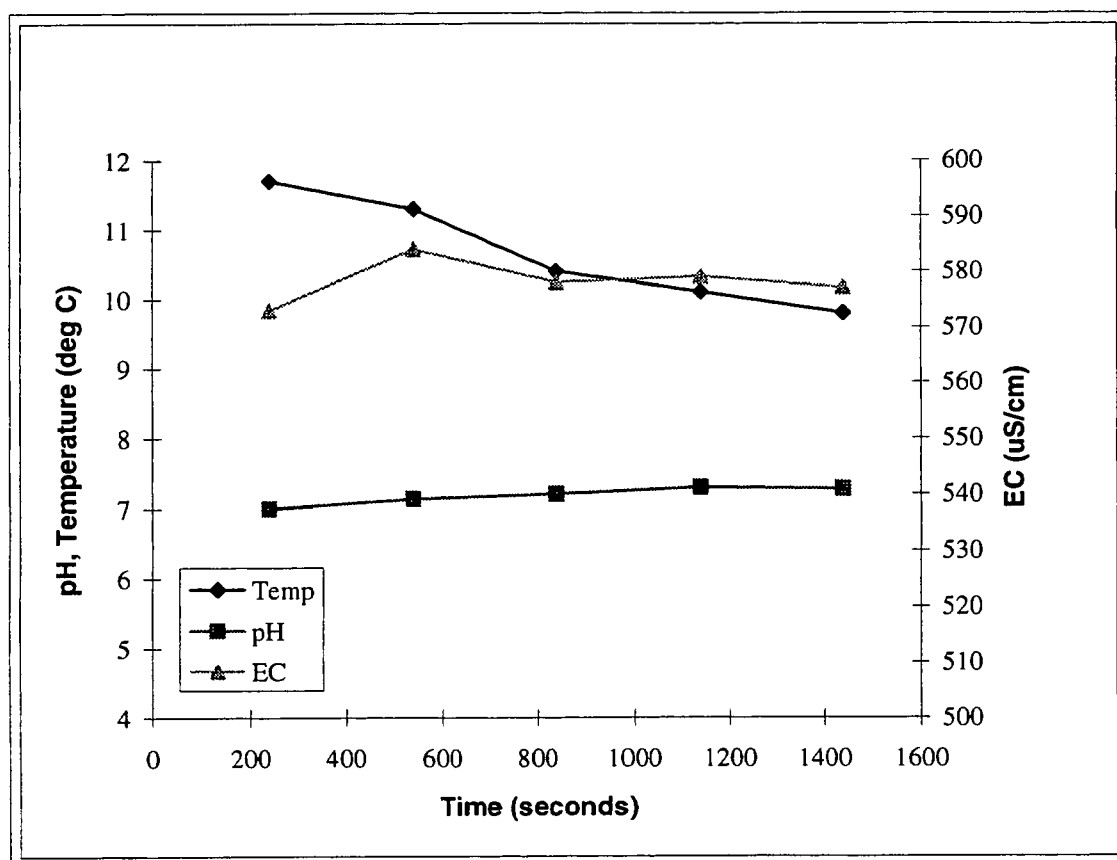
Time	Time secs	Temp deg C	pH	DO %	EC uS/cm	turbid NTU	redox mV	discharge l/s
		9.8	7.02	24	694	> 100	-1	n/a

total discharge = 25 litres

Borehole 3B - Purging

Time	Time secs	Temp deg C	pH	EC uS/cm	turbidity (visual)	discharge l/s
11:51	0		6.7	569	v.turbid	0.25
11:55	240	11.7	7	573	turbid	0.25
12:00	540	11.3	7.13	584	cloudy	0.25
12:05	840	10.4	7.2	578	clear	0.25
12:10	1140	10.1	7.29	579	clear	0.25
12:15	1440	9.8	7.27	577	clear	0.25

note: well head parameters measured are limited due to equipment failure.
total discharge = 360 litres



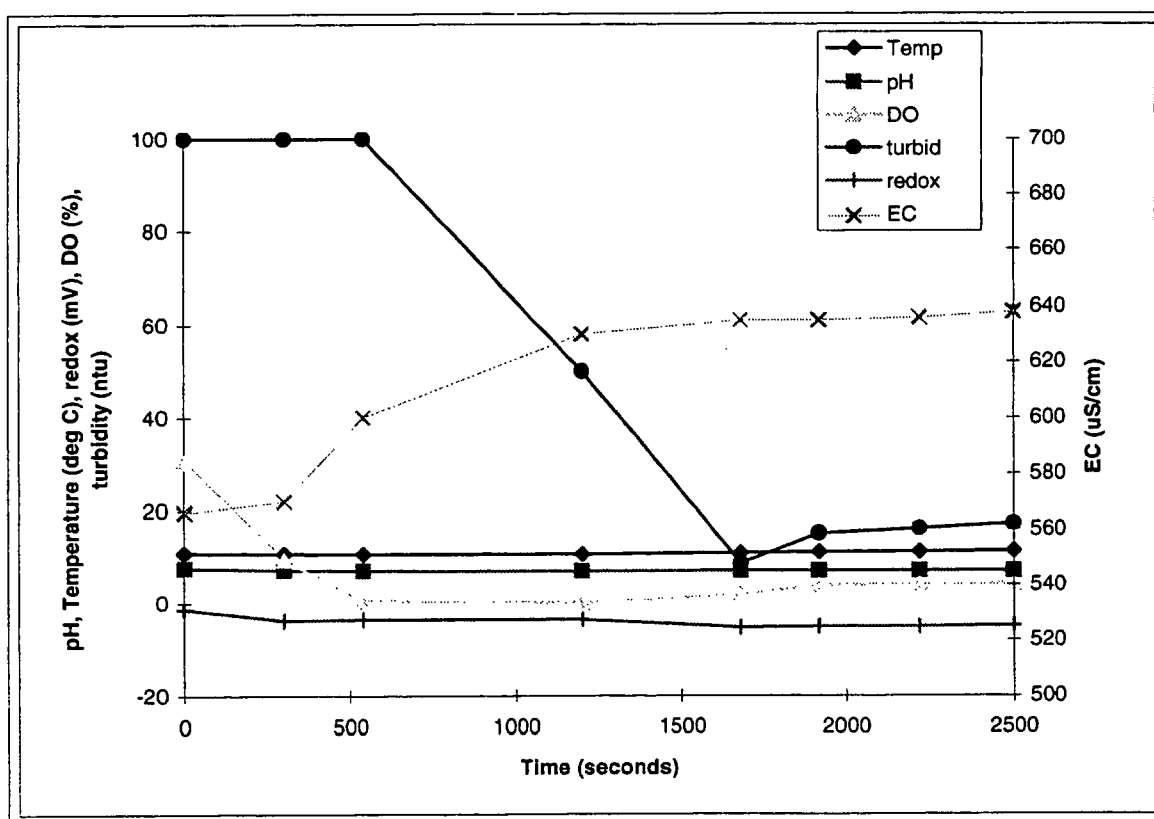
Borehole 4 - Purging

Time	Time secs	Temp deg C	pH	DO %	EC uS/cm	turbid NTU	redox mV	discharge l/s
16:45	0	10.9	7.65	30.6	566	> 100	-1.4	0.28
16:50	300	10.8	7.24	9.5	570	> 100	-3.8	0.28
16:54	540	10.7	7.06	0.5	600	> 100	-3.6	0.28
17:05	1200	10.7	7.02	0.1	630	50	-3.6	0.28
17:13	1680	11	7.07	1.8	635	8.7	-5.3	0.05
17:17	1920	11.2	7.07	3.8	635	15.2	-5.1	0.05
17:22	2220	11.3	7.08	4.1	636	16.2	-5.1	0.05
17:27	2500	11.5	7.09	4.2	638	17.3	-4.9	0.05

Note: turbidity increase due to bubbles on turbidity probe

17:05 - discharge reduced

total discharge = 401 litres

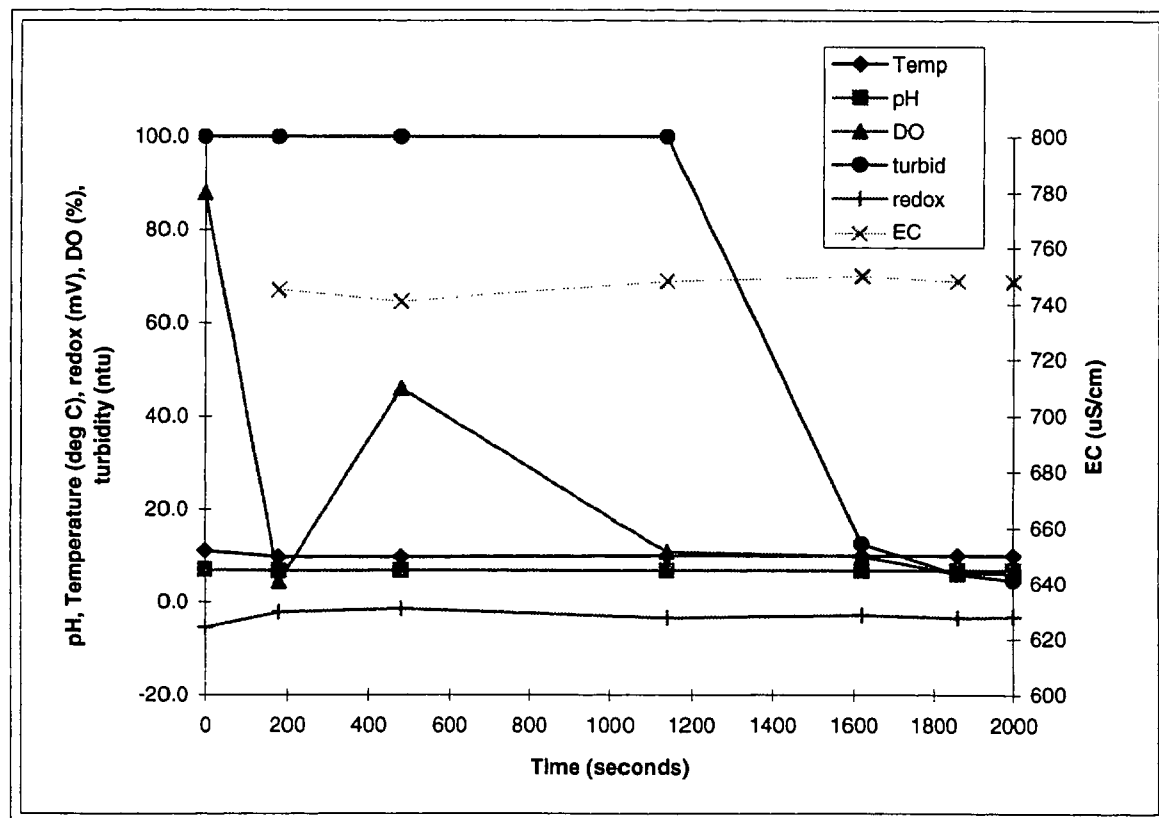


Borehole 5 - Purging

Time	Time secs	Temp deg C	pH	DO %	EC uS/cm	turbid NTU	redox mV	discharge l/s
08:40	0	11.2	7.10	88		> 100	-5.5	0.25
08:43	180	9.8	6.83	5	745	> 100	-2.2	0.25
08:48	480	9.8	6.86	46	741	> 100	-1.4	0.25
08:59	1140	10.1	6.88	11	748	> 100	-3.4	0.06
09:07	1620	10.1	6.90	10	750	12.7	-2.8	0.06
09:11	1860	10.1	6.91	6	748	6.1	-3.4	0.06
09:14	2000	10.1	6.92	6	748	4.7	-3.2	0.06

08:51 - discharge reduced

total discharge = 245 litres



Borehole 6 - Purging

Borehole 6 purged using a bailer due to insufficient inflow to borehole for submersible pump.

Time	Time secs	Temp deg C	pH	DO %	EC uS/cm	turbid NTU	redox mV	discharge l/s
		10	7.02	62	754	> 100	-1.4	n/a

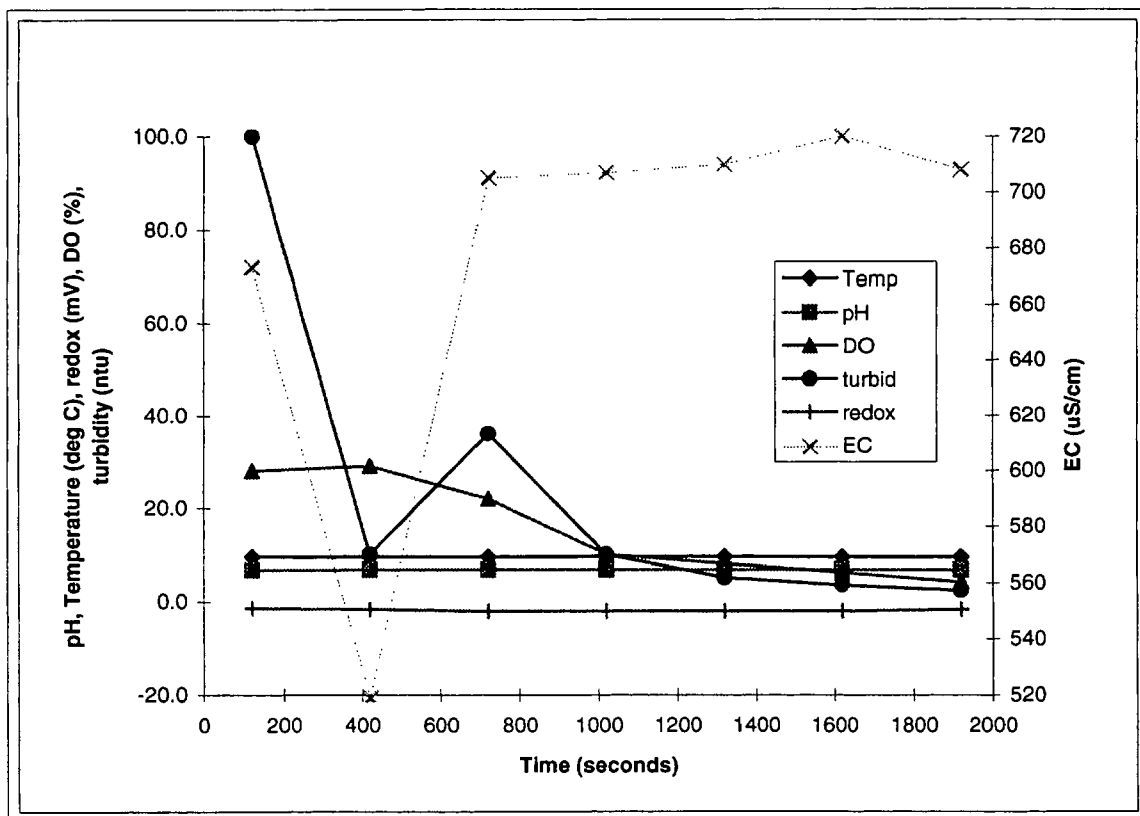
total discharge = 60 litres

Borehole 7 - Purging

Time	Time secs	Temp deg C	pH	DO %	EC uS/cm	turbid NTU	redox mV	discharge l/s
17:58	0							
18:00	120	9.5	6.70	28	673	> 100	-1.4	0.25
18:05	420	9.4	6.74	29	519	10	-1.6	0.25
18:10	720	9.4	6.76	22	705	36	-2.0	0.05
18:15	1020	9.5	6.76	10	707	9.9	-2.0	0.05
18:20	1320	9.5	6.75	8	710	5.1	-2.0	0.05
18:25	1620	9.4	6.75	6	720	3.5	-2.0	0.05
18:30	1920	9.4	6.75	4.2	708	2.4	-1.6	0.05

18:08 - discharge reduced

total discharge = 216 litres



Appendix

8

Results of Chemical Testing - Boreholes



TABLE OF RESULTS

Job Number : 97/01023/02/01

Client : ASPINWALL & COMPANY

Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER

Location : RAF UPPER HEYFORD

Client Contact : [REDACTED]

Client Ref. No. : MD3333A



- ☐ Preliminary
☒ Validated

☐ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	TLC	TLC	TLC	TLC
Detection Limits	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<1	<1	<1	<1	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Boron	Calcium	Cadmium	Chromium	Copper	Mercury	Magnesium	Nickel	Lead	Selenium	Zinc	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC
294	BH 3B	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	>1	>1	3	<1
295	BH 3B	UNKNOWN	2.28	<0.05	164.00	<0.05	<0.05	0.13	<0.05	2.13	0.21	0.11	<0.1	0.55	-	-	-	-
296	BH 3B	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
297	BH 3B	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
298	BH 3B	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
358	BH 2	25	-	-	-	-	-	-	-	-	-	-	-	-	1	2	15	3
363	BH1A	38	-	-	-	-	-	-	-	-	-	-	-	-	2	<1	1	2
364	BH1A	38	<0.05	0.12	178.20	<0.05	<0.05	<0.05	.14	11.97	<0.05	0.06	<0.1	<0.05	-	-	-	-
365	BH1A	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
366	BH1A	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
367	BH1A	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
368	BH1B	15	-	-	-	-	-	-	-	-	-	-	-	-	1	<1	1	1
369	BH1B (balled)	15	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	2	<1
370	BH1B	15	<0.05	<0.05	197.80	<0.05	<0.05	<0.05	.08	2.87	<0.05	<0.05	<0.1	<0.05	-	-	-	-
371	BH1B	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Printed on 19 June 1997

Checked by [REDACTED]

Page 96 of 205



OCHEM ANALYTICAL SERVICE
TABLE OF RESULTS

Job Number : 97/01023/02/01

Client : ASPINWALL & COMPANY

Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER

Location : RAF UPPER HEYFORD

Client Contact : [REDACTED]

Client Ref. No. : MD3333A



☐ Preliminary

☒ Validated

☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	TLC	TLC	TLC	TLC
Detection Limits	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<1	<1	<1	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Boron	Calcium	Cadmium	Chromium	Copper	Mercury	Magnesium	Nickel	Lead	Selenium	Zinc	Min Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC
372	BH1B	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
373	BH1B	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
374	BH2	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
375	BH2	25	0.71	0.37	115.30	<0.05	<0.05	<0.05	<0.05	8.13	<0.05	<0.05	<0.1	<0.05	>1	<1	3	>1
376	BH2	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
377	BH2	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
378	BH2	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
379	BH3A	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
380	BH3A	4	<0.05	<0.05	124.40	<0.05	<0.05	<0.05	<0.05	2.46	<0.05	0.06	<0.1	<0.05	<1	<1	2	<1
381	BH3A	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
382	BH3A	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
383	BH3A	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
384	BH4	13	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
385	BH4 (balled)	13	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
386	BH4	13	<0.05	<0.05	113.40	<0.05	<0.05	<0.05	06	6.58	<0.05	<0.05	<0.1	<0.05	-	-	-	-
387	BH4	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
388	BH4	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
389	BH4	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
390	BH5	3	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	1	<1
391	BH5 (balled)	3	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1



CHEM ANALYTICAL SERVICE
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER
Location : RAF UPPER HEYFORD
Client Contact :
Client Ref. No. : MD3333A



☐ Preliminary
☒ Validated

☐ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	TLC	TLC	TLC	TLC
Detection Limits	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<1	<1	<1	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Boron	Calcium	Cadmium	Chromium	Copper	Mercury	Magnesium	Nickel	Lead	Selenium	Zinc	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC
392	BH5	3	<0.05	0.22	141.80	0.22	0.07	<0.05	<0.05	2.71	<0.05	0.23	<0.1	0.15	-	-	-	-
393	BH5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
394	BH5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
395	BH5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
396	BH6	12	-	-	-	-	-	-	-	-	-	-	-	-	>1	>1	>1	>1
397	BH6	12	<0.05	0.08	152.50	0.10	<0.05	<0.05	.09	9.31	<0.05	<0.05	<0.1	0.06	-	-	-	-
398	BH6	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
399	BH6	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
400	BH6	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
401	BH7	4	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
402	BH7 (bailed)	4	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
403	BH7	4	<0.05	<0.05	135.00	<0.05	<0.05	<0.05	<0.05	2.78	<0.05	0.09	<0.1	0.08	-	-	-	-
404	BH7	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
405	BH7	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
406	BH7	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
407	SPRING B	SURFACE	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
408	SPRING D	SURFACE	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
409	SPRING I	SURFACE	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
410	SPRING I	SURFACE	<0.05	<0.05	57.53	<0.05	<0.05	<0.05	<0.05	1.37	<0.05	0.07	<0.1	0.10	-	-	-	-
411	SPRING I	SURFACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



JOE HANALYTICAL SERVICE
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER
Location : RAF UPPER HEYFORD
Client Contact : XXXXXXXXXX
Client Ref. No. : MD3333A



☐ Preliminary
☒ Validated

☐ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ms/cm	ppm(CaCO ₃)	ppm
Detection Method	Spectro	ATU	Colour	Flame P	Flame P	Gravi	IR	KONE	KONE	KONE	KONE	KONE	Meter	Meter	Titrat
Detection Limits	<10	<0.5	<0.01	<3	<3	<1	<1	<5	<0.5	<0.01	<3	<0.004	<0.01	<1	<1

Sample Number	Sample Identity	Depth (m)	COD On Unfiltered Sample	BOD in unfiltered water	Ammoniacal Nitrogen in Water	Potassium	Sodium	DCMMeOH Extract	Tot. Org. Carbon in Water	Chloride (soluble)	Nitrate (soluble)	Phosphate (soluble)	Sulphate (soluble)	Electrical Conductivity	pH Value in Water	Alkalinity Total	Bicarbonate
294	BH 3B	UNKNOWN	-	-	-	-	-	3	5	-	-	-	-	-	-	-	-
295	BH 3B	UNKNOWN	-	-	-	>3	12	-	-	13	14.1	0.18	42	0.614	7.21	400	400
296	BH 3B	UNKNOWN	-	-	0.08	-	-	-	-	-	-	-	-	-	-	-	-
297	BH 3B	UNKNOWN	10	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
298	BH 3B	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

358	BH 2	25	-	-	-	-	-	18	-	-	-	-	-	0.990	10.74	-	-
363	BH1A	38	-	-	-	-	-	3	2	-	-	-	-	-	-	-	-
364	BH1A	38	-	-	-	6	40	-	-	30	23.3	0.12	101	0.645	7.27	480	480
365	BH1A	38	-	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-
366	BH1A	38	478	11.1	-	-	-	-	-	-	-	-	-	-	-	-	-
367	BH1A	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
368	BH1B	15	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-
369	BH1B (balled)	15	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
370	BH1B	15	-	-	-	<3	12	-	-	19	93.4	0.06	56	0.549	7.25	330	330
371	BH1B	15	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-



OCHEM ANALYTICAL SERVICE
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER
Location : RAF UPPER HEYFORD
Client Contact :
Client Ref. No. : MD3333A



☐ Preliminary
☒ Validated
☐ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ms/cm	ppm(CaCO		ppm	
Detection Method	Spectro	ATU	Colour	Flame P	Flame P	Gravi	IR	KONE	KONE	KONE	KONE	KONE	KONE	Meter	Meter	Titrat	Titre	
Detection Limits	<10	<0.5	<0.01	<3	<3	<1	<1	>5	<0.5	<0.01	<3	<0.004	<0.01	<1	<1			
Sample Number	Sample Identity	Depth (m)	COD On Unfiltered Sample	BOD in unfiltered water	Ammoniacal Nitrogen in Water	Potassium	Sodium	DCMMeOH Extract	Tot. Org. Carbon in Water	Chloride (soluble)	Nitrate (soluble)	Phosphate (soluble)	Sulphate (soluble)	Electrical Conductivity	pH Value in Water	Alkalinity Total	Bicarbonate	Total Hardness
372	BH1B	15	<10	>0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
373	BH1B	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
374	BH2	25	-	-	-	-	3	7	-	-	-	-	-	-	-	-	-	-
375	BH2	25	-	-	0.26	7	96	-	-	46	52.6	0.63	324	1.029	8.11	90	90	-
376	BH2	25	30	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
377	BH2	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
378	BH3A	4	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-
379	BH3A	4	-	-	<3	14	-	-	-	13	41.3	0.07	53	0.572	7.38	480	480	-
380	BH3A	4	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-
381	BH3A	4	14	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
382	BH3A	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
383	BH4	13	-	-	-	-	<1	9	-	-	-	-	-	-	-	-	-	-
384	BH4 (bailed)	13	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-
385	BH4	13	-	-	-	3	21	-	-	15	<0.5	0.03	58	0.557	7.43	280	280	-
386	BH4	13	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-
387	BH4	13	>10	>0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
388	BH4	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
389	BH5	3	-	-	-	-	1	5	-	-	-	-	-	-	-	-	-	-
390	BH5 (bailed)	3	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-



GEOCHEM ANALYTICAL SERVICE
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER
Location : RAF UPPER HEYFORD
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☒ Validated
☐ NAMAS Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ms/cm	ppm(CaCO ₃)		ppm		
Detection Method		Spectro	ATU	Colour	Flame P	Flame P	Gravi	IR	KONE	KONE	KONE	KONE	Meter	Meter	Titrat	Titre		
Detection Limits		<10	<0.5	<0.01	<3	<3	<1	<1	<5	<0.5	<0.01	<3	<0.004	<0.01	<1	<1		
Sample Number	Sample Identity	Depth (m)	COD On Unfiltered Sample	BOD in unfiltered water	Ammoniacal Nitrogen in Water	Potassium	Sodium	DCM/MeOH Extract	Tot. Org. Carbon in Water	Chloride (soluble)	Nitrate (soluble)	Phosphate (soluble)	Sulphate (soluble)	Electrical Conductivity	pH Value in Water	Alkalinity Total	Bicarbonate	
392	BH5	3	-	-	-	<3	14	-	-	53	<0.5	0.02	29	0.624	7.21	300	300	
393	BH5	3	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	
394	BH5	3	<10	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	
395	BH5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
396	BH6	12	-	-	-	-	-	<1	6	-	-	-	-	-	-	-	-	
397	BH6	12	-	-	-	5	19	-	-	5	<0.5	0.11	82	0.602	7.32	1400	1400	
398	BH6	12	-	-	0.02	-	-	-	-	-	-	-	-	-	-	-	-	
399	BH6	12	77	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	
400	BH6	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
401	BH7	4	-	-	-	-	-	<1	5	-	-	-	-	-	-	-	-	
402	BH7 (balled)	4	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	
403	BH7	4	-	-	-	<3	12	-	-	10	<0.5	0.02	10	0.587	7.14	400	400	
404	BH7	4	-	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-	
405	BH7	4	<10	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	
406	BH7	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
407	SPRING B	SURFACE	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	
408	SPRING D	SURFACE	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	
409	SPRING I	SURFACE	-	-	-	-	-	<1	6	-	-	-	-	-	-	-	-	
410	SPRING I	SURFACE	-	-	-	<3	13	-	-	17	4.7	0.04	17	0.362	7.67	550	550	
411	SPRING I	SURFACE	-	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-	



GEOCHEM ANALYTICAL SERVICES

Diesel Range Organics

by
G.C.



Client Ref:= MD3333A/2847
Sample Matrix:= Water
Job Number:= 97/1023/02/01

Date Sample Received:= 24/4/97
Date Extracted/Prepared:= 6/6/97
Date Analysed:= 7/6/97

Separatory Funnel Ext:= Yes
Sextec Extraction:= No
Column Extraction:= Yes

Internal Standard:= A :- 2,2,4,4,6,8,8, HEPTAMETHYLNONANE B :- 1-CHLOROCTADECANE C :- SQUALANE

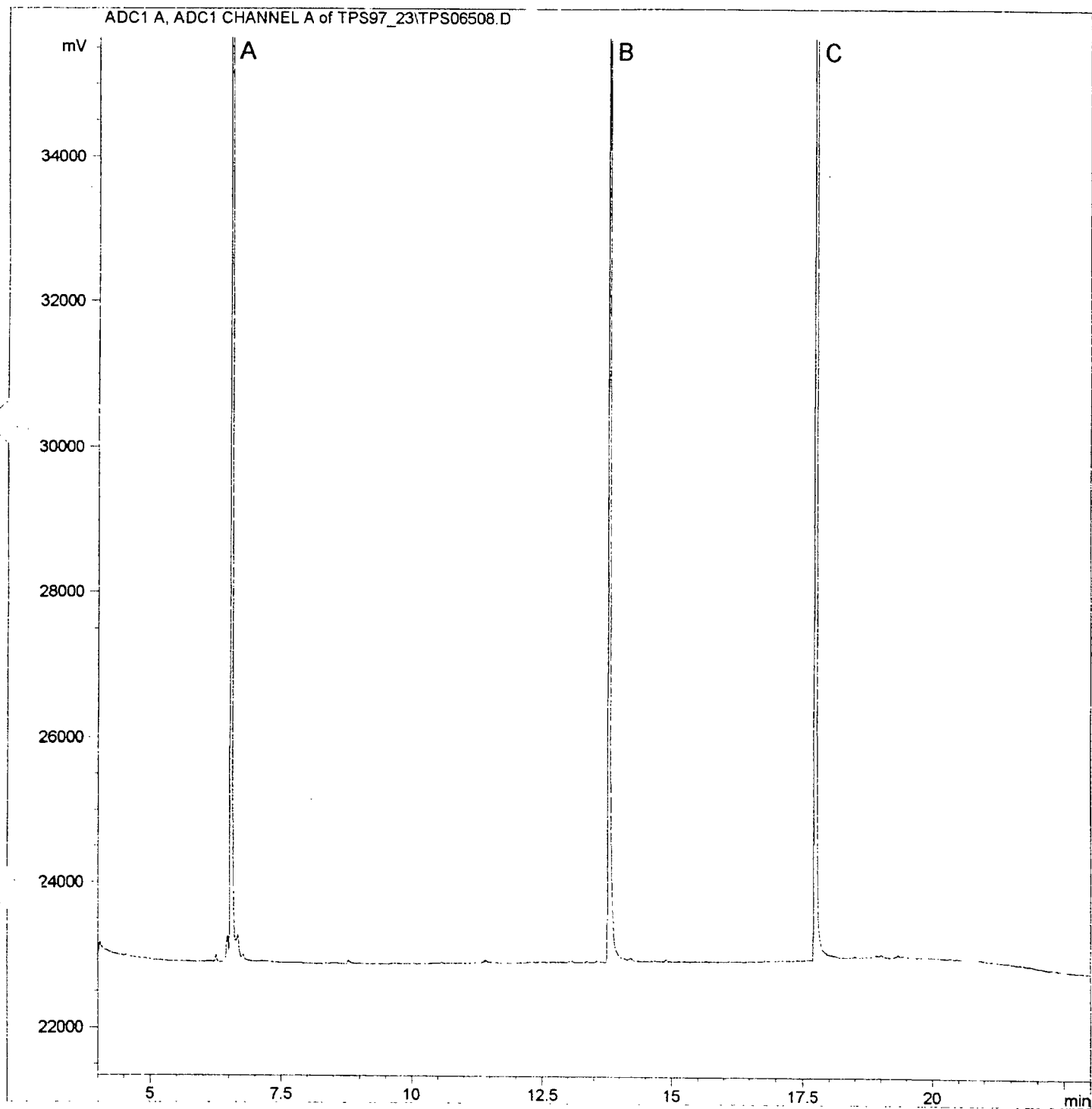
Sample number	Sample Identity	Depth	Total Soluble Extract (mg/litre)	Diesel Range Hydrocarbons (µg/litre)	Interpretation
090	SPRING D	-	<1	17	No Identification Possible
095	SPRING L	-	<1	31	No Identification Possible
100	SPRING M	-	<1	< 10	No Identification Possible
154	SPRING B	-	1	< 10	No Identification Possible
159	SPRING C2	-	1	24	No Identification Possible
164	SPRING G1	-	1	< 10	No Identification Possible
169	SPRING P1	-	1	< 10	No Identification Possible
174	SPRING R2	-	2	< 10	No Identification Possible
294	BH 3B	-	3	< 10	No Identification Possible
363	BH 1A	-	3	< 10	No Identification Possible
368	BH 1B	-	2	< 10	No Identification Possible
369	BH 1B(bailed)	-	2	< 10	No Identification Possible
374	BH 2	-	2	77	No Identification Possible
379	BH 3A	-	2	< 10	No Identification Possible
384	BH 4	-	<1	< 10	No Identification Possible
385	BH 4(bailed)	-	<1	< 10	No Identification Possible
390	BH 5	-	1	10	No Identification Possible
391	BH 5(bailed)	-	<1	< 10	No Identification Possible
396	BH 6	-	<1	17	No Identification Possible
401	BH 7	-	<1	< 10	No Identification Possible

Checked by [REDACTED]



GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

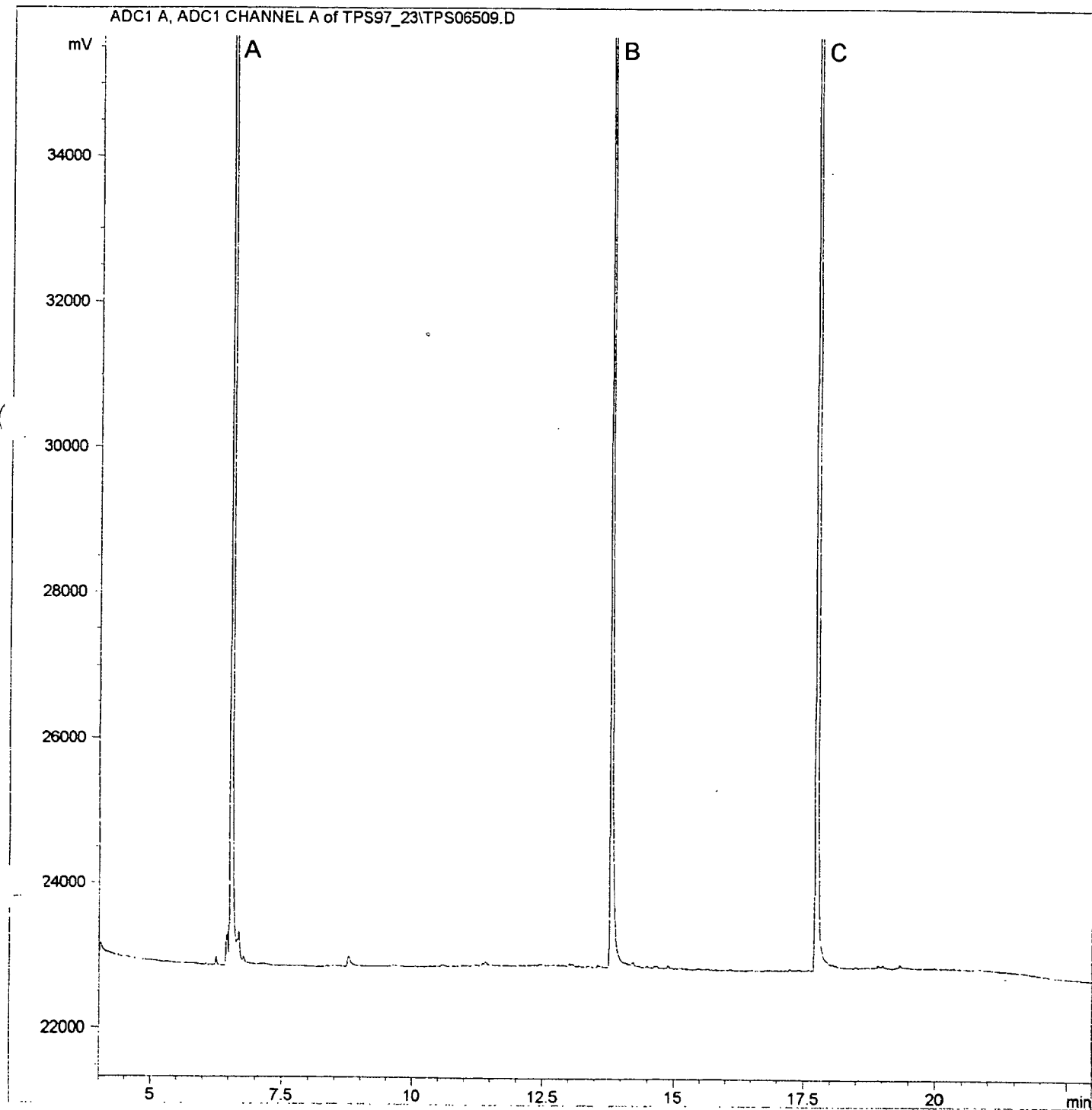
1023-294





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

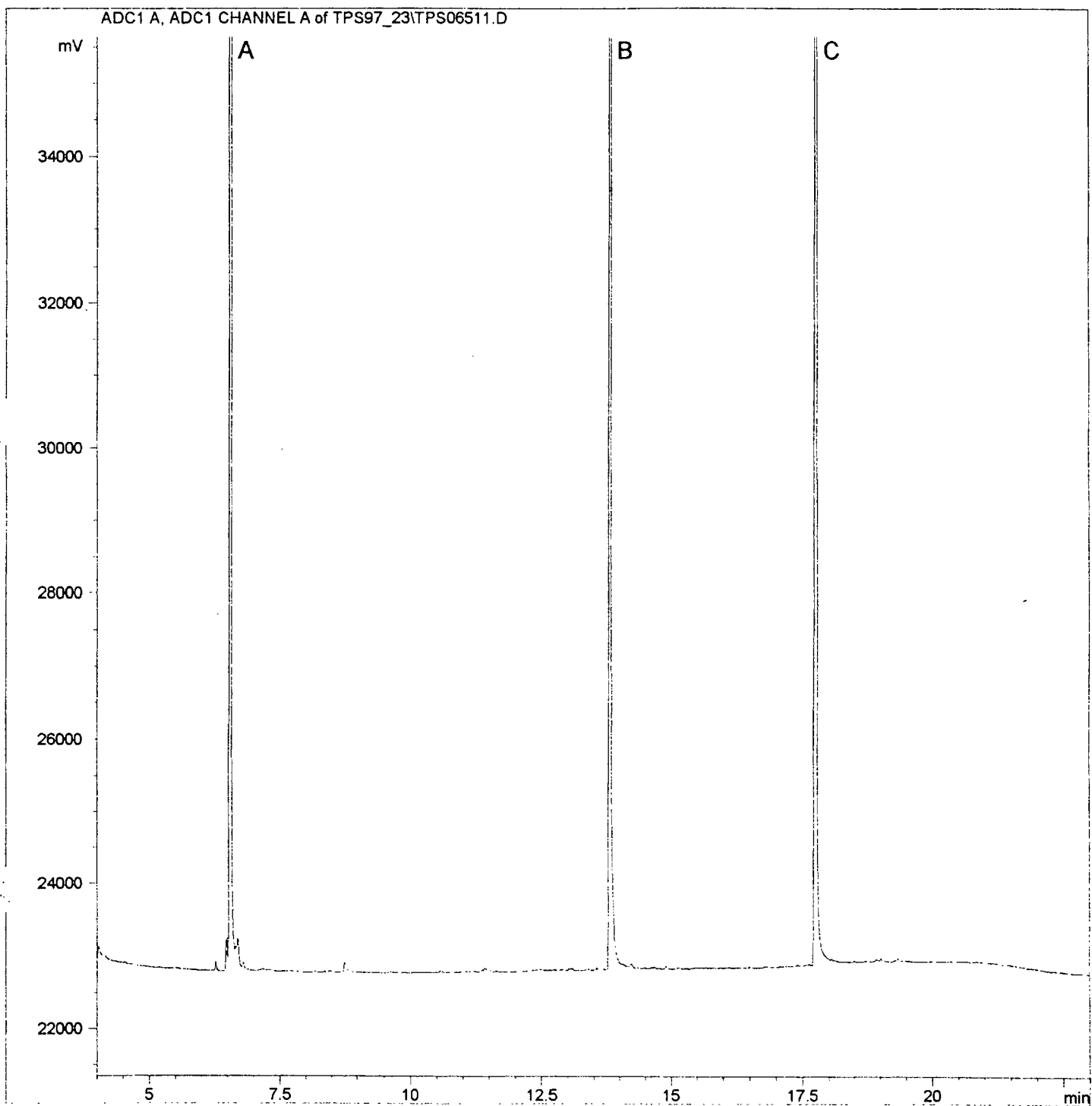
1023-363





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

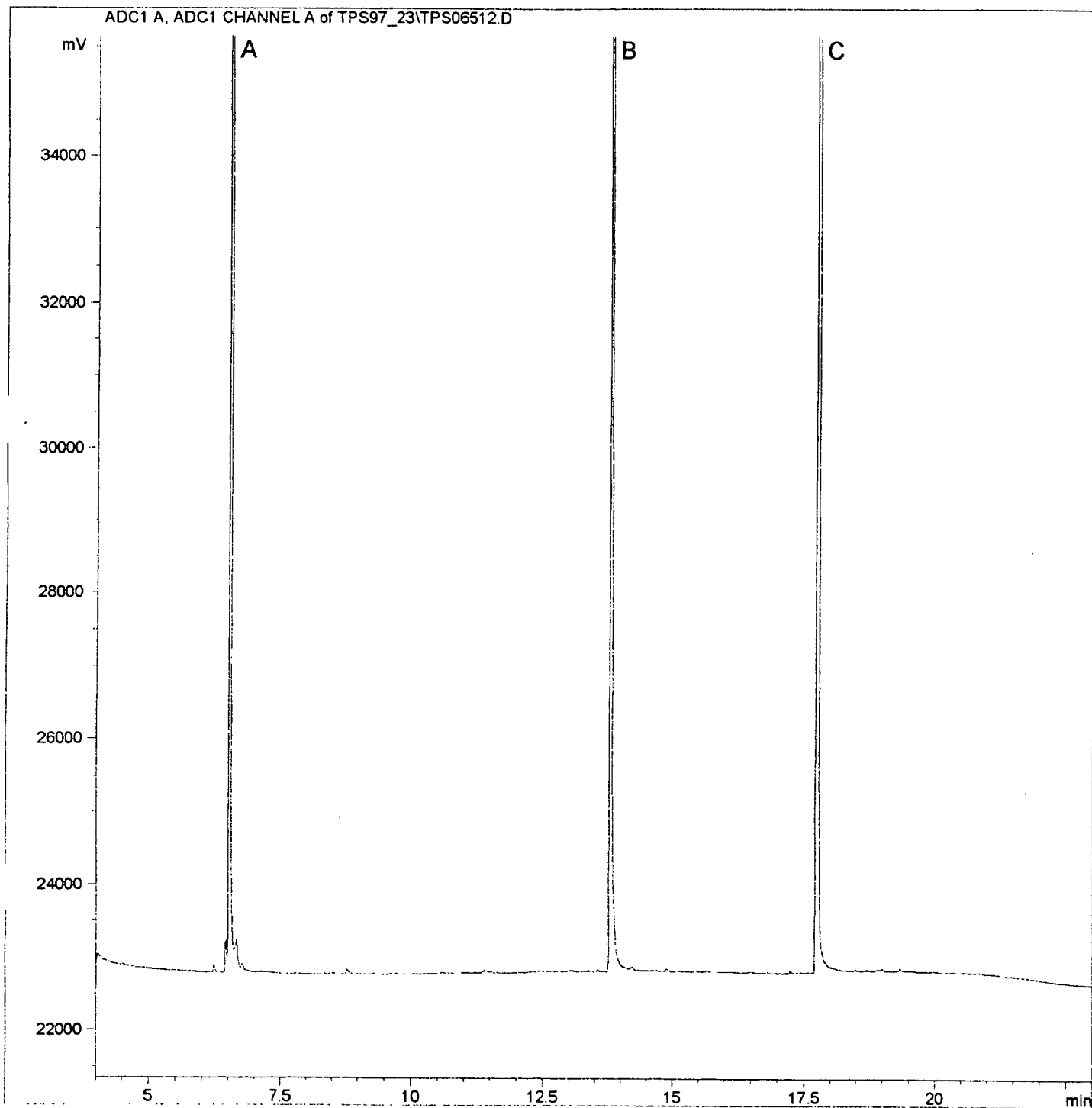
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GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

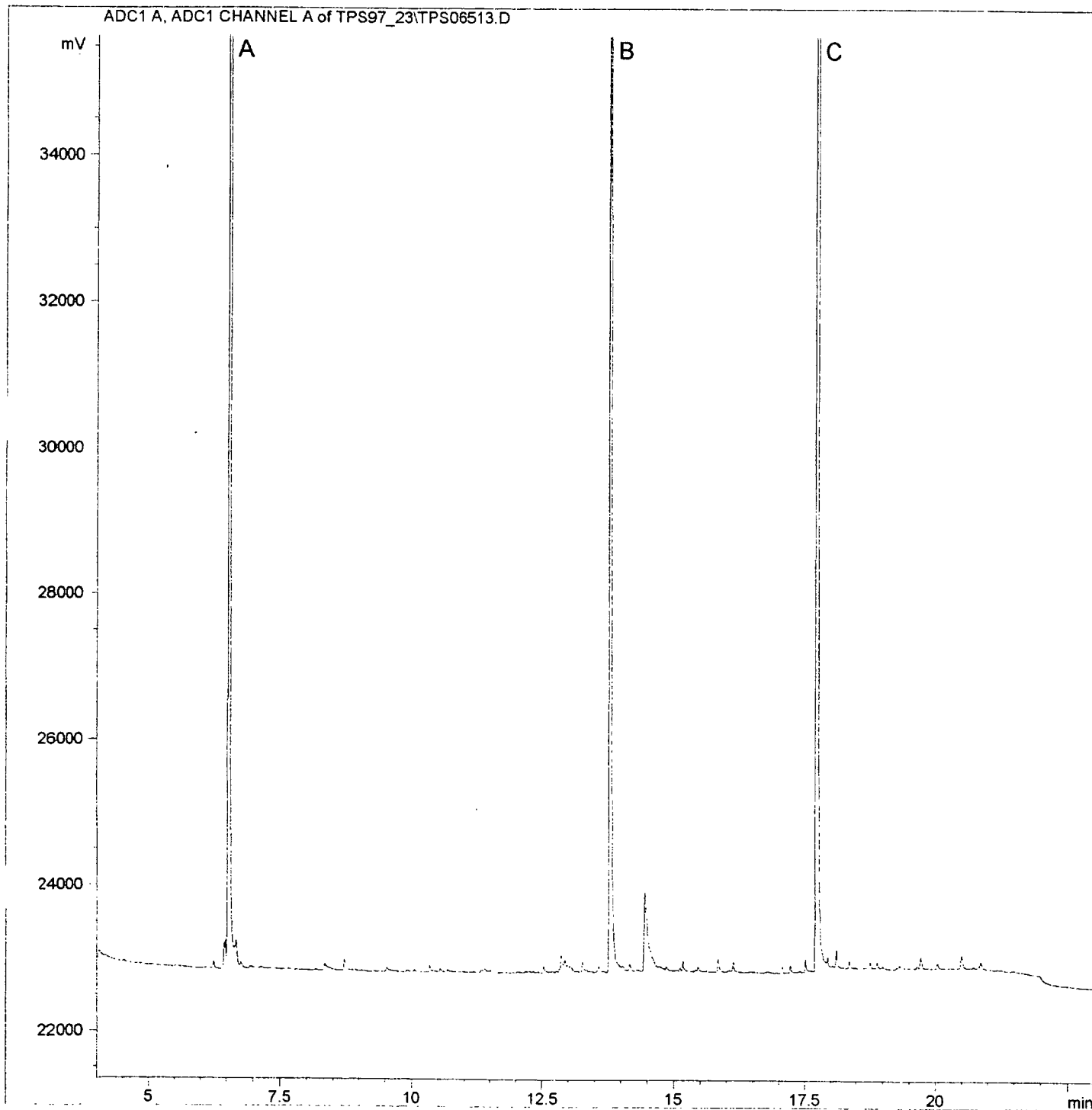
1023-369





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

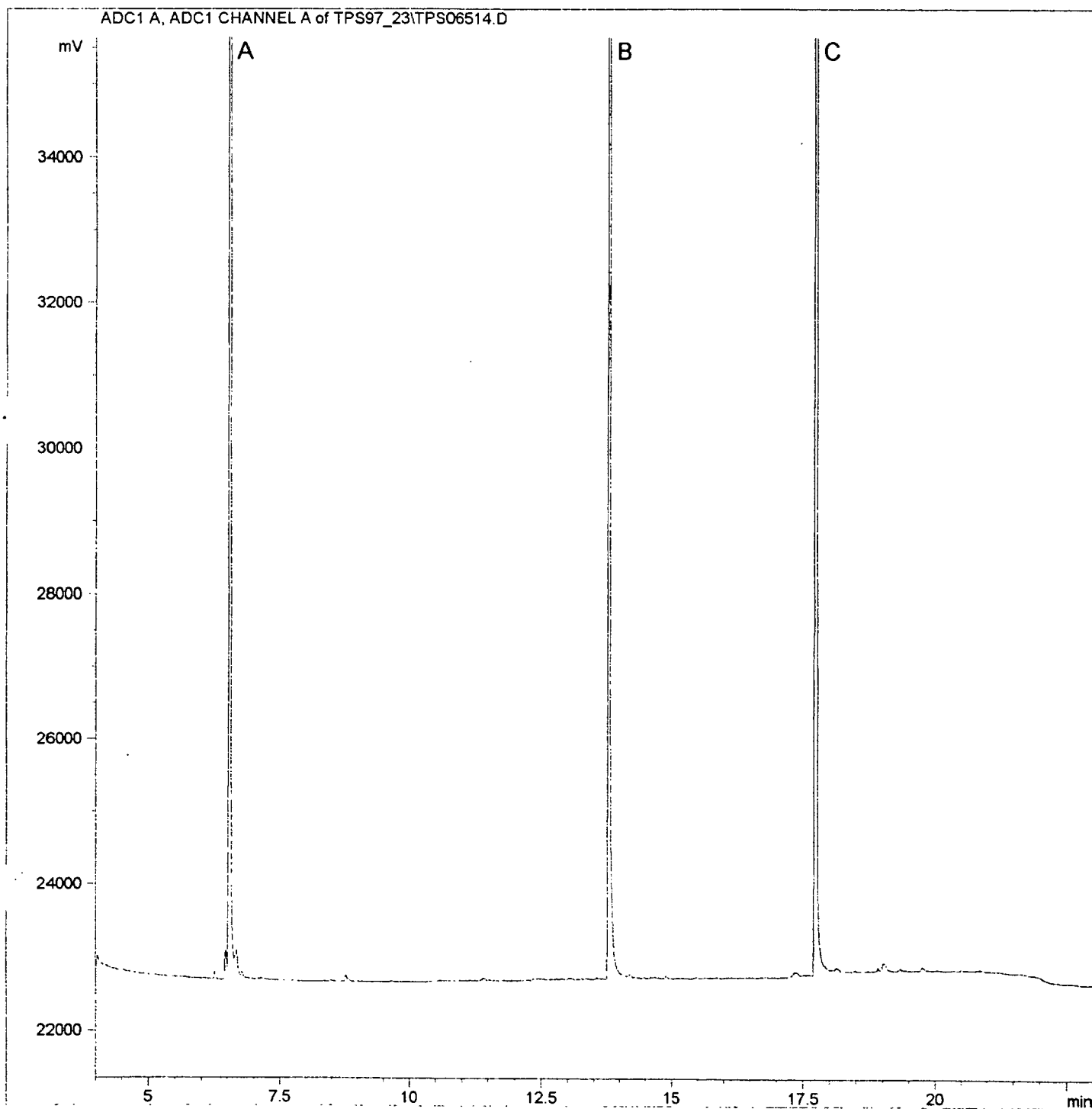
1023-374





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

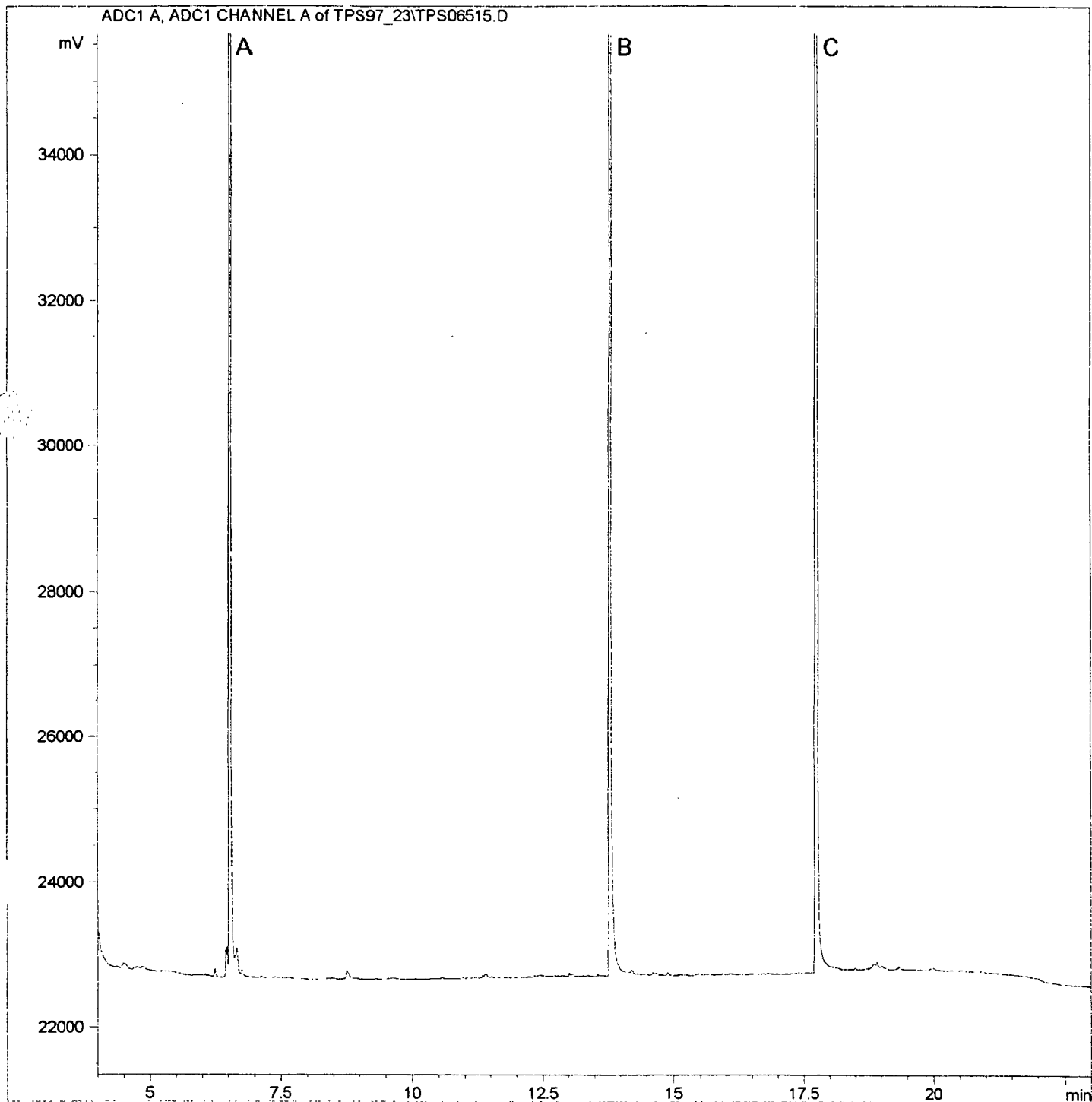
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GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

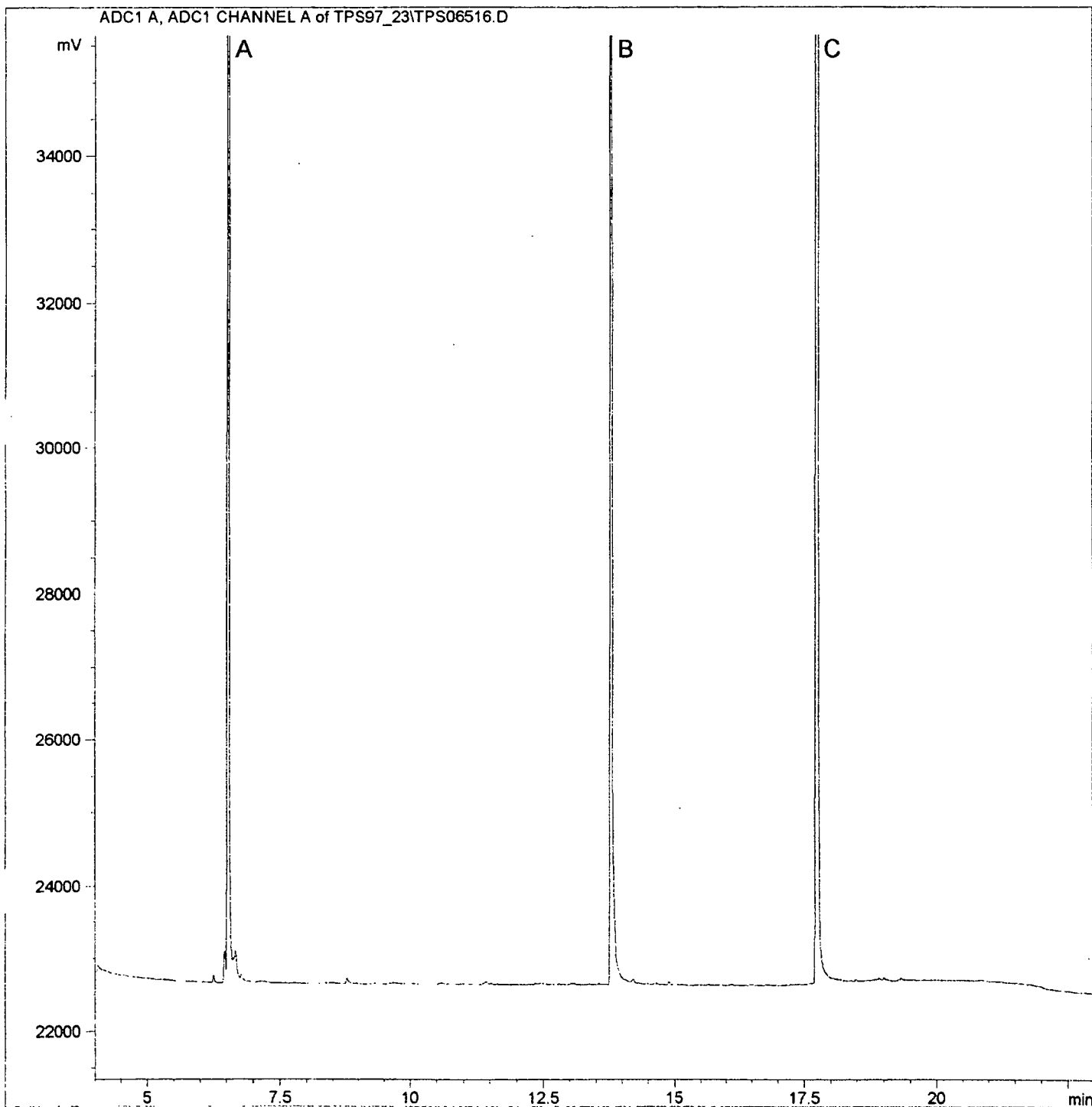
1023-384





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

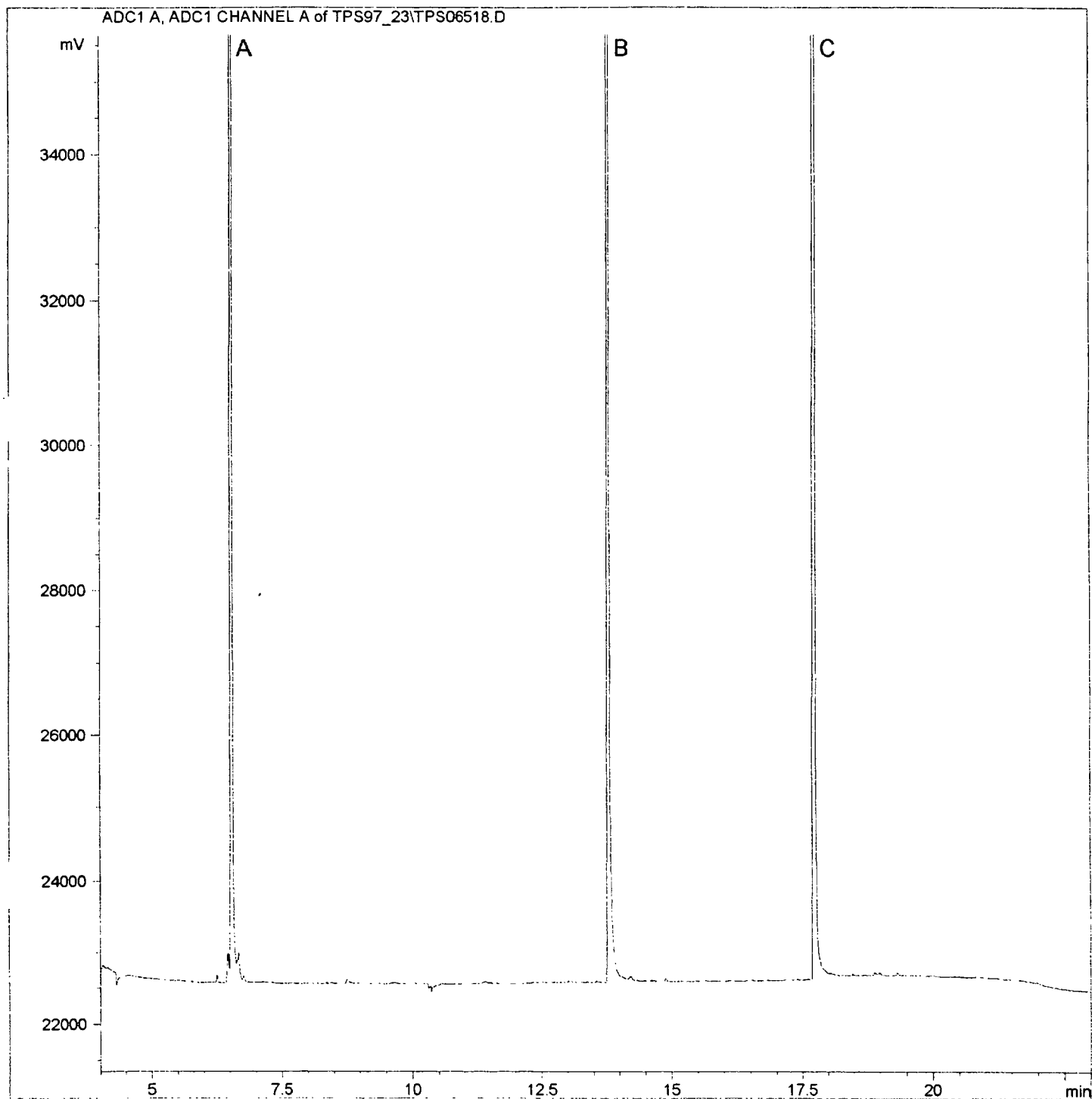
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GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

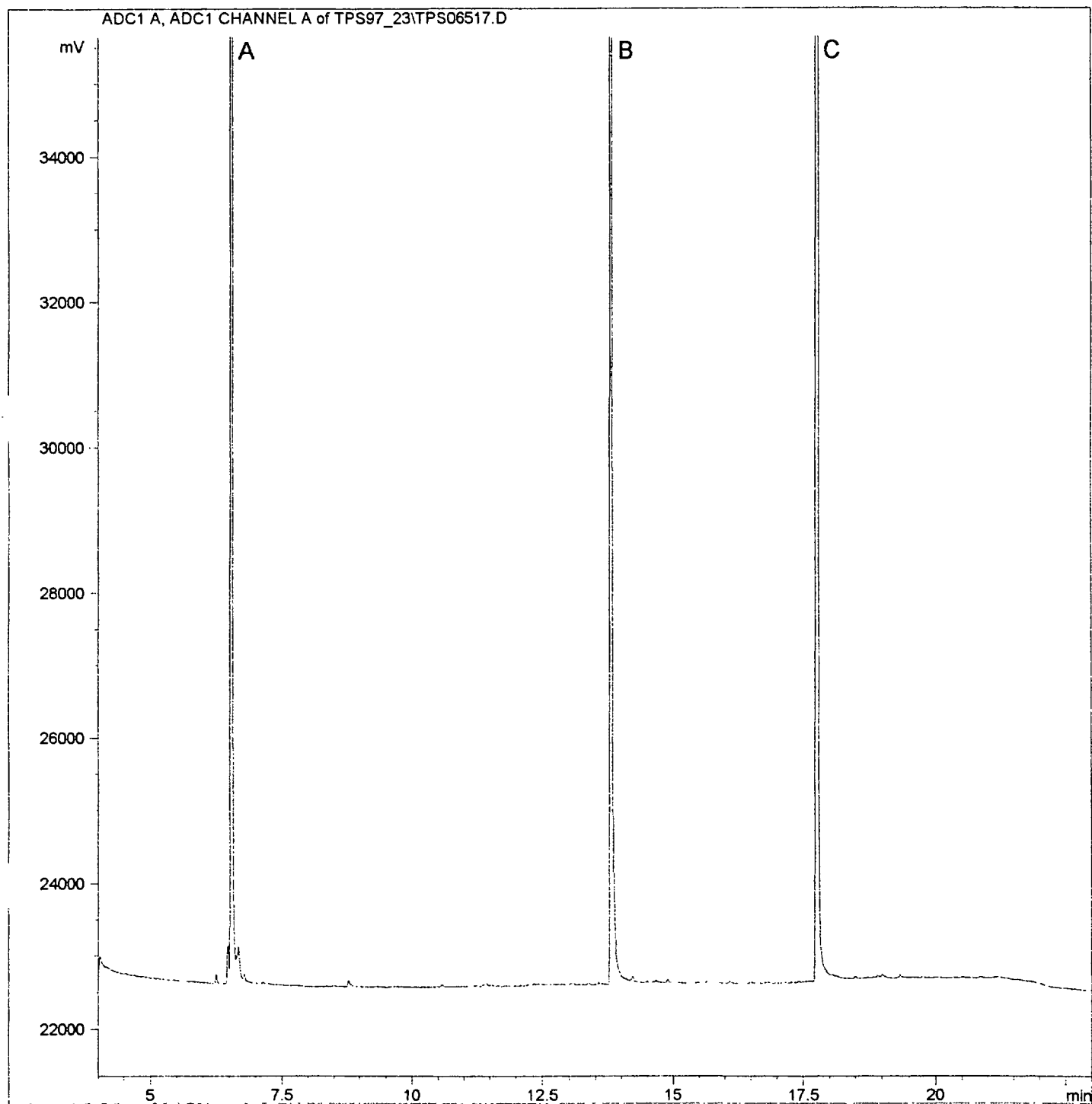
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GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

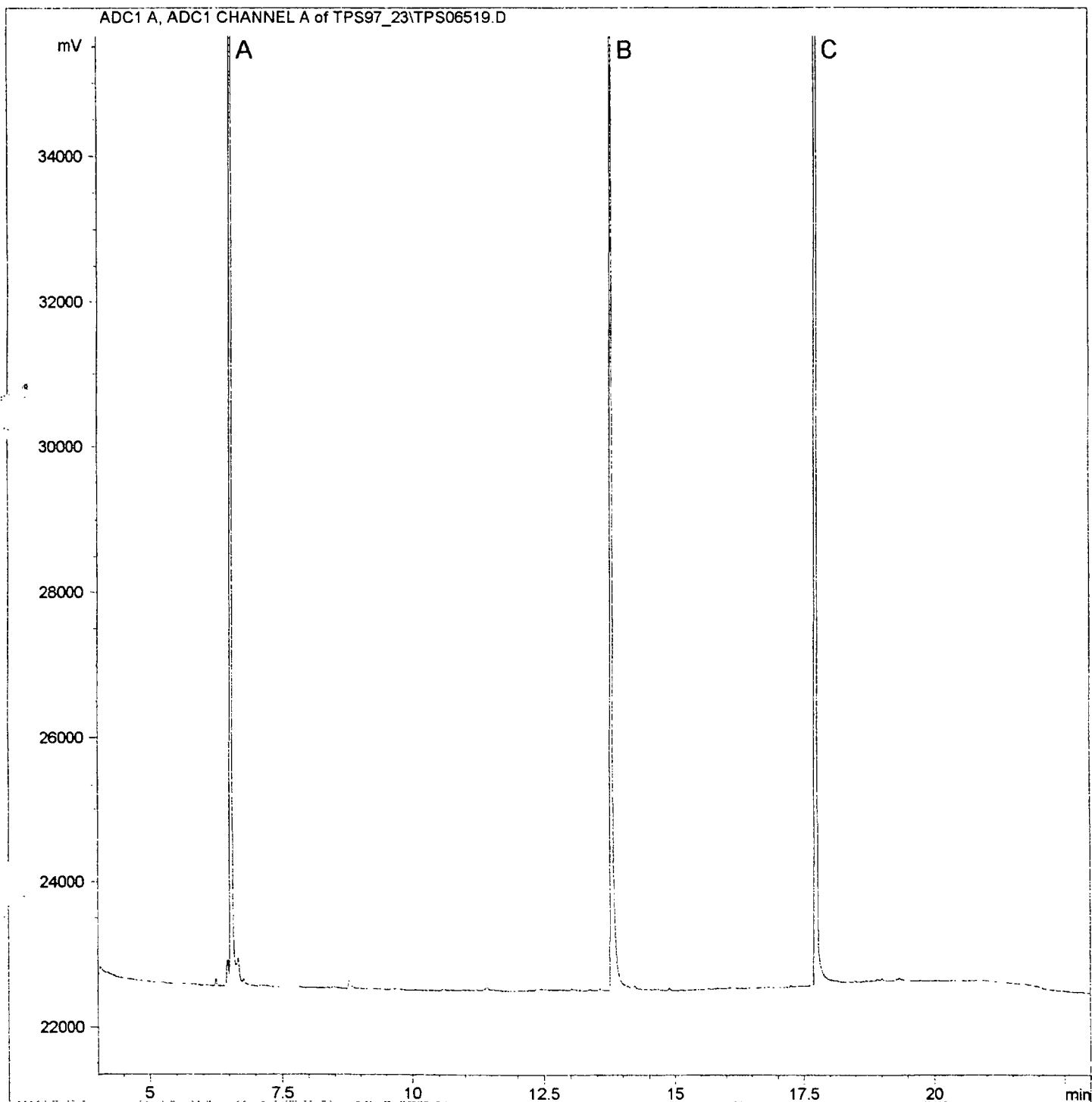
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GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

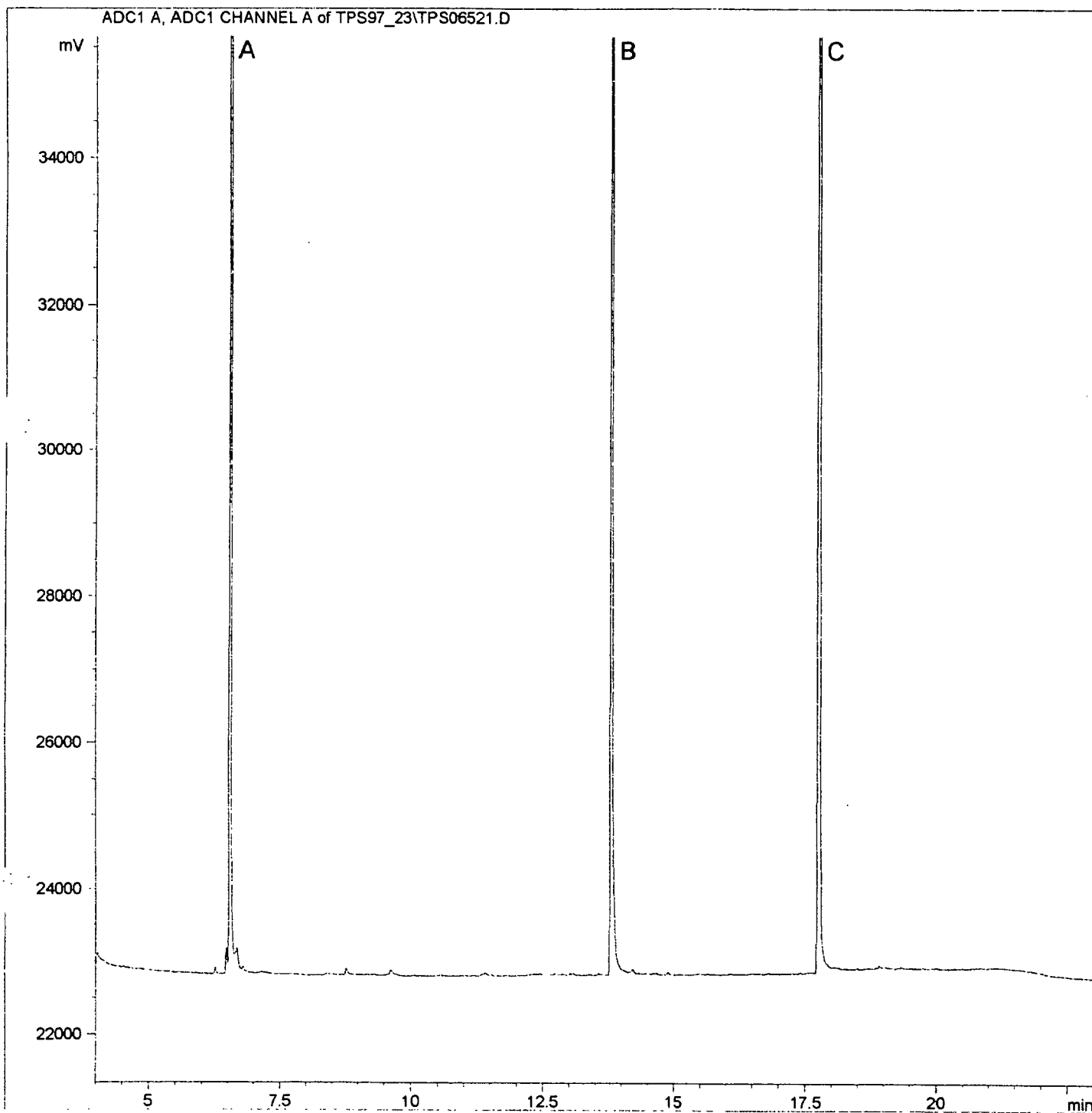
1023-396





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

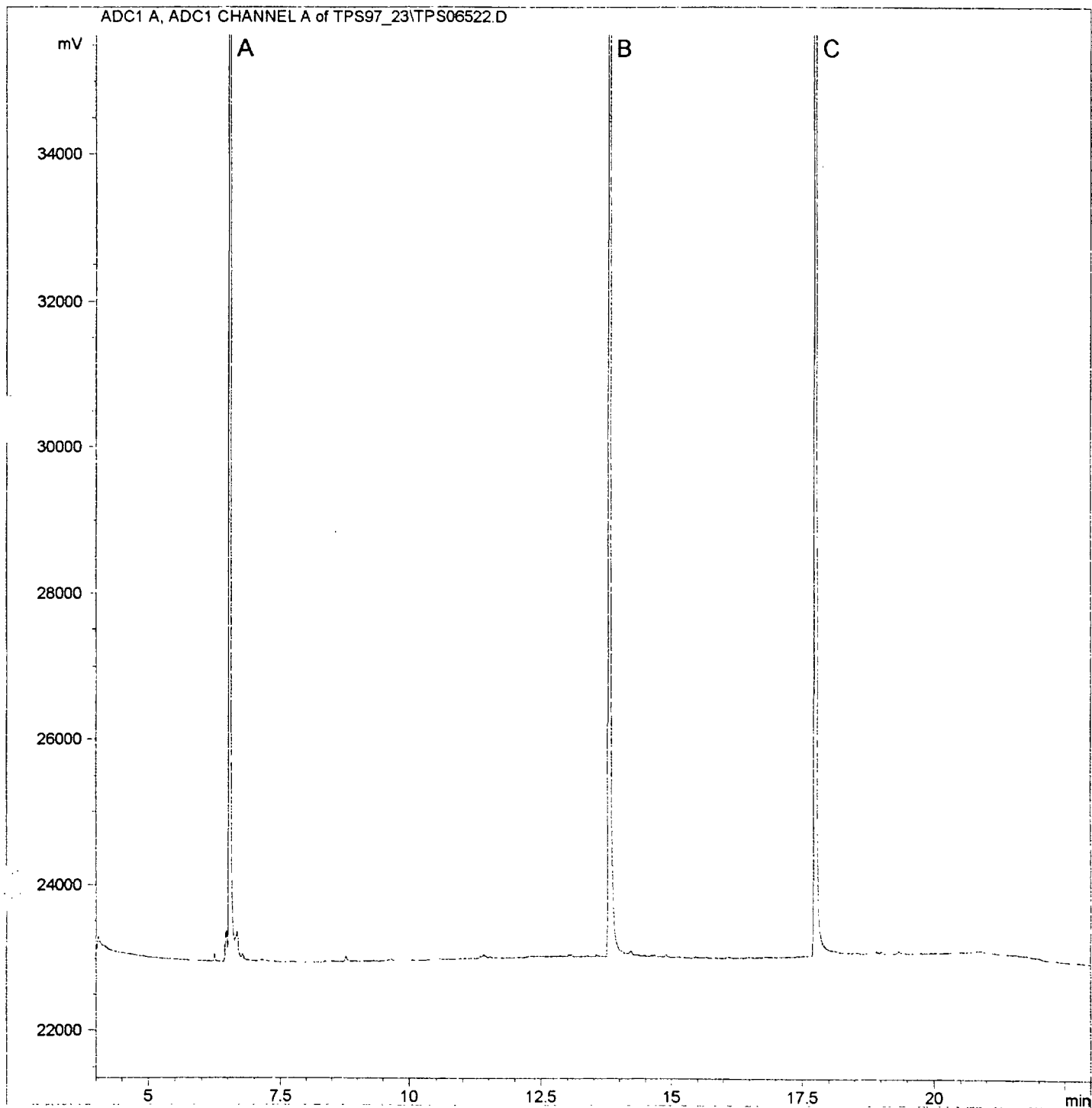
1023-401





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

1023-402



Appendix

9

Results of Chemical Testing - Springs



CHEM ANALYTICAL SERVICE
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER
Location : RAF UPPER HEYFORD
Client Contact : S.HOBBS
Client Ref. No. : MD3333A



☐ Preliminary
☒ Validated

☐ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	TLC	TLC	TLC	TLC
Detection Limits	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<1	<1	<1	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Boron	Calcium	Cadmium	Chromium	Copper	Mercury	Magnesium	Nickel	Lead	Selenium	Zinc	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH by TLC
90	SPRING D	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	>1	>1	>1	>1
91	SPRING D	UNKNOWN	<0.05	<0.05	298.00	<0.05	<0.05	<0.05	<0.05	3.69	<0.05	<0.05	<0.1	<0.05	-	-	-	-
92	SPRING D	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93	SPRING D	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94	SPRING D	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	SPRING L	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
96	SPRING L	UNKNOWN	<0.05	<0.05	184.00	<0.05	<0.05	<0.05	<0.05	2.96	<0.05	<0.05	<0.1	<0.05	-	-	-	-
97	SPRING L	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98	SPRING L	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
99	SPRING L	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	SPRING M	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
101	SPRING M	UNKNOWN	<0.05	<0.05	177.00	<0.05	<0.05	<0.05	<0.05	2.05	<0.05	<0.05	<0.1	<0.05	-	-	-	-
102	SPRING M	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
103	SPRING M	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
104	SPRING M	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
154	SPRING B	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	1	<1
155	SPRING B	UNKNOWN	<0.05	<0.05	173.00	<0.05	<0.05	<0.05	<0.05	2.28	<0.05	<0.05	<0.1	<0.05	-	-	-	-
156	SPRING B	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
157	SPRING B	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
158	SPRING B	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



GEOCHEM ANALYTICAL SERVICE
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER
Location : RAF UPPER HEYFORD
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☒ Validated
☒ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	TLC	TLC	TLC	TLC
Detection Limits	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<1	<1	<1	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Boron	Calcium	Cadmium	Chromium	Copper	Mercury	Magnesium	Nickel	Lead	Selenium	Zinc	Min Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC
159	SPRING C2	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	1	<1
160	SPRING C2	UNKNOWN	<0.05	<0.05	228.00	<0.05	<0.05	<0.05	<0.05	2.95	<0.05	<0.05	<0.1	<0.05	-	-	-	-
161	SPRING C2	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
162	SPRING C2	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
163	SPRING C2	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
164	SPRING G1	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	1	<1
165	SPRING G1	UNKNOWN	<0.05	<0.05	248.00	<0.05	<0.05	<0.05	<0.05	3.33	<0.05	<0.05	<0.1	<0.05	-	-	-	-
166	SPRING G1	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
167	SPRING G1	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
168	SPRING G1	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
169	SPRING P1	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	1	<1
170	SPRING P1	UNKNOWN	<0.05	<0.05	215.00	<0.05	<0.05	<0.05	<0.05	3.72	<0.05	<0.05	<0.1	<0.05	-	-	-	-
171	SPRING P1	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
172	SPRING P1	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
173	SPRING P1	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
174	SPRING R2	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	2	<1
175	SPRING R2	UNKNOWN	<0.05	<0.05	246.00	<0.05	<0.05	<0.05	<0.05	3.19	<0.05	<0.05	<0.1	<0.05	-	-	-	-
176	SPRING R2	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
177	SPRING R2	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
178	SPRING R2	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



JOCHEM ANALYTICAL SERVICE
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER
Location : RAF UPPER HEYFORD
Client Contact :
Client Ref. No. : MD3333A



- ☐ Preliminary
☒ Validated
☐ NAMAS Accredited

Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	TLC	TLC	TLC	TLC
Detection Limits	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<1	<1	<1	<1

Sample Number	Sample Identity	Depth (m)	Arsenic	Boron	Calcium	Cadmium	Chromium	Copper	Mercury	Magnesium	Nickel	Lead	Selenium	Zinc	Min. Oil / Paraffin	Total Non-Volatile Aromatics	NSO / Resins	TPH By TLC
407	SPRING B	SURFACE	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
408	SPRING D	SURFACE	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
409	SPRING I	SURFACE	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1
410	SPRING I	SURFACE	<0.05	<0.05	57.53	<0.05	<0.05	<0.05	<0.05	1.37	<0.05	0.07	<0.1	0.10	-	-	-	-
411	SPRING I	SURFACE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



JCHEM ANALYTICAL SERVICE
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER
Location : RAF UPPER HEYFORD
Client Contact : [REDACTED]
Client Ref. No. : MD3333A



☐ Preliminary
☒ Validated

☐ NAMAS Accredited

		Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ms/cm	ppm(CaCO ₃)	ppm	
Detection Method		Spectro	ATU	Colour	Flame P	Flame P	Gravi	IR	KONE	KONE	KONE	KONE	Meter	Meter	Titrat	Titre	
Detection Limits		<10	<0.5	<0.01	<3	<3	<1	<1	<5	<0.5	<0.01	<3	<0.004	<0.01	<1	<1	
Sample Number	Sample Identity	Depth (m)	COD On Unfiltered Sample	BOD in unfiltered water	Ammoniacal Nitrogen in Water	Potassium	Sodium	DCMM/COH Extract	Tot. Org. Carbon in Water	Chloride (soluble)	Nitrate (soluble)	Phosphate (soluble)	Sulphate (soluble)	Electrical Conductivity	pH Value in Water	Alkalinity Total	Bicarbonate
90	SPRING D	UNKNOWN	-	-	-	-	-	.53	3	-	-	-	-	-	-	-	-
91	SPRING D	UNKNOWN	-	-	-	10	18	-	-	54	97.2	<0.01	69	0.919	7.79	300	300
92	SPRING D	UNKNOWN	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-
93	SPRING D	UNKNOWN	<10	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
94	SPRING D	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	SPRING L	UNKNOWN	-	-	-	-	-	.33	3	-	-	-	-	-	-	-	-
96	SPRING L	UNKNOWN	-	-	-	<3	20	-	-	64	3.8	0.07	27	0.654	7.76	260	260
97	SPRING L	UNKNOWN	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-
98	SPRING L	UNKNOWN	<10	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
99	SPRING L	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	SPRING M	UNKNOWN	-	-	-	-	-	.46	3	-	-	-	-	-	-	-	-
101	SPRING M	UNKNOWN	-	-	-	<3	16	-	-	35	31.0	0.01	47	0.667	7.36	250	250
102	SPRING M	UNKNOWN	-	-	0.09	-	-	-	-	-	-	-	-	-	-	-	-
103	SPRING M	UNKNOWN	<10	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
104	SPRING M	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
154	SPRING B	UNKNOWN	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-
155	SPRING B	UNKNOWN	-	-	-	<3	16	-	-	25	27.5	0.02	44	0.685	7.52	300	300
156	SPRING B	UNKNOWN	-	-	0.49	-	-	-	-	-	-	-	-	-	-	-	-
157	SPRING B	UNKNOWN	<10	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
158	SPRING B	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



()CHEM ANALYTICAL SERVICE
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER
Location : RAF UPPER HEYFORD
Client Contact :
Client Ref. No. : MD3333A



☐ Preliminary
☒ Validated
☐ NAMES Accredited

Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ms/cm	ppm(CaCO ₃)		ppm	
Detection Method		Spectro	ATU	Colour	Flame P	Flame P	Gravi	IR	KONE	KONE	KONE	KONE	Meter	Meter	Titrat	Titre	
Detection Limits		<10	<0.5	<0.01	<3	<3	<1	<1	<5	<0.5	<0.01	<3	<0.004	<0.01	<1	<1	
Sample Number	Sample Identity	Depth (m)	COD On Unfiltered Sample	BOD in unfiltered water	Ammoniacal Nitrogen in Water	Potassium	Sodium	DCM/MeOH Extract	Tot. Org. Carbon in Water	Chloride (soluble)	Nitrate (soluble)	Phosphate (soluble)	Sulphate (soluble)	Electrical Conductivity	pH Value in Water	Alkalinity Total	Bicarbonate
159	SPRING C2	UNKNOWN	-	-	-	-	-	1	3	-	-	-	-	-	-	-	-
160	SPRING C2	UNKNOWN	-	-	-	<3	24	-	-	59	119.1	0.02	35	0.858	7.72	233	233
161	SPRING C2	UNKNOWN	-	-	0.95	-	-	-	-	-	-	-	-	-	-	-	-
162	SPRING C2	UNKNOWN	<10	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
163	SPRING C2	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
164	SPRING G1	UNKNOWN	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-
165	SPRING G1	UNKNOWN	-	-	-	<3	15	-	-	28	30.1	0.02	71	0.791	7.83	400	400
166	SPRING G1	UNKNOWN	-	-	0.61	-	-	-	-	-	-	-	-	-	-	-	-
167	SPRING G1	UNKNOWN	<10	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
168	SPRING G1	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
169	SPRING P1	UNKNOWN	-	-	-	-	-	1	3	-	-	-	-	-	-	-	-
170	SPRING P1	UNKNOWN	-	-	-	8	22	-	-	34	36.0	0.02	77	0.796	7.94	367	367
171	SPRING P1	UNKNOWN	-	-	0.08	-	-	-	-	-	-	-	-	-	-	-	-
172	SPRING P1	UNKNOWN	<10	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
173	SPRING P1	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
174	SPRING R2	UNKNOWN	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-
175	SPRING R2	UNKNOWN	-	-	-	<3	12	-	-	18	17.1	<0.01	69	0.798	7.32	433	433
176	SPRING R2	UNKNOWN	-	-	0.18	-	-	-	-	-	-	-	-	-	-	-	-
177	SPRING R2	UNKNOWN	<10	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
178	SPRING R2	UNKNOWN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



JOCHEM ANALYTICAL SERVICE
TABLE OF RESULTS

Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER
Location : RAF UPPER HEYFORD
Client Contact :
Client Ref. No. : MD3333A



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Units		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ms/cm	ppm(CaCO ₃)	ppm	
Detection Method		Spectro	ATU	Colour	Flame P	Flame P	Gravi	IR	KONE	KONE	KONE	KONE	KONE	Meter	Meter	Titrat	Titre
Detection Limits		<10	<0.5	<0.01	<3	<3	<1	<1	<5	<0.5	<0.01	<3	<0.004	<0.01	<1	<1	
Sample Number	Sample Identity	Depth (m)	COD on Unfiltered Sample	BOD in unfiltered water	Ammoniacal Nitrogen in Water	Potassium	Sodium	DCM/MeOH Extract	Tot. Org. Carbon in Water	Chloride (soluble)	Nitrate (soluble)	Phosphate (soluble)	Sulphate (soluble)	Electrical Conductivity	pH Value in Water	Alkalinity Total	Bicarbonate
407	SPRING B	SURFACE	-	-	-	-	-	>1	-	-	-	-	-	-	-	-	-
408	SPRING D	SURFACE	-	-	-	-	-	>1	-	-	-	-	-	-	-	-	-
409	SPRING I	SURFACE	-	-	-	-	-	>1	6	-	-	-	-	-	-	-	-
410	SPRING I	SURFACE	-	-	-	<3	13	-	-	17	4.7	0.04	17	0.362	7.87	550	550
411	SPRING I	SURFACE	-	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-



Job Number : 97/01023/02/01
Client : ASPINWALL & COMPANY
Date of Receipt : 23/04/97
(of first sample)

Sample Type : WATER
Location : RAF UPPER HEYFORD
Client Contact : [REDACTED]
Client Ref. No. : MD3333A



☐ Preliminary
☒ Validated
☐ NAMAS Accredited

[illegible]



Diesel Range Organics
by
G.C.



Client Ref:= MD3333A/2847

Sample Matrix= Water

Job Number:= 97/1023/02/01

Date Sample Received:= 24/4/97

Date Extracted/Prepared:= 6/6/97

Date Analysed:= 7/6/97

Separatory Funnel Ext:= Yes

Soxtec Extraction:= No

Column Extraction:= Yes

Internal Standard:= A :- 2,2,4,4,6,8,8, HEPTAMETHYLNONANE B :- 1-CHLOROCTADECANE C :- SQUALANE

Sample number	Sample Identity	Depth	Total Soluble Extract (mg/litre)	Diesel Range Hydrocarbons (µg/litre)	Interpretation
090	SPRING D	-	<1	17	No Identification Possible
095	SPRING L	-	<1	31	No Identification Possible
100	SPRING M	-	<1	< 10	No Identification Possible
154	SPRING B	-	1	< 10	No Identification Possible
159	SPRING C2	-	1	24	No Identification Possible
164	SPRING G1	-	1	< 10	No Identification Possible
169	SPRING P1	-	1	< 10	No Identification Possible
174	SPRING R2	-	2	< 10	No Identification Possible
294	BH 3B	-	3	< 10	No Identification Possible
363	BH 1A	-	3	< 10	No Identification Possible
368	BH 1B	-	2	< 10	No Identification Possible
369	BH 1B(bailed)	-	2	< 10	No Identification Possible
374	BH 2	-	2	77	No Identification Possible
379	BH 3A	-	2	< 10	No Identification Possible
384	BH 4	-	<1	< 10	No Identification Possible
385	BH 4(bailed)	-	<1	< 10	No Identification Possible
390	BH 5	-	1	10	No Identification Possible
391	BH 5(bailed)	-	<1	< 10	No Identification Possible
396	BH 6	-	<1	17	No Identification Possible
401	BH 7	-	<1	< 10	No Identification Possible

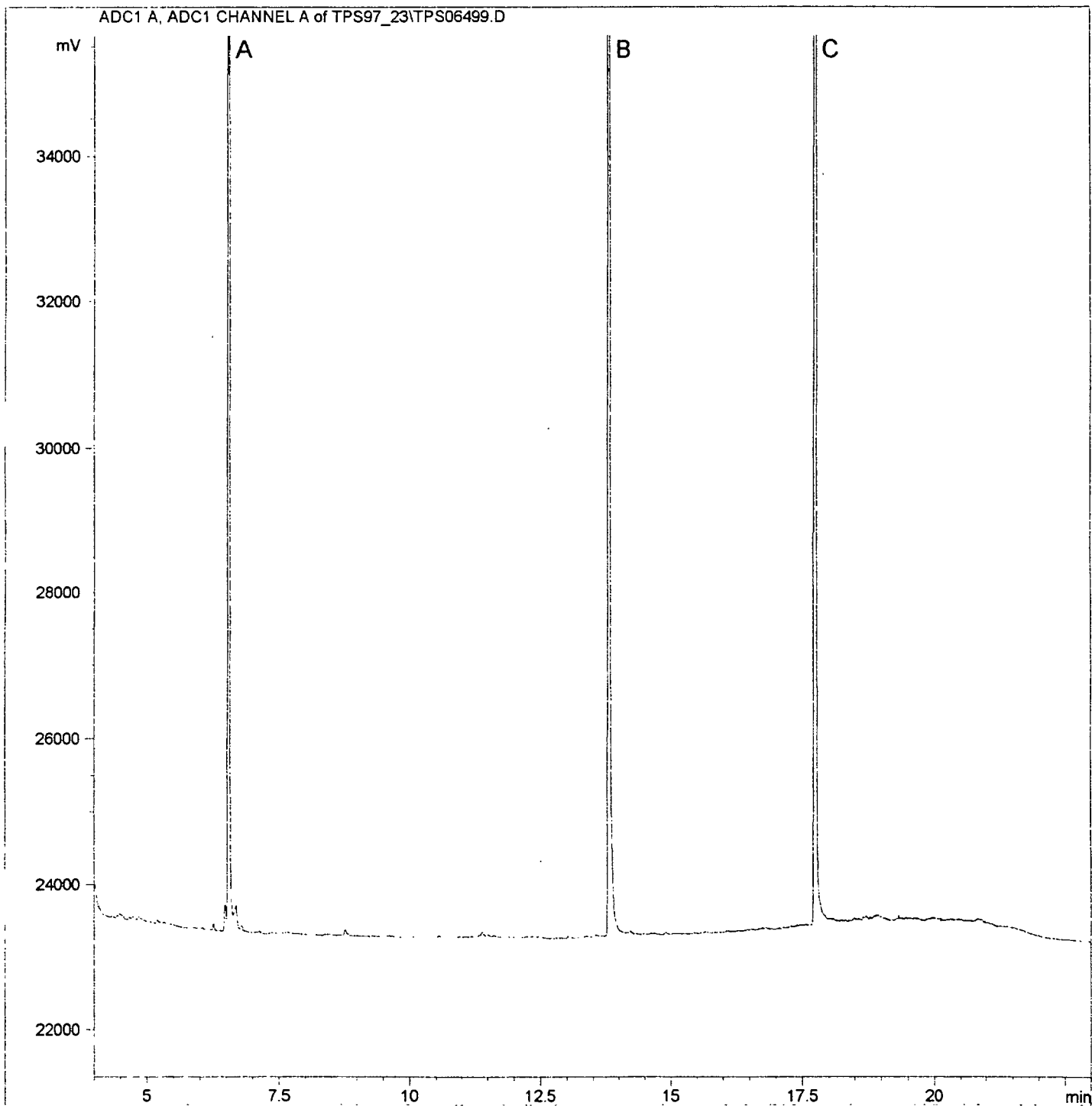
Checked by

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Diesel Range Organics Analysis
By G.C.

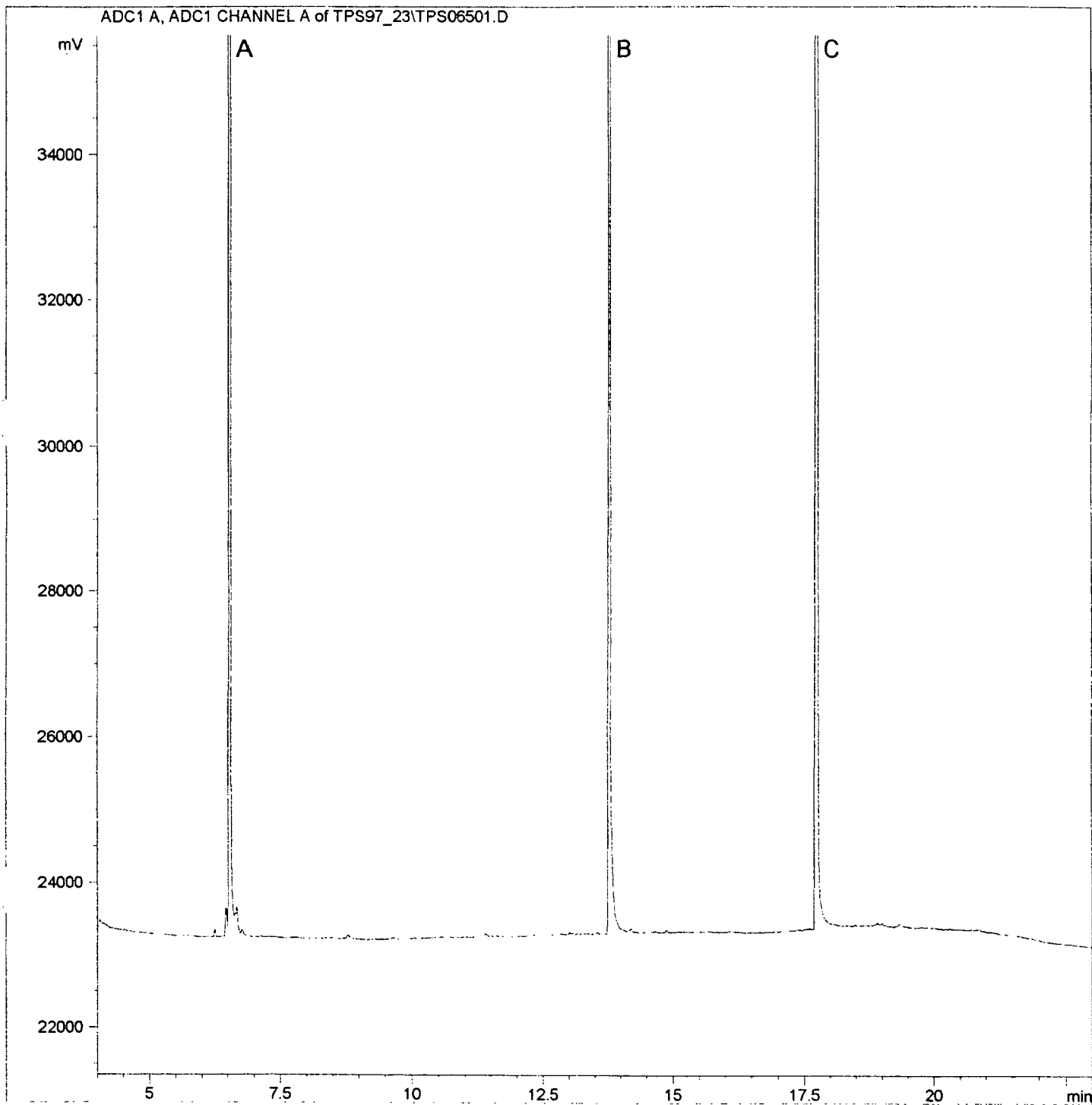
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Diesel Range Organics Analysis
By G.C.

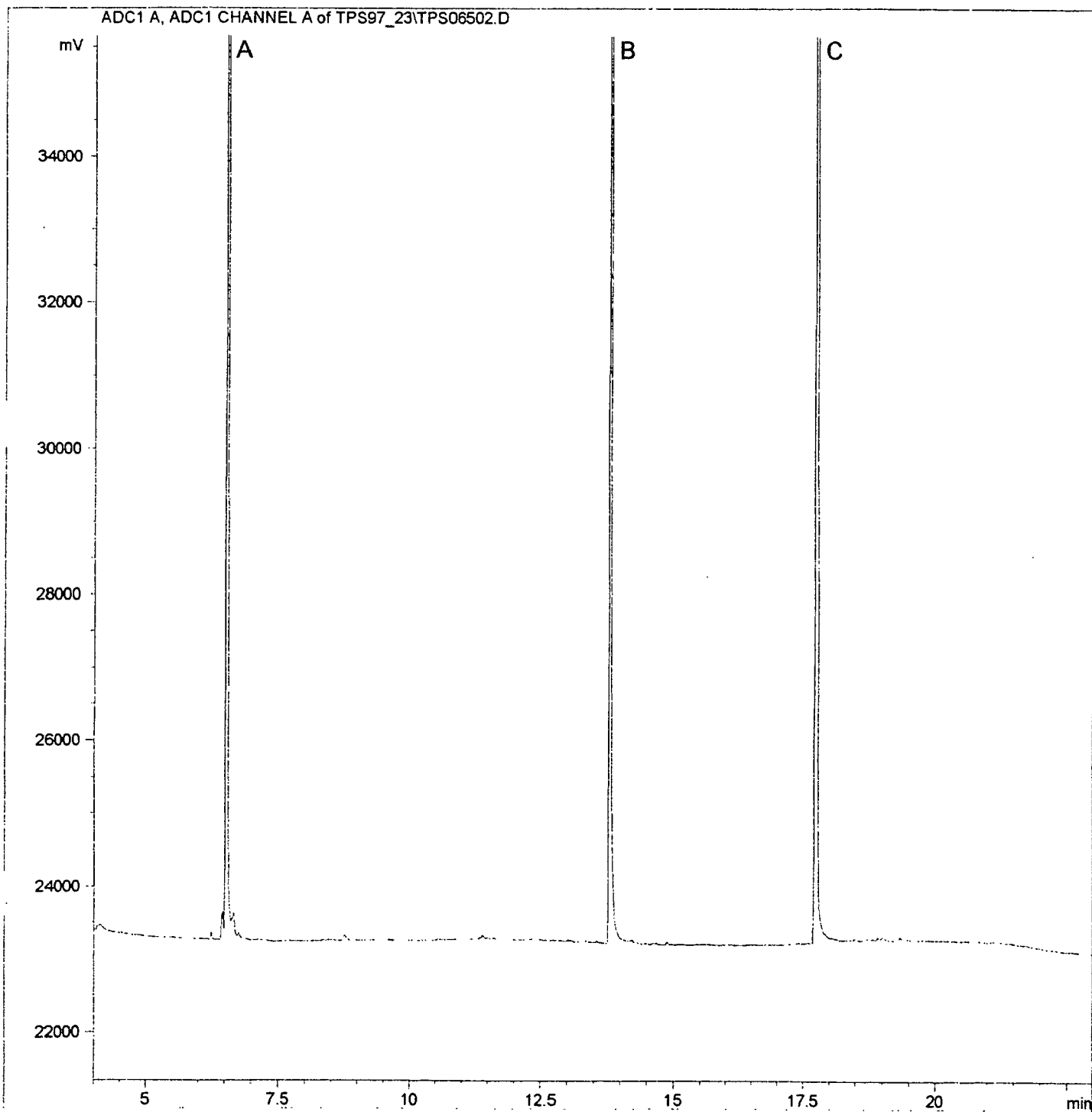
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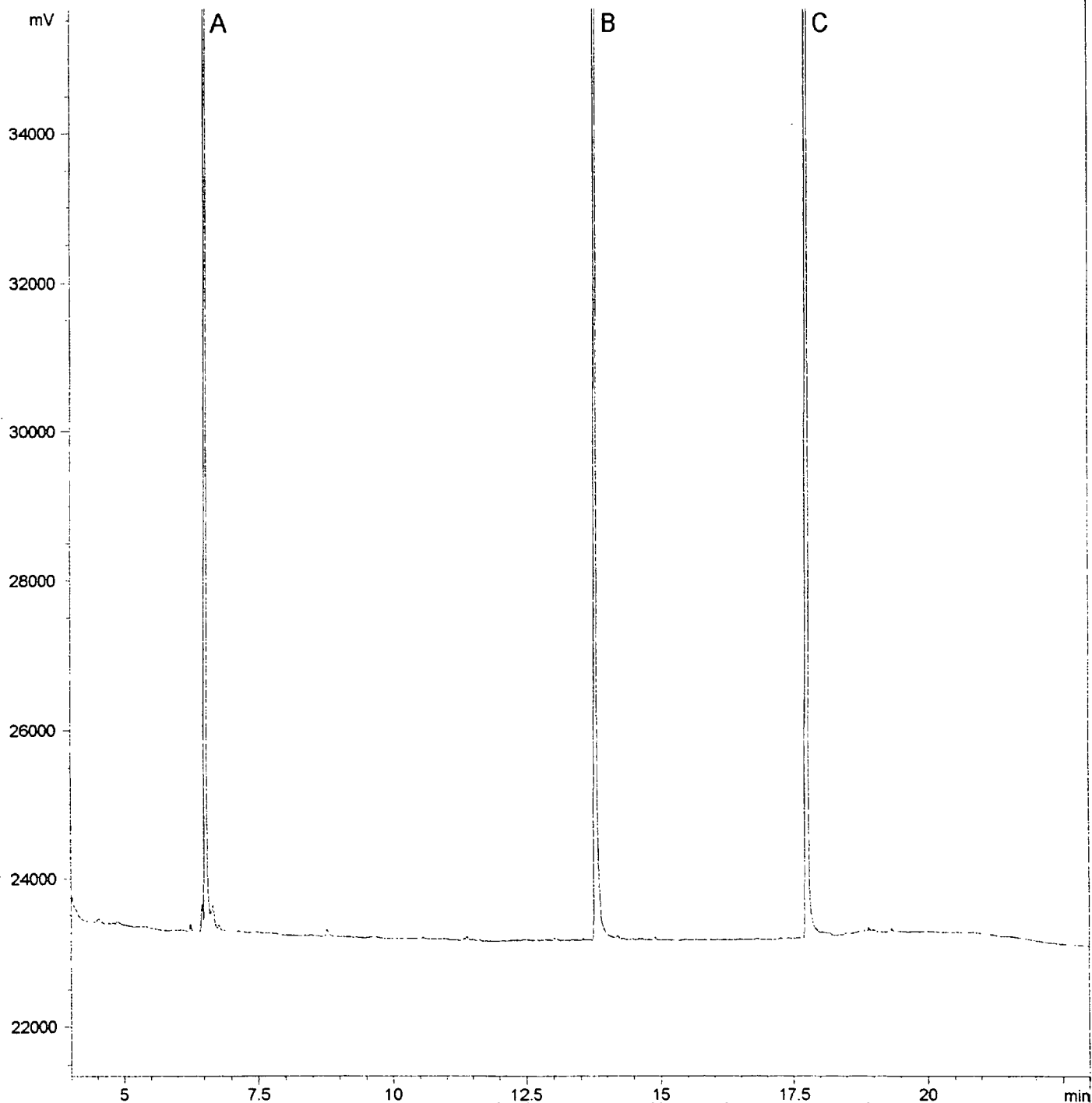
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Diesel Range Organics Analysis
By G.C.

1023-100





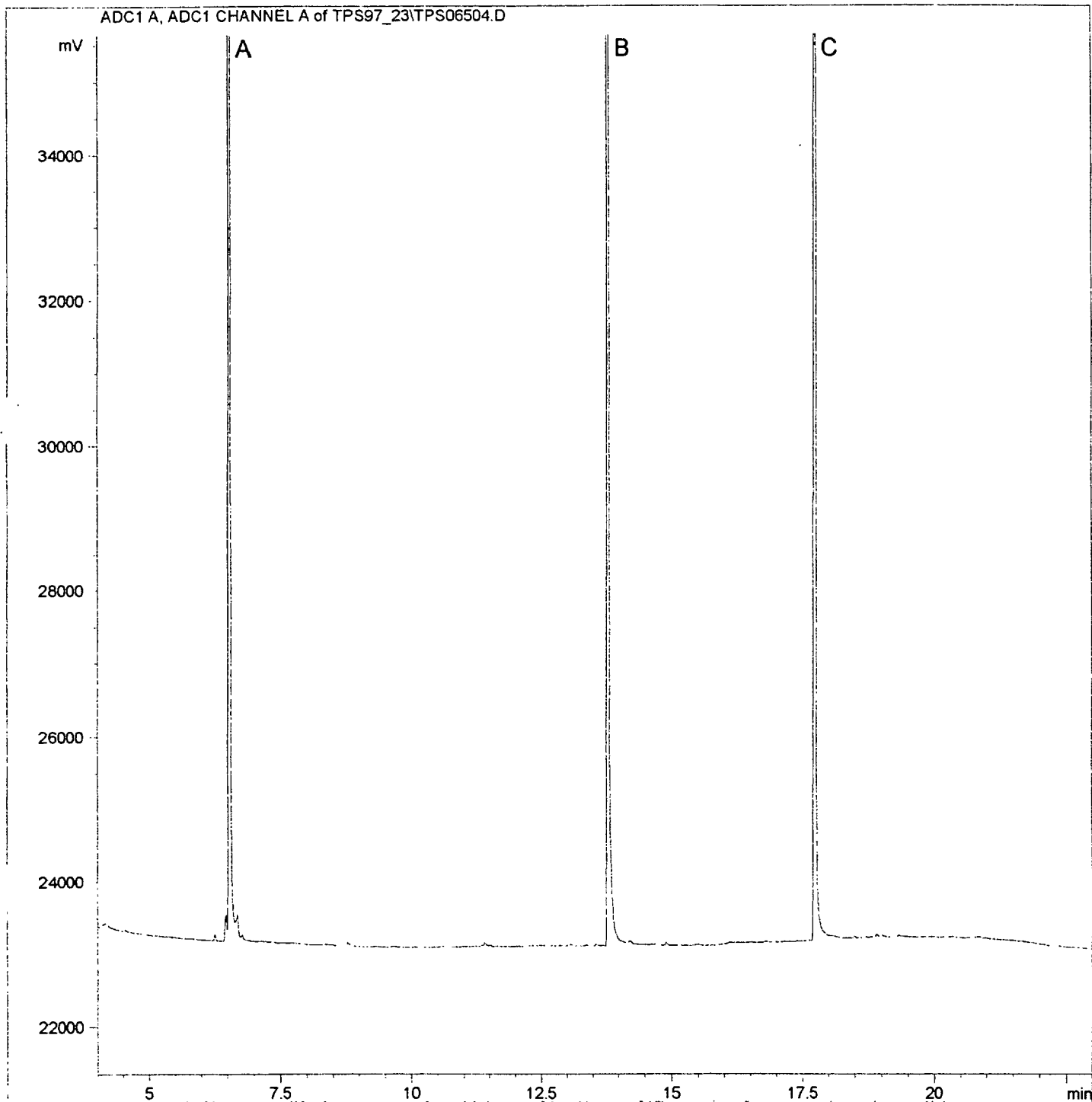
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Diesel Range Organics Analysis
By G.C.

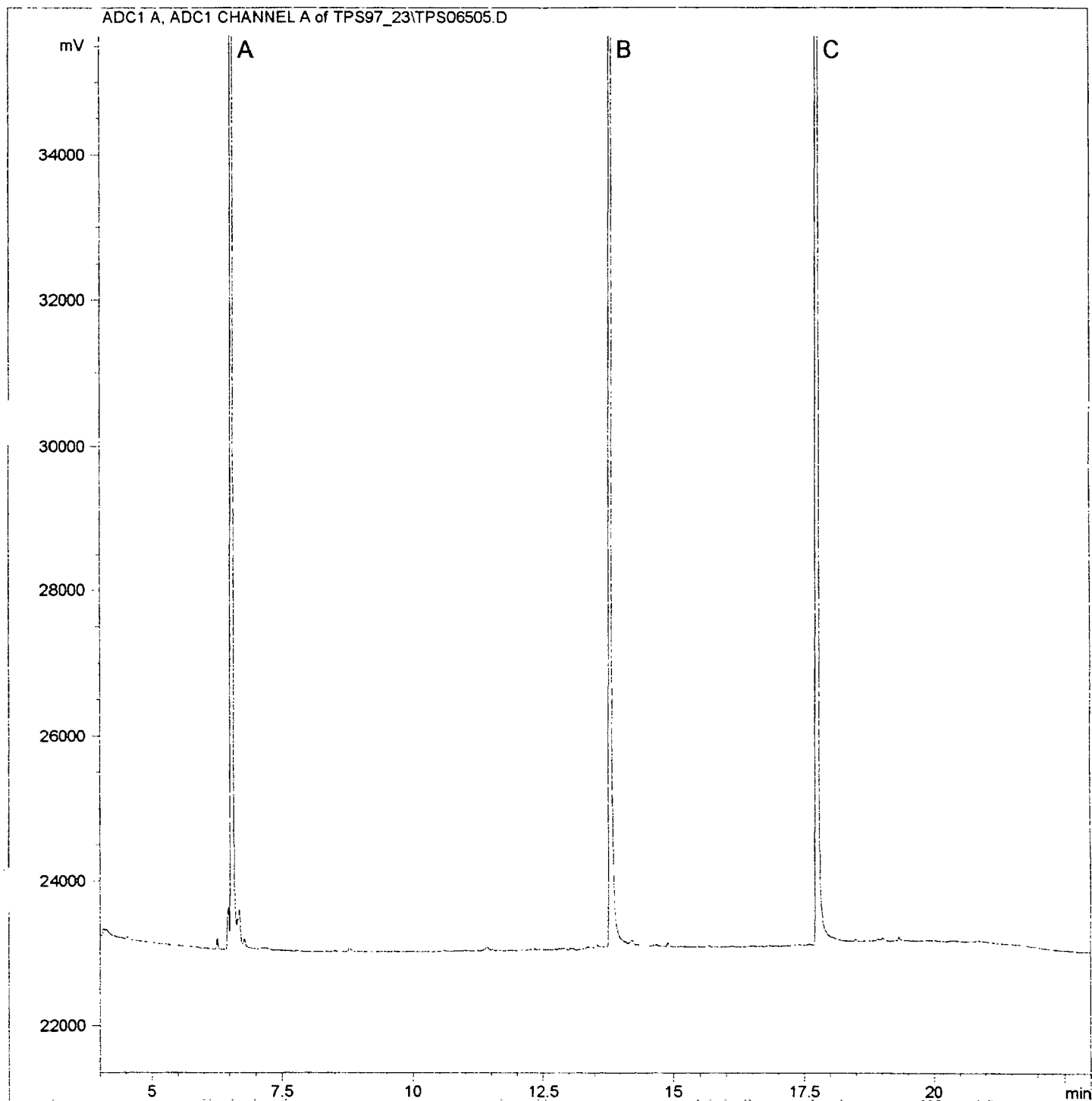
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Diesel Range Organics Analysis
By G.C.

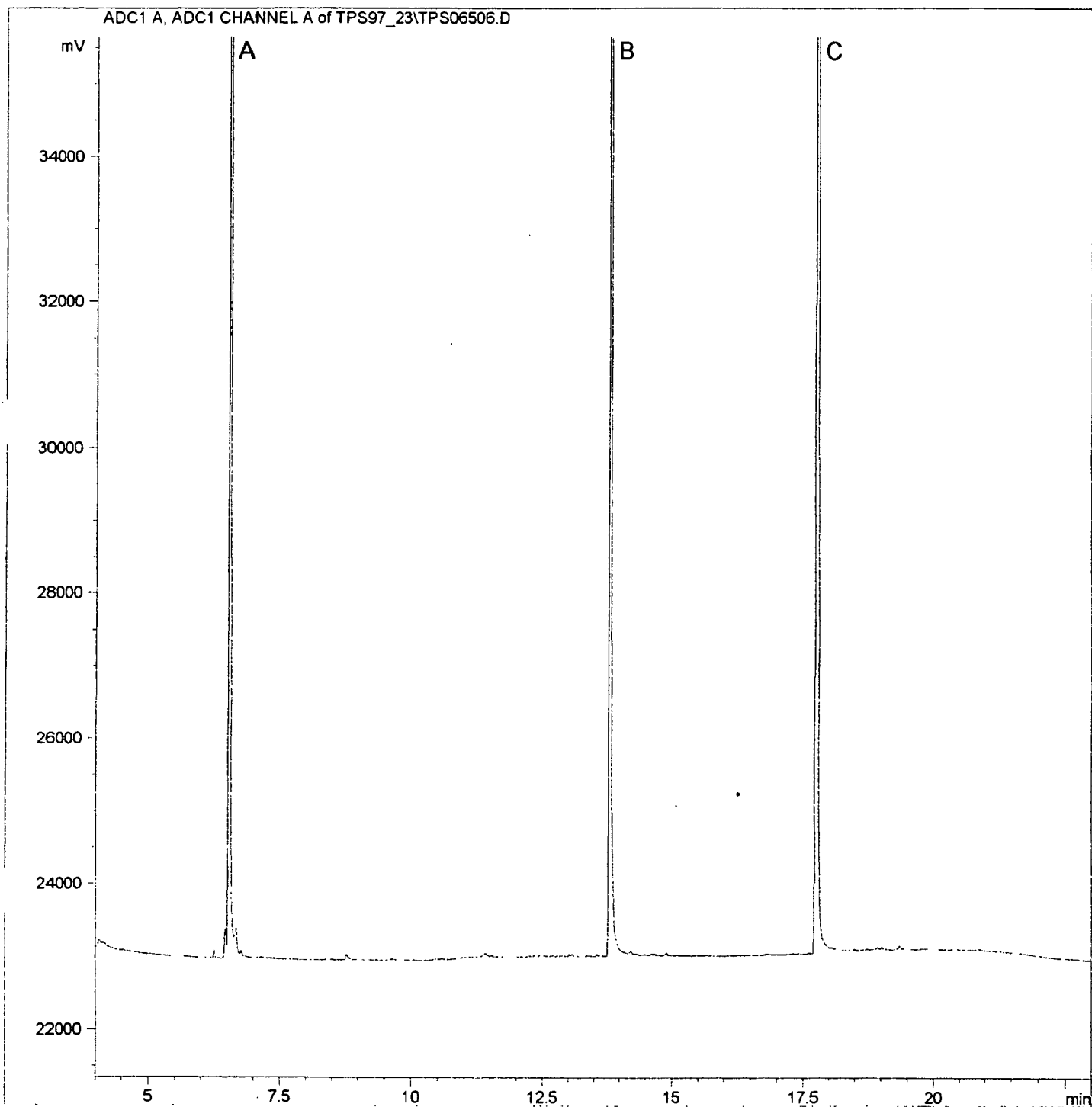
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GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

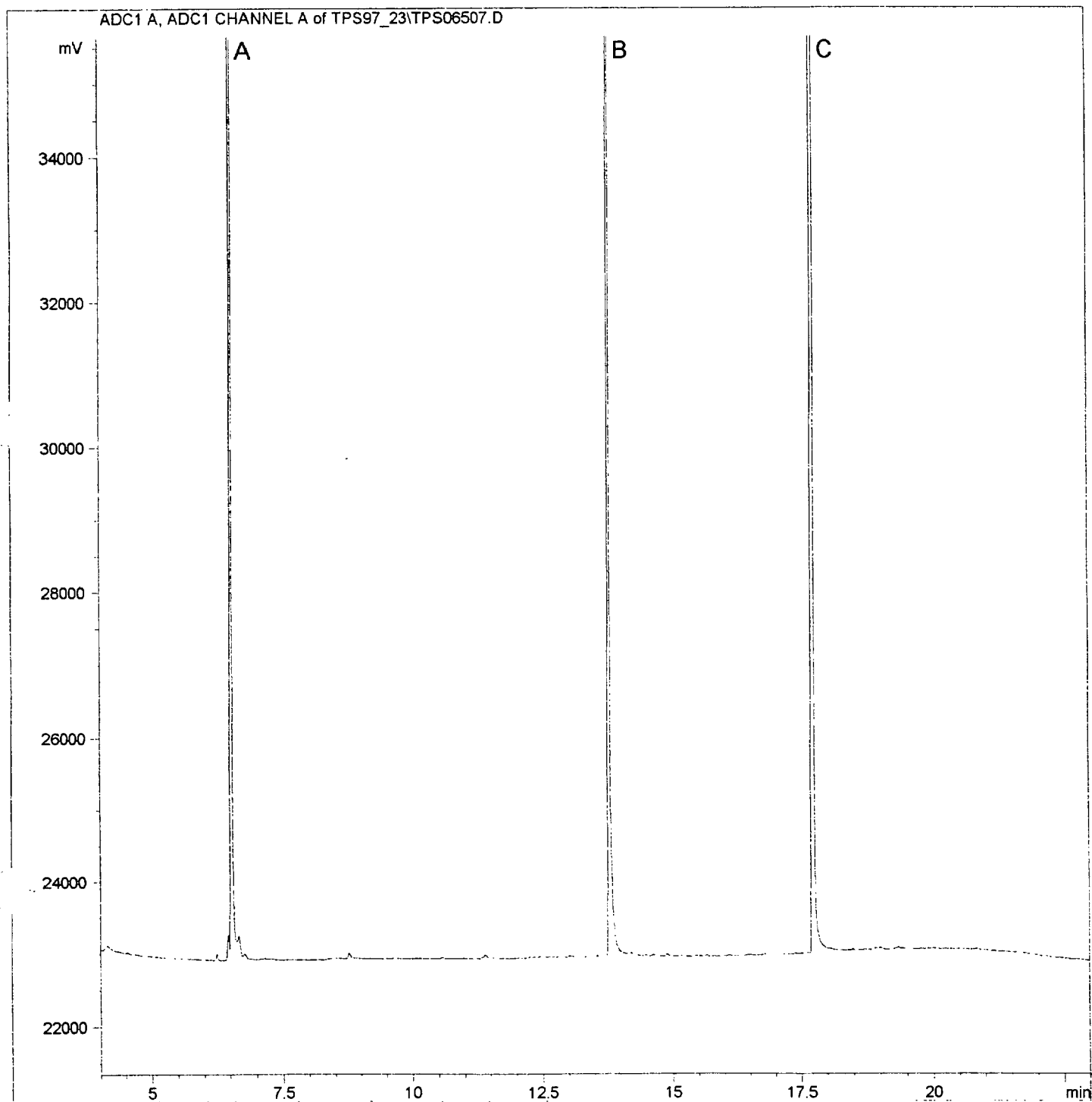
1023-169





GEOCHEM ANALYTICAL SERVICES
Diesel Range Organics Analysis
By G.C.

1023-174



Appendix

10

DRPS Radiological Investigations

Appendix

10

Note: the location of the trial pits referred to in this Appendix are shown on Figures 10 to 12 presented in the Phase 2 Factual Report.

DRPS REPORT N° 40/97

**RAF UPPER HEYFORD
LAND QUALITY ASSESSMENT
RADIOACTIVE CONTAMINATION ISSUES**

Prepared by [REDACTED]

Authorised for release by:

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] DRPS

20 June 1997

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SUMMARY

This report describes the way in which the Royal Air Force (RAF) has used radioactive materials and assesses the possible nature and extent of any contamination of land or buildings at RAF Upper Heyford. The report also describes the methods used and results obtained during a survey for radioactive contamination which was carried out in support of a land quality assessment by Aspinwall & Co at Upper Heyford in April 1997. With the exception of caesium-137, no radioactive contamination due to the presence of man-made radionuclides or significantly enhanced levels of naturally occurring radioactive materials were detected during this radiological survey. The discovery of caesium-137 is expected as this material is present throughout the UK as a result of the Chernobyl accident and atmospheric nuclear weapons testing. These results are in agreement with the findings of an earlier DRPS survey which was carried out in support of site closure operations in January and February 1995.

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PART 1

USE OF RADIOACTIVE MATERIALS BY THE ROYAL AIR FORCE

INTRODUCTION

1. The requirement for radioactive contamination issues to be considered during land quality assessments at Royal Air Force (RAF) sites arises from the use of radioactive material in a variety of military equipment. Civilian and military waste disposal operations were not well regulated in the distant past; and there is a possibility that contaminated debris from the disposal or incineration of equipment containing radioactive material might be present on any RAF site. The ways in which the RAF have used radioactive materials and an assessment of the possible nature and extent of any contamination at RAF Upper Heyford are described below and the results of a radiological survey at the site are described in Part 2.
2. This report has been produced by DERA Radiation Protection Services (DRPS) following a search of RAF radiation safety records and DRPS archives in which material covering the period 1955 to 1997 was discovered. Because of the commonality of equipment and procedures within the Armed Forces, experience or knowledge gained at one site can be related to work or conditions at other sites and this procedure has been used while compiling this report. In fact it is essential to do this when preparing any historical review of UK military activities as it has always been the practice for military units to destroy most archive records after a 5 year period. There is also a high degree of commonality between US and UK military equipment and procedures which means that the information in this report can be applied to periods of US occupation of RAF sites.
3. DRPS was formed in 1965 and provides the Ministry of Defence (MOD) and UK Armed Forces with technical and advisory services on all aspects of radiation protection and the transport and disposal of radioactive material. The organisation also carries out aquatic and terrestrial environmental monitoring surveys and advises on the remediation of land or buildings contaminated with radioactive substances. DRPS has BS EN ISO 9002 and NAMAS accreditation for most of its services and is appointed as corporate radiation protection adviser to the Armed Forces under legislation which implements EEC Council Directives 80/836/Euratom and 84/467/Euratom. Before the formal appointment of DRPS as the RAF's corporate radiation protection adviser in 1986, the RAF's radiation protection advisory services were provided by specialist RAF Medical Officers. The records maintained by these Medical Officers are held at DRPS and have been examined while preparing this report.

RAF RADIATION PROTECTION POLICY

4. The available documentary evidence indicates that it has been RAF policy since 1955 that exposures to radioactive material should be kept as low as reasonably practicable. The primary means of achieving this has been by ensuring that contamination is contained at source and that radiation safety arrangements are appropriate to the degree of radiological hazard. In the event of any unexpected incident involving radiation sources or radioactive material, the procedure has been for all work to cease and for the equipment or site to be secured until specialist advice has been obtained from a professional radiation safety adviser. The earliest surviving RAF radiation safety regulations date from the mid-1950s and concern safety arrangements during the atmospheric nuclear weapons tests. Further extensive Radiation Safety Orders and instructions covering the use and disposal of all types of RAF equipment containing radioactive material were published in Air Publication (AP) 830 and in AP 4687A Vol 2. AP 4687A was regularly revised and updated (there were 18 amendments to Vol 2 between 1966 and 1980) until it was superseded by Joint Service Publication 392 in January 1986. One feature of all these publications is that sealed and unsealed radioactive sources have been regarded as "valuable and attractive items" and have been safeguarded as such.

RADIOACTIVE SOURCES

5. Sealed radioactive sources have been used in a variety of military applications. Examples include the large iridium-192 industrial radiography sources used in Non Destructive Testing (NDT) and the lower activity cobalt-60 and caesium-137 sources used in Nuclear, Biological and Chemical (NBC) defence training. Most of these high activity sources were withdrawn from RAF stations in the late 1980s and early 1990s and returned to the manufacturer or consigned to British Nuclear Fuel's site at Drigg for disposal, but a very few sources still remain at specialist training and NDT establishments. There are also considerable numbers of much lower activity sealed and unsealed sources which have been, and are still, used on a daily basis for checking radiation and contamination monitoring instruments before use. The vast majority of the RAF's instrument check sources contain radium-226, americium-241, plutonium-239 or natural uranium. There are also records which indicate that RAF Upper Heyford may once have had the capability to store nuclear weapons.
6. All high activity sources were kept in large lead-shielded containers which could only be accessed by specially trained personnel such as NDT technicians and Ground Defence Trainers. These sources were subject to very strict control and were easily identifiable (as they were stored in containers which had a general orange colouration or were

marked with an orange band and the word "RADIOACTIVE" or the radiation warning trefoil). All high activity sources were leak tested at regular intervals and the results of these tests passed to specialist medical and technical branches dealing with radiation protection matters. Any contamination discovered would have been cleaned up immediately and the waste disposed of via the UK Atomic Energy Authority (UKAEA). Leak tests were generally carried out in fume cupboards in Servicing or Process Buildings in Supplementary, Special or Explosives Storage areas. It is known that a small number of these fume cupboards were also used for carrying out small-scale radium luminising work before they were decommissioned and disposed of through the UKAEA in the 1980s.

7. For the reasons outlined above, it is inconceivable that any high activity sources could ever have been lost or caused any radioactive contamination at any RAF site. The lower activity instrument check sources were much more widely used and subject to less stringent controls and it is known that a few of these sources have been lost - but there is no record of such a loss ever having occurred at RAF Upper Heyford. Furthermore, it is very difficult to construct a credible scenario by which these lower activity sources could present a hazard to any person today. As standard search procedures for missing "valuable and attractive items" obviously failed to recover the missing source at the time when the loss was actually discovered, it is extremely unlikely that an essentially "random" search years later will result in recovery of the source. This belief is substantiated by the fact that most investigations into the loss of these sources have indicated that it is likely that the sources were disposed of with normal refuse.

RADIOACTIVE LUMINISING MATERIAL

8. Radioactive luminising material has been widely used in aircraft instruments and other types of military equipment. Radioactive materials used by the RAF include radium-226 (which was introduced in 1915) and promethium-147 and tritium which gradually began to replace radium in the early 1970s. It is known that radioactive luminous equipment and debris from broken equipment were occasionally buried in RAF Station Tips and that some individuals carried out the unauthorised disposal of very small numbers of luminous items on an "ad-hoc" basis. It is also known that such items were also accidentally or intentionally incinerated at some RAF sites and the resulting ash sent to the Station Tip or used as landfill. Anecdotal evidence from Instrument Maintainers employed by the RAF since the early 1960s indicates that, although the burning of non-hazardous waste continued at some RAF sites until the mid-1980s, the large-scale incineration of surplus equipment such as aircraft instruments ceased in the mid-1970s. Although there is no evidence to suggest that any of these practices ever occurred at RAF Upper Heyford, it is evident that any Station Tips or Burning Grounds should be

considered as potentially contaminated areas and checked for the presence of radioactive material.

9. In the past, reluminising of instruments was often carried out in military and civilian workshops as part of routine maintenance. There is a Government report prepared in 1960 which states that at that time it was common practice for the solid waste from such operations to be buried on designated areas of the site or burnt on waste ground under primitive conditions. This burning resulted in some local fall-out of ash; the containers used for burning the waste became highly contaminated and any residual ash and debris was generally buried with other non-combustible waste. There is no record of a luminising workshop ever having existed at Upper Heyford and the Station's history makes it very unlikely that there would have been a requirement for such a facility.
10. In 1989, the RAF's Radiation Safety Officers carried out a programme of desk studies and contamination monitoring to identify sites where luminising work had taken place. RAF Support Command were reported as carrying out a "100% check" of their sites and RAF Strike Command surveyed all areas where desk studies suggested there was a possibility of finding radioactive contamination from luminising operations. This programme identified 3 sites at which there was contamination from previous luminising operations, but no contamination was reported at Upper Heyford.
11. In addition to the types of equipment mentioned above, there are also some weapons systems and items such as wrist watches, compasses, radios and weapons sights which contain luminised components. Such items may have been maintained in Workshops or Servicing or Process Buildings, or disposed of in Station Tips or at Burning Grounds in Explosives Storage or other areas. There is no record of any work with unsealed radioactive material or intentional burial or incineration of radioactive luminised items at RAF Upper Heyford; but there was an occasion on which luminous components from a weapons system were inadvertently incinerated at another RAF site. There has also been low level radium contamination detected in waste tips at 5 of the 15 RAF stations monitored by DRPS between June 1995 and March 1997. In summary, it is very unlikely that any large-scale maintenance of items containing radioactive material was ever carried out at RAF Upper Heyford; and only very minimal contamination could have resulted from the "ad-hoc" disposal of damaged instruments or the accidental incineration of in-service items.
12. There have been suggestions that strontium-90 may have been used for luminising instruments, but DRPS do not have knowledge of any significant commercial exploitation of this material and there is only one recorded instance (in 1963) of strontium-90 being detected in any RAF equipment. No strontium-90 has ever been detected in any

luminous item analysed by DRPS. These findings are corroborated by a single report by the Medical Research Council in 1960. This report states that (since publication of an earlier report in 1956) strontium-90 has, to a very small extent, been substituted for radium in luminised clocks and watches. The report also notes that doses to the "superficial tissues" may be high when strontium is used as a luminising material and this may be why this radionuclide was not more widely used.

BETALIGHTS

13. Betalights are sealed glass capsules internally coated with phosphor and filled with a radioactive gas such as tritium or krypton-85. They are used as self-powered light sources which require no maintenance and have a useful life of over 20 years. The betalights installed in a large number of aircraft components and military equipment are ruggedised and designed to withstand the full military and vibration specifications of Defence Standard 62/4. This Standard was issued in 1972 and 1976. By 1977, betalights were being used to illuminate aircraft emergency exit signs, safety switches, refuelling drogues, radios, compasses, level bubbles, gun directors, aiming post lamps, graticules, rifle foresights and mortar sights. Tritium is used extensively in betalights fitted to UK military equipment, but no krypton-85 has ever been detected in the hundreds of items analysed by DRPS and no information relating to the use of krypton-85 in military betalights has ever been found. There would usually be a few hundred betalights in use or stored at a station like RAF Upper Heyford.
14. Virtually all military betalights are ruggedised and installed in items which are subject to strict accounting and storage procedures. There are a very few large and some small workshops where betalights which are not installed in any form of protective housing are kept, but the number of such betalights at most RAF sites is very small (ie 4 or 5 betalights kept in a steel cabinet in the Rapier system servicing bay) and storage arrangements at these sites are inspected by professional radiation safety staff during regular radiation protection advisory visits. There would be no requirement for a station such as RAF Upper Heyford to be involved in maintenance operations in which betalights were being removed from their protective housings; and it is highly unlikely that anything other than the very occasional loss or breakage or unintentional incineration of equipment containing a betalight could have resulted in the contamination of land or buildings.
15. Radioactive contamination from the breakage of small numbers of betalights is not of any significance to health. This is because most of the radioactive material is in the form of tritium gas or tritiated water vapour which is immediately dispersed into the atmosphere when a betalight is broken. Because tritium is an isotope of hydrogen and

has similar chemical properties to that element, tritium in the environment will be taken up by all hydrogen-containing molecules and become widely distributed on a global scale. Thus any solid tritiated material remaining in areas where betalights are broken will also be quickly dispersed. Similar reasoning indicates that any tritiated material present on items which are intentionally or inadvertently incinerated will be converted to combustion products (such as tritiated water) and released to atmosphere during the incineration process.

ELECTRONIC VALVES

16. Radioactive materials such as radium-226, promethium-147, krypton-85, cobalt-60, caesium-137, nickel-63, tritium and naturally occurring thorium have been/are used in some types of electronic valves. Documentation from 1978 lists 179 radioactive electronic valves used by the RAF and records that 9 of these were hazard grade valves, 57 were class 2 valves and the remainder were class 1 valves. Most of the points made above in regard to the construction and use of betalights are also relevant to valves - but the radioactive materials other than tritium are more radiotoxic and valves are generally more fragile and contain smaller quantities of radioactive material. There would usually be a few hundred radioactive electronic valves in use or stored at a station like RAF Upper Heyford.
17. Interviews with RAF technicians who began work in the early 1960s reveal that the presence of radioactive material in valves has always been well known and that radioactive valves have always been subject to much more stringent controls than luminised instruments. From the earliest days it was normal for valves or their packaging to be marked with appropriate warning signs and with details of the type and quantity of radioactive material in the valve. Controls on the use and disposal of radioactive electronic valves were further strengthened by the issue of a Defence Standard in 1967 and RAF regulations required that valves were to be kept in their cartons until required for use and that stocks were to be kept to a minimum. There were also instructions which required that decontamination and monitoring were to be carried out in areas where radioactive electronic valves were broken. Since 1967 it has been the practice for class 1 and class 2 radioactive electronic valves to be disposed of with normal refuse. This is permitted under an Exemption Order made under the Radioactive Substances Acts of 1960 and 1993.

USE OF UNSEALED RADIOACTIVE MATERIAL IN EXERCISES

18. In the distant past, unsealed radioactive materials have been used very infrequently in open field training exercises for members of the MOD's Nuclear Accident Response

Organisation (NARO). This occurred only when there was a compelling training advantage to be gained and there was very close supervision of the radioactive material by MOD civilian and RAF radiation safety specialists. Some of these exercises were held at RAF stations, and, although the exact locations are not available, the Secretary of State for Defence has stated that the radioactive materials used in these exercises all had half-lives of less than 12 days and would therefore have decayed to insignificant levels within a few months. It has also been publicly stated that the quantities of radioactive material used were always the smallest necessary to achieve relevant instrument readings on sensitive contamination monitoring equipment; and that after each exercise the area was thoroughly cleaned up and monitored to ensure that all contaminated material had been removed. Given that a time equal to at least 200 half-lives has elapsed since unsealed radioactive material was last used in NARO exercises at an RAF station, there is no possibility of any contamination remaining at any site where these exercises occurred.

BURNING GROUNDS

19. Training for Station Firefighters was once carried out in areas known as "Burning Grounds" and involved setting fire to scrapped aircraft which may have contained luminised instruments or other items containing radioactive material. The debris from such training exercises was usually sold as scrap and removed from the site, but it is possible that areas where fire training occurred or where the debris from training was dumped could be slightly contaminated. This is similar to the situation described in paragraph 8 above.

MISCELLANEOUS USES OF RADIOACTIVE MATERIAL

20. There are a number of sensors or detectors in which radioactive materials are included as an essential component of the detection system. Such equipment includes: radiation dose rate meters; certain types of smoke detectors containing radium-226 or americium-241 foils; and explosives, gas and leak detectors. The radioactive sources in these items are incorporated into the equipment during manufacture and are not accessible to the user, but they could be exposed during an accident or deep maintenance. Radioactive material is also sometimes present in items known as static eliminators or ionised air blowers. These items generally contain the radioactive material polonium-210 and are hired from and returned to the manufacturers. There are records which confirm that static eliminators used by the RAF were returned to a company known as 3M in 1990.
21. As it is normal practice for items of the type described above to be returned to the manufacturer or other specialised workshops for maintenance or repair; there would be

no requirement for the radioactive sources in this type of equipment to be handled at RAF Upper Heyford and the only way in which contamination of land or buildings could occur would be as a result of very severe damage to one of these items. This is very unlikely as military equipment is built to withstand combat conditions and commercial items containing radioactive materials are built to similarly high standards. DRPS regularly check such items for leakage of radioactive material and are aware of only one instance in which the recovery and retention of a damaged radioactive smoke detector by a Station Fire Section led to minimal contamination of a shelf on which the fire detector was kept.

CONTAMINATION OF AIRCRAFT

22. The atmospheric testing of nuclear weapons during the 1950s and 1960s resulted in the upper atmosphere becoming contaminated with radioactive dust which slowly dispersed and decayed. Thus, for months, or even years, after periods of nuclear weapon testing there was a risk that aircraft which flew at high altitude (heights greater than 30,000 feet) might become contaminated by radioactive dust which adhered to the aircraft in flight. The RAF aircraft at most risk were the Vulcan, Victor, Valiant and Comet. Levels of aircraft contamination were relatively unpredictable and depended upon the quantity and age of the radioactive material in the atmosphere, the number of hours flown at high altitude and the condition of the aircraft in terms of its ability to collect and retain dust particles.
23. It is known that some minimal contamination of RAF stations occurred in this period as a result of the cleaning and paint stripping carried out before and during aircraft maintenance. Samples of liquid and a large quantity of sludge from an old bath used for cleaning Vulcan aircraft parts were analysed at the Atomic Weapons Establishment (AWE) in 1965. These analyses showed that the samples contained about 3.7Bq/ml of beta-gamma activity due to aged fission products and 0.0185Bq/ml of alpha activity. The alpha activity was reported as being too insignificant for it to be possible to identify its source, but the quantity was observed as being "in accordance with that expected from natural sources". The maximum level of contamination found on any rag used for cleaning aircraft surfaces is reported as being 185Bqcm⁻².
24. In 1965, a survey was carried out at 17 Maintenance Units at which there was judged to be a significant risk of radioactive contamination from aircraft washing. No contamination was found in hangers where aircraft were stripped, or in workshops or on benches where possibly contaminated aircraft components were maintained, but "slight" contamination was detected around water channels and drain entrances in areas where aircraft were washed down on a regular basis. The actual level of surface contamination is not

specified, but it is reported that the instrument response in these areas was four times lower than the response found on aircraft cleaning cloths. Given that the maximum level of surface contamination recorded on a cleaning cloth is 185Bqcm^{-2} , it is possible to infer very tentatively that contamination levels around water channels and drains in aircraft wash-down areas were of the order of 50Bqcm^{-2} in the mid-1960s.

25. The existence of radioactive contamination in aircraft wash-down areas in the 1960s is not of any significance nowadays. This is because the analysis mentioned above proved that it was the relatively short-lived beta/gamma rather than the much longer-lived alpha emitters which were present in radiologically significant quantities. Different types of nuclear weapon produce similar mixtures of beta/gamma emitting fission products in slightly different proportions, but the overall rate of decay of radioactivity is known to be almost the same for all types of weapon. The total radioactivity decays to one-tenth of the original level for each seven-fold increase of time in days, as measured from the moment of detonation. As input of radioactive debris into the upper atmosphere effectively ceased after the signing of the Limited Nuclear Test Ban Treaty in 1963, natural radioactive decay will have reduced the concentrations of beta/gamma emitters present in the environment in the mid-1960s to insignificant levels by now.

NATURALLY OCCURRING RADIOACTIVE MATERIALS

26. Items containing radioactive material derived from naturally occurring thorium and uranium ores are fitted in a few military and civilian aircraft and in missile systems. The material most commonly used is thorium which is present in some large magnesium alloy castings at up to 3% by weight. Tens of kilograms of depleted uranium are present in industrial radiography source containers and in counterbalance weights in a small number of fixed wing aircraft such as the Stretched Hercules and Tristar; and much smaller quantities of depleted uranium are used for balancing rotor blades in helicopters such as the Wessex.
27. Items of the type described above present no risk of contamination of land or buildings unless the radioactive material becomes severely corroded or is abraded or disposed of by burial. Because of the very strict rules necessary to ensure aircraft safety, extreme precautions are taken to prevent any form of corrosion and replacement components from manufacturers are used in preference to reconditioned items. Thus no major abrasive or dust-raising operations involving processes like drilling or grinding would ever be carried out at sites such as RAF Upper Heyford. There is occasionally a requirement to remove very minor corrosion from the outside of alloy castings with wet and dry paper, but any contamination generated would remain on the paper and be disposed of with normal refuse. The only means by which significant contamination of land or buildings

could occur would be by scrap metal containing uranium or thorium being left exposed to the elements for prolonged periods. However this is unlikely to occur as there are regular sales of scrap metal to commercial firms.

28. Thorium and uranium are also used in much smaller quantities in high quality optical glasses and filters, but such items are generally ruggedised and maintained in specialist "clean" instrument workshops. There are records from December 1990 which indicate that the very thin thorium coating on the surface of one particular optical component used by the RAF was found to be prone to "flaking", but no radioactive contamination was detected when the workshop in which these items were maintained was monitored.

CONTAMINATION SURVEYS

29. It is concluded that there is unlikely to be any major or widespread radioactive contamination at RAF Upper Heyford, but there is a possibility that radioactive material from the uncontrolled disposal or incineration of luminised equipment could be present in tips or areas where ash from incinerators was dumped. Although radium, promethium and tritium have all been used for luminising military equipment, radium-226 is the only material likely to be present in significant quantities now and it is only necessary to search for this material. This is because:

a. Only a very small percentage of the hundreds of line items held by the RAF have been found to contain promethium.

b. Investigations at other RAF stations have revealed that contamination resulting from the incineration of radioactive luminising material is associated with ash which has been buried for 20 - 40 years. This means that virtually all of the contaminated material was buried well before the date on which tritium became widely used as a luminising material. Furthermore, given that promethium has a half-life of only 2.62 years, any promethium buried 20 - 40 years ago would have decayed to at least 0.5% (and more likely to 0.0025%) of its initial concentration by now.

c. There is firm evidence for the use of radium-luminising material in RAF workshops, but there is no evidence for the use of promethium or tritium.

d. It is not credible that any promethium or tritium-luminised items would have been segregated from radium-luminised items before they were consigned for disposal. Thus, in the unlikely event that any tritium or promethium was present, it would be found in association with radium.

e. Tritium is an isotope of hydrogen and shares similar chemical properties to that element. In particular it is both chemically active and so mobile that considerable quantities can be removed from tritium painted dials during gentle handling. Given that the incineration of instruments is the process most likely to have led to contamination of RAF Upper Heyford, any tritium present would have been converted to combustion products (such as tritiated water) and released to atmosphere during the incineration process.

CONCLUSIONS

30. There is unlikely to be any major or widespread radioactive contamination at RAF Upper Heyford - but it would be prudent to survey tips or areas where ash from incinerators has been dumped for the presence of radium-226. This naturally occurring radioactive material could have been present in luminised instruments which might have been buried or burnt at the site in the distant past.

PART 2
DRPS SURVEY AT RAF UPPER HEYFORD

INTRODUCTION

1. A review of the way in which the RAF has used radioactive material and an assessment of the possible nature and extent of any radioactive contamination at RAF Upper Heyford is contained in Part 1 of this report. This assessment suggested that there was unlikely to be widespread radioactive contamination at Upper Heyford - but it was concluded that it would be prudent to check tips or areas where ash from incinerators had been dumped for the presence of radium-226. This is a naturally occurring radioactive material which could have been in or on luminised items buried or burnt at the site in the distant past.
2. In January and February 1995 a radiological survey was carried out at RAF Upper Heyford as part of the site closure operations. With the exception of caesium-137, which is present throughout the UK as a result of the Chernobyl accident and previous atmospheric nuclear weapons testing, no radioactive contamination due to the presence of man-made radionuclides or significantly enhanced levels of naturally occurring radioactive materials were detected during this survey work. A full description of the methods used and results obtained in 1995 are contained in DRPS Report No 9/95.
3. The present report describes further radiological monitoring work which DRPS carried out at RAF Upper Heyford during April 1997. This work was more extensive than that which had been done previously and was carried out in support of a land quality assessment by Aspinwall & Co. Ground and soil monitoring were carried out in areas where desk studies suggested that there was a possibility of radioactive contamination being present and soil samples were collected for radiochemical analysis.
4. Although the main purpose of this radiological survey was to monitor pre-selected areas of the site for the presence of significantly enhanced levels of radium-226; the actual scope of the monitoring work was considerably greater than this as the equipment used was capable of detecting most man-made radionuclides used in military equipment. With regard to the possible presence of radium-226, material with a radium activity concentration below 0.37Bq/g is of no health or regulatory significance as it is not considered to be radioactive material under UK legislation such as the Radioactive Substances Act 1993 and the Ionising Radiations Regulations 1985.
5. DRPS was formed in 1965 and provides the Ministry of Defence and UK Armed Forces with technical and advisory services on all aspects of radiation protection and the transport and disposal of radioactive material. The organisation also carries out aquatic

and terrestrial environmental monitoring surveys and advises on the remediation of land or buildings contaminated with radioactive substances. DRPS has BS EN ISO 9002 and National Measurement Accreditation Service (NAMAS) accreditation for most of its services and is appointed as Corporate Radiation Protection Adviser to the Armed Forces under UK legislation which implements EEC Council Directives 80/836/Euratom and 84/467/Euratom.

INSTRUMENTATION

6. The monitoring instruments used in this survey were Mini Instruments Series 900 ratemeters with Type 44B probes (with Serial Numbers 034649 and 034570) which are sensitive to X-ray and gamma radiation in the energy range 10keV to 1.0MeV. Both instruments were calibrated at DRPS in NAMAS accredited facilities and received daily instrument checks with a natural thorium source.
7. When using a Mini Instruments Series 900 ratemeter and Type 44B probe for ground or soil monitoring, a reading of more than 12 counts per second (cps) above background is considered to indicate the possible presence of radium-contaminated material with an activity concentration above 0.37Bq/g. This relationship between the 44B reading and the radium activity concentration has been derived over a 12 year period in which field measurements from work in 15 radium luminising workshops have been correlated with radium activity concentrations in samples analysed by gamma spectrometry. During this time it has been found that 44B readings of less than 12cps above background are associated with samples which have radium activity concentrations well below 0.37Bq/g.

MONITORING PROCEDURE

8. Before beginning the survey, background instrument readings were obtained in areas where it was judged that only naturally occurring radioactive material was likely to be present. Subsequent monitoring results were then compared with these background levels and with the action level of 12cps above background described in paragraph 7 above. Due to the random nature of radiation emission and the associated fluctuations in instrument readings, it is generally considered that elevated readings are only statistically significant when they exceed twice the background level.
9. Ground monitoring was carried out around each of the trial pits listed in Table 1 and the spoil from these pits was monitored while excavations were in progress. The identity numbers of these trial pits correspond to the numbers used by Aspinwall & Co during their survey for non-radioactive contaminants and the trial pit locations are shown on the maps appended to this report. The 44B probe was kept at a distance of 5cm from the

surface during ground monitoring and spoil from the trial pits was monitored with the Type 44B probe being held within 5mm of the soil surface.

10. Trial pits were dug at locations selected by Aspinwall & Co and soil samples were taken from areas where ash or debris were discovered and from some randomly selected locations. Each sample had a nominal weight of approximately 250g and was taken to DRPS for analysis on high resolution gamma spectrometers fitted with intrinsic germanium detectors. DRPS gamma spectrometry techniques are NAMAS accredited and the laboratories have Testing Number 1305. For each sample, the assessed activity concentration or detection limit for each nuclide in Table 2 is quoted routinely; and any significant unidentified gamma peaks found during computer analysis of the spectra are flagged for manual investigation and separate reporting.

RESULTS

11. The background countrate on the Type 44B probe was 5 - 8 cps and the monitoring results from around the trial pits are shown in Table 1. It can be seen that no significantly increased instrument readings were found around or within any of the trial pits monitored during this survey.
12. Soil samples were taken from 2 trial pits where buried ash was found and from 9 other randomly selected locations. The locations of these trial pits are shown on the maps appended to this report and the results of the gamma spectroscopy analysis of the soil samples are given in Table 2.
13. All gamma spectrometry results are consistent with natural background readings and no significantly enhanced levels of naturally occurring or man-made radionuclides other than caesium-137 were detected in any sample. Caesium-137 is found throughout the UK as a result of the Chernobyl accident and previous atmospheric nuclear weapons testing and potassium-40 and beryllium-7 are naturally occurring. Thallium-208, lead-212 and actinium-228 are decay products of the naturally occurring radioactive material thorium-232; and lead-214, bismuth-214 and radium-226 are decay products of naturally occurring uranium-238. Soil activity concentrations of actinium, lead, radium, thorium and uranium were all below the levels at which the soil would be considered radioactive material under the Radioactive Substances Act 1993.

CONCLUSIONS

14. With the exception of caesium-137 which is present throughout the UK as a result of the Chernobyl accident and atmospheric nuclear weapons testing, no radioactive

contamination due to the presence of man-made radionuclides or artificially enhanced levels of naturally occurring radioactive material were detected during a contamination survey of RAF Upper Heyford. These results are in agreement with the findings of an earlier DRPS survey which was carried out at the site in January and February 1995.

DISTRIBUTION

Aspinwall & Co

TABLE 1 - MONITORING RESULTS AROUND TRIAL PITS

Trial Pit	Soil Type and/or Depth(m)	Countrate (cps)	Soil Type and/or Depth(m)	Countrate (cps)	Soil Type and/or Depth(m)	Countrate (cps)	Soil Type and/or Depth(m)	Countrate (cps)
TP 1	surface	8 - 10	0.0 - 0.5	8 - 10	0.5 - 0.8	8 - 10	0.8 - 1.2	10 - 12
TP 2	surface	5 - 8	0.0 - 0.5	5 - 8	0.5 - 1.3	5 - 8	1.3 - 2.1	5 - 8
TP 3	surface	10	0.0 - 0.8	10	0.8 - 1.0	10 - 12	1.0 - 1.7	8 - 10
TP 4	surface	5 - 8	0.0 - 0.5	5 - 8	0.5 - 0.8	8 - 10	0.8 - 1.1	5 - 8
TP 5	surface	5 - 8	0.0 - 0.4	5 - 8	0.4 - 0.9	5 - 8	No further monitoring	
TP 6	surface	8 - 10	0.0 - 0.2	8 - 10	0.2 - 1.4	8 - 10	1.4 - 1.9	8 - 10
TP 49	surface	5 - 8	0.0 - 0.1	5 - 8	0.1 - 0.5	5 - 8	0.5 - 1.3	5 - 8
TP 50	surface	8 - 10	0.0 - 0.2	8 - 10	0.2 - 1.0	8 - 10	1.0 - 2.0	8 - 10
TP 59	surface	5 - 8	0.0 - 0.3	8 - 10	0.3 - 0.5	8 - 10	0.5 - 1.9	8 - 10
TP 60	surface	8 - 10	0.0 - 0.6	8 - 10	0.6 - 1.1	8 - 10	1.1 - 1.2	8 - 10
TP 61	surface	5 - 8	0.0 - 0.2	5 - 8	0.2 - 0.5	8 - 10	0.5 - 0.6 Ash	8 - 10
TP 61	0.6 - 1.2	8 - 10	1.2 - 1.3	8 - 10	No further monitoring		No further monitoring	
TP 62	surface	8 - 10	0.0 - 0.4	8 - 10	0.4 - 1.1	8 - 10	1.1 - 1.5	5 - 8
TP 66	surface	8 - 10	0.0 - 0.2	8 - 10	0.2 - 0.6 Rubble	8 - 10	0.6 - 1.5	8 - 10
TP 67	surface	5 - 8	0.0 - 0.3	5 - 8	0.3 - 1.3	5 - 8	No further monitoring	
TP 68	surface	8 - 10	0.0 - 0.2	8 - 10	0.2 - 1.0	8 - 10	1.0 - 1.1	8 - 10
TP 69	surface	5 - 8	0.0 - 0.4	5 - 8	0.4 - 1.1	8 - 10	No further monitoring	

Trial Pit	Soil Type and/or Depth(m)	Countrate (cps)	Soil Type and/or Depth(m)	Countrate (cps)	Soil Type and/or Depth(m)	Countrate (cps)	Soil Type and/or Depth(m)	Countrate (cps)
TP 70	surface	5 - 8	0.0 - 0.3	5 - 8	0.3 - 0.5	8 - 10	0.5 - 1.2	8 - 10
TP 71	surface	8 - 10	0.0 - 0.3	8 - 10	0.3 - 0.4 Ash	8 - 10	0.4 - 1.2	10 - 12
TP 72	surface	5 - 8	0.0 - 0.2	5 - 8	0.2 - 1.2	5 - 8	1.2 - 1.7	5 - 8
TP 73	surface	8 - 10	0.0 - 0.3	8 - 10	0.3 - 1.2	8 - 10	1.2 - 2.0	8 - 10
TP 74	surface	5 - 8	0.0 - 0.2	5 - 8	0.2 - 0.6	5 - 8	0.6 - 1.4	5 - 8
TP 75	surface	5 - 8	0.0 - 0.5	5 - 8	0.5 - 1.4	5 - 8	1.4 - 2.0	5 - 8
TP 76	surface	5 - 8	0.0 - 0.2	5 - 8	0.2 - 0.9	5 - 8	0.9 - 1.3	5 - 8
TP 77	surface	5 - 8	0.0 - 0.5	5 - 8	0.5 - 1.0	8 - 10	1.0 - 1.6	10 - 12
TP 78	surface	8 - 10	0.0 - 0.3	8 - 10	Electric cable - move to 78A		No further monitoring	
TP 78A	surface	8 - 10	0.0 - 0.3	8 - 10	0.3 - 0.9	8 - 10	0.9 - 1.7	8 - 10
TP 79	surface	8 - 10	0.0 - 0.4	8 - 10	0.4 - 0.9	8 - 10	No further monitoring	
TP 80	surface	8 - 10	0.0 - 0.3	8 - 10	0.3 - 1.2	8 - 10	No further monitoring	
TP 81	surface	5 - 8	0.0 - 0.3	5 - 8	Cable - move to 81A		No further monitoring	
TP 81A	surface	5 - 8	0.0 - 0.4	5 - 8	0.4 - 1.1	5 - 8	1.1 - 1.8	5 - 8
TP 82	surface	8 - 10	0.0 - 0.6 Hardcore	8 - 10	0.6 - 1.1	8 - 10	No further monitoring	
TP 83	surface	8 - 10	0.0 - 0.3	8 - 10	0.3 - 1.0 Hardcore	5 - 8	No further monitoring	
TP 84	surface	5 - 8	0.0 - 0.2	5 - 8	0.2 - 1.2 Hardcore	8 - 10	No further monitoring	

Trial Pit	Soil Type and/or Depth(m)	Countrate (cps)	Soil Type and/or Depth(m)	Countrate (cps)	Soil Type and/or Depth(m)	Countrate (cps)	Soil Type and/or Depth(m)	Countrate (cps)
TP 85	surface	8 - 10	0.0 - 0.3	8 - 10	0.3 - 0.8 Hardcore	5 - 8	0.8 - 0.9	5 - 8
TP 87	surface	5 - 8	0.0 - 0.2	5 - 8	0.2 - 0.5	5 - 8	0.5 - 1.0	5 - 8
TP 87	1.0 - 1.5	5 - 8	1.5 - 1.9	5 - 8	No further monitoring		No further monitoring	
TP 89	surface	8 - 10	0.0 - 0.5	8 - 10	0.5 - 0.8	5 - 8	0.8 - 2.0	8 - 10
TP 88	surface	5 - 8	0.0 - 0.5	5 - 8	0.5 - 1.2	5 - 8	1.2 - 2.0	5 - 8
TP 109	surface	8 - 10	0.0 - 0.2	8 - 10	0.2 - 0.9	8 - 10	0.9 - 1.3	10 - 12
TP 109	1.3 - 2.0	10 - 12	2.0 - 2.3	10 - 12	No further monitoring		No further monitoring	
TP 110	surface	8 - 10	0.0 - 0.2	8 - 10	0.2 - 0.3	5 - 8	0.3 - 1.3	5 - 8
TP 110	1.3 - 1.4	5 - 8	No further monitoring		No further monitoring		No further monitoring	
TP 111	surface	8 - 10	0.0 - 0.4	8 - 10	0.4 - 1.2	5 - 8	1.2 - 1.7	8 - 10
TP 113	surface	5 - 8	0.0 - 0.4	5 - 8	Pit abandoned - suspect material		No further monitoring	
TP 124	surface	5 - 8	0.0 - 0.2	5 - 8	0.2 - 1.0	5 - 8	1.0 - 2.0	5 - 8
TP 127	surface	8 - 10	0.0 - 0.3	8 - 10	0.3 - 0.9	8 - 10	0.9 - 1.6	8 - 10
TP 130	surface	5 - 8	0.0 - 0.2	5 - 8	0.2 - 0.7	5 - 8	0.7 - 1.2	5 - 8
TP 132	surface	5 - 8	0.0 - 0.4	5 - 8	0.4 - 0.9	8 - 10	Pit abandoned - gas main	
TP 139	surface	8 - 10	0.0 - 0.4	8 - 10	0.4 - 1.2	8 - 10	1.2 - 1.8	8 - 10

TABLE 2 - SOIL SAMPLE ANALYSIS RESULTS

Point	¹⁴⁷ Pm	⁷ Be	⁴⁰ K	⁶⁰ Co	¹³⁷ Cs	²⁰⁸ Tl	²¹² Pb	²¹⁴ Pb	²¹⁴ Bi	²²⁶ Ra	²²⁸ Ac	²³⁴ Th	²³⁵ U	²⁴¹ Am
TP1 0.2m	±23800	±3.3	407.5 ±48.5	±1.0	1.9 ±1.5	9.6 ±2.4	29.2 ±5.2	16.9 ±5.8	13.4 ±5.7	13.4 ±5.7	28.1 ±7.6	±64.5	±14.2	±5.3
TP50 0.8m	±17500	±4.2	110.8 ±28.4	±0.2	±0.9	3.7 ±2.0	8.8 ±3.3	15.7 ±4.6	13.0 ±4.4	39.7 ±29.7	11.7 ±5.0	70.5 ±61.0	±10.2	±6.3
TP61 0.5m	±23100	±3.9	300.7 ±41.2	±0.9	±1.1	7.6 ±2.2	26.9 ±5.9	22.2 ±6.1	13.8 ±4.8	62.5 ±34.9	24.2 ±8.0	±59.7	±11.8	±8.3
TP61 Ash 0.5m	±40700	±10.1	288.8 ±47.7	±0.6	±2.0	49.0 ±5.2	140.6 ±11.6	85.6 ±10.1	74.8 ±13.6	115.6 ±65.6	150.3 ±14.8	±105	±23.2	±16.0
TP69 0.5m	±38900	±4.0	289.2 ±40.9	±0.5	±1.6	7.8 ±2.5	23.7 ±6.2	20.1 ±6.5	16.3 ±5.4	54.7 ±40.6	26.4 ±8.6	±68.1	±13.3	±11.5
TP71 Ash 0.3m	±34200	±6.9	165.8 ±35.3	±0.7	±1.5	9.8 ±2.7	29.8 ±5.1	44.0 ±6.9	40.7 ±6.9	73.1 ±39.3	33.4 ±8.3	±66.5	±11.3	±8.0
TP72 0.8m	±33400	±5.0	314.6 ±46.6	±1.0	±1.2	11.9 ±3.3	29.9 ±6.5	16.0 ±8.0	20.9 ±5.6	60.7 ±42.4	34.7 ±8.1	85.6 ±73.3	±11.6	±9.3
TP82 0.5m	±19100	±2.9	156.3 ±33.1	±0.5	±1.1	5.3 ±2.3	14.4 ±4.0	14.0 ±5.2	10.5 ±4.0	40.6 ±30.9	18.8 ±5.6	±56.7	±11.2	±7.1
TP87 1.0m	±24800	±8.3	328.7 ±40.5	±0.8	±1.2	8.0 ±2.5	22.4 ±5.2	16.0 ±4.0	14.5 ±3.9	14.5 ±3.9	28.8 ±8.4	±54.0	±9.0	±7.6
TP109 1.0m	±22900	±4.5	240.3 ±40.4	±0.4	±1.4	8.6 ±2.6	23.7 ±4.4	18.0 ±6.4	18.8 ±4.9	63.3 ±34.9	26.3 ±8.0	±57.8	±8.4	±9.9
TP124 1.0m	±16800	±5.8	114.9 ±28.0	±0.4	±1.0	4.9 ±1.8	12.5 ±3.2	14.5 ±5.0	13.3 ±5.1	13.3 ±5.1	17.7 ±6.4	±45.4	±6.2	±5.2

Point	¹⁴⁷ Pm	⁷ Be	⁴⁰ K	⁶⁰ Co	¹³⁷ Cs	²⁰⁸ Tl	²¹² Pb	²¹⁴ Pb	²¹⁴ Bi	²²⁶ Ra	²²⁸ Ac	²³⁴ Th	²³⁸ U	²⁴¹ Am
TP132 0.5m	±20200	±5.1	198.8 ±35.5	±0.3	±1.2	7.8 ±2.9	18.6 ±4.4	22.7 ±5.2	17.3 ±4.8	60.2 ±35.2	21.1 ±6.5	±61.4	±8.8	±8.3

NOTE

All values are Bq/kg.