

Appendix C
Laboratory Reports

Soil



IEA
An Aquarion Company

149 Rangeway Road
North Billerica, MA 01862

2,23 (TOP)
Phone 508-667-1400
Fax 508-667-7871

Ms. Grace Hwang
Raytheon Company
528 Boston Post Road
Sudbury, MA 01776

June 30, 1995

Dear Ms. Hwang:

Please find enclosed the analytical results of the sample(s) received at our laboratory on June 15, 1995. This report contains sections addressing the following information at a minimum:

- analytical results
- chain-of-custody (if applicable)

Client Project #	N/A	Client Project Name	BLD. 3 SUBSURFACE
IEA Report #	R117C-003	Purchase Order #	535690SL00017

Copies of this analytical report and supporting data are maintained in our files for a minimum of 3 years unless special arrangements are made. Unless specifically indicated, all analytical testing was performed at the IEA-Massachusetts laboratory.

We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (508) 667-1400 for any additional information. Thank you for utilizing our services and we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Sincerely,

Michael F. Wheeler, Ph.D.
Laboratory Director
IEA-Massachusetts

MW/smb

DOC# RPF00300.MA

Monroe,
Connecticut
203-261-4458

Sunrise,
Florida
305-846-1730

Schaumburg,
Illinois
708-705-0740

Whippany,
New Jersey
201-428-8181

Research Triangle Park,
North Carolina
919-677-0090





SUBCONTRACT/INTERLABORATORY NOTIFICATION

Report Date: 06/30/95
Client: Raytheon - RESD
Project: BLD. 3 SUBSURFACE

Received Date: 06/15/95
IEA Job Number: R117C-003

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A portion of the analytical work for this project was performed at another laboratory. Analytical methods conducted within the IEA Network are subject to uniform corporate quality control procedures. Non-network laboratories are selected on the basis of appropriate certification. The following parameters were analyzed at the indicated labs.

<u>Subcontract Laboratory</u>	<u>Parameter</u>
IEA-Connecticut	Barium
IEA-Connecticut	Cadmium
IEA-Connecticut	Chromium
IEA-Connecticut	Lead
IEA-Connecticut	Silver

If you have any questions please call our client service representative.



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IEA LABORATORY RESULTS

Report Date: 06/30/95
 Client: Raytheon - RESD
 Project: BLD. 3 SUBSURFACE

Received Date: 06/15/95
 IEA Job Number: R117C-003

IEA
 Sample

#	Client ID	Parameter	Results	Units	PQL	Date Analyzed
=====						
TOTAL METALS						
1	PIT 3-1-386	Arsenic	4.48	mg/kg (dry)	0.50	06/21/95
1	PIT 3-1-386	Barium	25	mg/kg (dry)	10	06/27/95
1	PIT 3-1-386	Cadmium	BQL	mg/kg (dry)	1.0	06/27/95
1	PIT 3-1-386	Chromium	19.6	mg/kg (dry)	3.0	06/27/95
1	PIT 3-1-386	Lead	14	mg/kg (dry)	10	06/27/95
1	PIT 3-1-386	Mercury	BQL	mg/kg (dry)	0.10	06/27/95
1	PIT 3-1-386	Selenium	BQL	mg/kg (dry)	0.50	06/21/95
1	PIT 3-1-386	Silver	BQL	mg/kg (dry)	2.0	06/27/95
TOTAL METALS						
2	MH-13	Arsenic	12.4	mg/kg (dry)	0.50	06/21/95
2	MH-13	Barium	5,310	mg/kg (dry)	10	06/27/95
2	MH-13	Cadmium	67.5	mg/kg (dry)	1.0	06/27/95
2	MH-13	Chromium	7,850	mg/kg (dry)	3.0	06/27/95
2	MH-13	Lead	549	mg/kg (dry)	10	06/27/95
2	MH-13	Mercury	0.81	mg/kg (dry)	0.19	06/27/95
2	MH-13	Selenium	BQL	mg/kg (dry)	0.50	06/21/95
2	MH-13	Silver	45.1	mg/kg (dry)	2.0	06/27/95

COMMENTS:

PQL = Practical Quantitation Limit
 BQL = Below Quantitation Limit

Result3.wk1 Rev. 041393





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An Aquarion Company

IEA LABORATORY RESULTS

Report Date: 06/30/95
Client: Raytheon - RESD
Project: BLD. 3 SUBSURFACE

Received Date: 06/15/95
IEA Job Number: R117C-003

IEA Sample #	Client ID	Parameter	Results	Units	PQL	Date Analyzed
1	PIT 3-1-386	TPH-IR	BQL	mg/kg (dry)	32	06/22/95
2	MH-13	TPH-IR	300	mg/kg (dry)	90	06/22/95

*Review
R117C
= LPA-0*

? PET ? Groove?

↓ LPA Samples collected 6/14/95

COMMENTS:

PQL = Practical Quantitation Limit
BQL = Below Quantitation Limit



IEA

An Aquarion Company

Analysis Report: EPA Method 8080A
Aroclors

Client:	Raytheon - RESD	IEA ID:	R117C-003-01
Project:	BLD. 3 SUBSURFACE	Sample:	PIT 3-1-386
Report Date:	06/29/95	Type:	Soil
Collected:	06/14/95	Container:	Glass
Received:	06/15/95		
Extracted:	06/21/95		
Analyzed:	06/23/95		
By:	GAM	Dilution Factor:	2.2

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Aroclor 1016	220	BQL
2	Aroclor 1221	220	BQL
3	Aroclor 1232	220	BQL
4	Aroclor 1242	220	BQL
5	Aroclor 1248	220	BQL
6	Aroclor 1254	220	BQL
7	Aroclor 1260	220	BQL

Surrogate Standard Recovery:

Tetrachloro-meta-xylene	97 %
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Comments:

BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
Quantitation limit elevated due to extract dilution prior to analysis.
Extract diluted due to the presence of non-target compounds.

Doc# GCF20300.MA



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Analysis Report: EPA Method 8240A
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Client:	Raytheon - RESD	IEA ID:	R117C-003-01
Project:	BLD. 3 SUBSURFACE	Sample:	PIT 3-1-386
Report Date:	06/30/95	Type:	Soil
Collected:	06/14/95	Container:	Glass
Received:	06/15/95		
Analyzed:	06/27/95		
By:	GMT	Dilution Factor:	1.1

Priority Pollutant Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene	6	BQL
2	Bromodichloromethane	6	BQL
3	Bromoform	6	BQL
4	Bromomethane	11	BQL
5	Carbon tetrachloride	6	BQL
6	Chlorobenzene	6	BQL
7	Chloroethane	11	BQL
8	2-Chloroethylvinyl ether	6	BQL
9	Chloroform	6	BQL
10	Chloromethane	11	BQL
11	Dibromochloromethane	6	BQL
12	1,2-Dichlorobenzene	6	BQL
13	1,3-Dichlorobenzene	6	BQL
14	1,4-Dichlorobenzene	6	BQL
15	1,1-Dichloroethane	6	BQL
16	1,2-Dichloroethane	6	BQL
17	1,1-Dichloroethene	6	BQL
18	1,2-Dichloroethene (Total)	6	BQL
19	1,2-Dichloropropane	6	BQL
20	cis-1,3-Dichloropropene	6	BQL
21	trans-1,3-Dichloropropene	6	BQL
22	Ethylbenzene	6	BQL
23	Methylene chloride	6	13B
24	1,1,2,2-Tetrachloroethane	6	BQL
25	Tetrachloroethene	6	BQL
26	Toluene	6	BQL
27	1,1,1-Trichloroethane	6	BQL
28	1,1,2-Trichloroethane	6	BQL
29	Trichloroethene	6	BQL
30	Trichlorofluoromethane	6	BQL
31	Vinyl chloride	11	BQL

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Analysis Report: EPA Method 8240A
(PAGE 1 OF 2 PAGES)

Client:	Raytheon - RESD	IEA ID:	R117C-003-02
Project:	BLD. 3 SUBSURFACE	Sample:	MH-13
Report Date:	06/30/95	Type:	Soil
Collected:	06/14/95	Container:	Glass
Received:	06/15/95		
Analyzed:	06/28/95		
By:	GMT	Dilution Factor:	3

Priority Pollutant Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene	15	BQL
2	Bromodichloromethane	15	BQL
3	Bromoform	15	BQL
4	Bromomethane	30	BQL
5	Carbon tetrachloride	15	BQL
6	Chlorobenzene	15	BQL
7	Chloroethane	30	BQL
8	2-Chloroethylvinyl ether	15	BQL
9	Chloroform	15	BQL
10	Chloromethane	30	BQL
11	Dibromochloromethane	15	BQL
12	1,2-Dichlorobenzene	15	BQL
13	1,3-Dichlorobenzene	15	BQL
14	1,4-Dichlorobenzene	15	BQL
15	1,1-Dichloroethane	15	BQL
16	1,2-Dichloroethane	15	BQL
17	1,1-Dichloroethene	15	BQL
18	1,2-Dichloroethene (Total)	15	BQL
19	1,2-Dichloropropane	15	BQL
20	cis-1,3-Dichloropropene	15	BQL
21	trans-1,3-Dichloropropene	15	BQL
22	Ethylbenzene	15	BQL
23	Methylene chloride	15	15B
24	1,1,2,2-Tetrachloroethane	15	BQL
25	Tetrachloroethene	15	BQL
26	Toluene	15	BQL
27	1,1,1-Trichloroethane	15	BQL
28	1,1,2-Trichloroethane	15	BQL
29	Trichloroethene	15	BQL
30	Trichlorofluoromethane	15	BQL
31	Vinyl chloride	30	BQL

Doc# MSF10900.MA





Analysis Report: EPA Method 8240A
(PAGE 2 OF 2 PAGES)

Client: Raytheon - RESD
Project: BLD. 3 SUBSURFACE
IEA ID: R117C-003-02
Sample: MH-13

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
Other TCL Compounds:			
32	Acetone	300	BQL
33	2-Butanone	300	BQL
34	Carbon disulfide	15	BQL
35	1,2-Dibromoethane	15	BQL
36	2-Hexanone	150	BQL
37	Methyl-t-butylether	15	BQL
38	4-Methyl-2-pentanone	150	BQL
39	Styrene	15	BQL
40	Vinyl Acetate	150	BQL
41	Xylenes (Total)	15	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	103 %
Toluene-d8	107 %
Bromofluorobenzene	84 %

Comments:

BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
Dilution factor adjusted for % moisture.
Smaller amount of sample analyzed due to the presence of non-target compounds.
Quantitation limit elevated due to smaller amount of sample analyzed.
B = Compound in blank

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An Aquarion Company

Analysis Report: EPA Method 8240A
(PAGE 1 OF 2 PAGES)

Client:		IEA ID:	Method Blank (06/27)
Project:		Sample:	
Report Date:	06/30/95	Type:	Soil
Collected:		Container:	
Received:			
Analyzed:	06/27/95		
By:	GMT	Dilution Factor:	1

Priority Pollutant Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene	5	BQL
2	Bromodichloromethane	5	BQL
3	Bromoform	5	BQL
4	Bromomethane	10	BQL
5	Carbon tetrachloride	5	BQL
6	Chlorobenzene	5	BQL
7	Chloroethane	10	BQL
8	2-Chloroethylvinyl ether	5	BQL
9	Chloroform	5	BQL
10	Chloromethane	10	BQL
11	Dibromochloromethane	5	BQL
12	1,2-Dichlorobenzene	5	BQL
13	1,3-Dichlorobenzene	5	BQL
14	1,4-Dichlorobenzene	5	BQL
15	1,1-Dichloroethane	5	BQL
16	1,2-Dichloroethane	5	BQL
17	1,1-Dichloroethene	5	BQL
18	1,2-Dichloroethene (Total)	5	BQL
19	1,2-Dichloropropane	5	BQL
20	cis-1,3-Dichloropropene	5	BQL
21	trans-1,3-Dichloropropene	5	BQL
22	Ethylbenzene	5	BQL
23	Methylene chloride	5	3J
24	1,1,2,2-Tetrachloroethane	5	BQL
25	Tetrachloroethene	5	BQL
26	Toluene	5	BQL
27	1,1,1-Trichloroethane	5	BQL
28	1,1,2-Trichloroethane	5	BQL
29	Trichloroethene	5	BQL
30	Trichlorofluoromethane	5	BQL
31	Vinyl chloride	10	BQL

Doc# MSF10900.MA



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Analysis Report: EPA Method 8240A
(PAGE 2 OF 2 PAGES)

Client:
Project:

IEA ID: Method Blank (06/27)
Sample:

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
Other TCL Compounds:			
32	Acetone	100	BQL
33	2-Butanone	100	BQL
34	Carbon disulfide	5	BQL
35	1,2-Dibromoethane	5	BQL
36	2-Hexanone	50	BQL
37	Methyl-t-butylether	5	BQL
38	4-Methyl-2-pentanone	50	BQL
39	Styrene	5	BQL
40	Vinyl Acetate	50	BQL
41	Xylenes (Total)	5	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	103 %
Toluene-d8	107 %
Bromofluorobenzene	88 %

Comments:

BQL = Below Quantitation Limit.
 PQL = Practical Quantitation Limit.
 Dilution factor adjusted for % moisture.
 J = Approximate result. Quantitation below calibration.
 Corresponding Sample: R117C-003-01

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Analysis Report: EPA Method 8240A
(PAGE 1 OF 2 PAGES)

Client:		IEA ID:	Method Blank (06/28)
Project:		Sample:	
Report Date:	06/30/95	Type:	Soil
Collected:		Container:	
Received:			
Analyzed:	06/28/95		
By:	GMT	Dilution Factor:	1

Priority Pollutant Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene	5	BQL
2	Bromodichloromethane	5	BQL
3	Bromoform	5	BQL
4	Bromomethane	10	BQL
5	Carbon tetrachloride	5	BQL
6	Chlorobenzene	5	BQL
7	Chloroethane	10	BQL
8	2-Chloroethylvinyl ether	5	BQL
9	Chloroform	5	BQL
10	Chloromethane	10	BQL
11	Dibromochloromethane	5	BQL
12	1,2-Dichlorobenzene	5	BQL
13	1,3-Dichlorobenzene	5	BQL
14	1,4-Dichlorobenzene	5	BQL
15	1,1-Dichloroethane	5	BQL
16	1,2-Dichloroethane	5	BQL
17	1,1-Dichloroethene	5	BQL
18	1,2-Dichloroethene (Total)	5	BQL
19	1,2-Dichloropropane	5	BQL
20	cis-1,3-Dichloropropene	5	BQL
21	trans-1,3-Dichloropropene	5	BQL
22	Ethylbenzene	5	BQL
23	Methylene chloride	5	4J
24	1,1,2,2-Tetrachloroethane	5	BQL
25	Tetrachloroethene	5	BQL
26	Toluene	5	BQL
27	1,1,1-Trichloroethane	5	BQL
28	1,1,2-Trichloroethane	5	BQL
29	Trichloroethene	5	BQL
30	Trichlorofluoromethane	5	BQL
31	Vinyl chloride	10	BQL

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IEA

An Aquarion Company

Analysis Report: EPA Method 8240A
(PAGE 2 OF 2 PAGES)

Client:
Project:

IEA ID: Method Blank (06/28)
Sample:

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
Other TCL Compounds:			
32	Acetone	100	BQL
33	2-Butanone	100	BQL
34	Carbon disulfide	5	BQL
35	1,2-Dibromoethane	5	BQL
36	2-Hexanone	50	BQL
37	Methyl-t-butylether	5	BQL
38	4-Methyl-2-pentanone	50	BQL
39	Styrene	5	BQL
40	Vinyl Acetate	50	BQL
41	Xylenes (Total)	5	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	101 %
Toluene-d8	108 %
Bromofluorobenzene	97 %

Comments:

BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
Dilution factor adjusted for % moisture.
J = Approximate result. Quantitation below calibration.
Corresponding Sample: R117C-003-02

Doc# MSF10900.MA



Printed on 06/28/2006



IEA
An Aquarion Company

Analysis Report: EPA Method 8270A
(PAGE 1 OF 2 PAGES)

Client:	Raytheon - RESD	IEA ID:	R117C-003-01
Project:	BLD. 3 SUBSURFACE	Sample:	PIT 3-1-386
Report Date:	06/30/95	Type:	Soil
Collected:	06/14/95	Container:	Glass
Received:	06/15/95		
Extracted:	06/20/95		
Analyzed:	06/26/95		
By:	MEW	Dilution Factor:	1.1

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Acenaphthene	363	BQL
2	Acenaphthylene	363	BQL
3	Aniline	1815	BQL
4	Anthracene	363	BQL
5	Benzoic acid	1815	BQL
6	Benzo (a) anthracene	363	BQL
7	Benzo (b) fluoranthene	363	BQL
8	Benzo (k) fluoranthene	363	BQL
9	Benzo (g, h, i) perylene	363	BQL
10	Benzo (a) pyrene	363	BQL
11	Benzyl alcohol	726	BQL
12	bis (2-Chloroethoxy) methane	363	BQL
13	bis (2-Chloroethyl) ether	363	BQL
14	bis (2-Chloroisopropyl) ether	363	BQL
15	bis (2-Ethylhexyl) phthalate	363	BQL
16	4-Bromophenyl phenyl ether	363	BQL
17	Benzyl butyl phthalate	363	BQL
18	4-Chloroaniline	726	BQL
19	2-Chloronaphthalene	363	BQL
20	4-Chloro-3-methylphenol	726	BQL
21	2-Chlorophenol	363	BQL
22	4-Chlorophenyl phenyl ether	363	BQL
23	Chrysene	363	BQL
24	Dibenzo (a, h) anthracene	363	BQL
25	Dibenzofuran	363	BQL
26	Di-n-butyl phthalate	363	BQL
27	1,3-Dichlorobenzene	363	BQL
28	1,4-Dichlorobenzene	363	BQL
29	1,2-Dichlorobenzene	363	BQL
30	1,2-Diphenylhydrazine	363	BQL
31	3,3'-Dichlorobenzidine	726	BQL
32	2,4-Dichlorophenol	363	BQL
33	Diethyl phthalate	363	BQL
34	2,4-Dimethylphenol	363	BQL
35	Dimethyl phthalate	363	BQL
36	2-Methyl-4,6-dinitrophenol	1815	BQL
37	2,4-Dinitrophenol	1815	BQL
38	2,4-Dinitrotoluene	363	BQL

Doc# MSF00200.MA



FORM NO. 100-101 (10/91)



Analysis Report: EPA Method 8270A
(PAGE 2 OF 2 PAGES)

Client: Raytheon - RESD IEA ID: R117C-003-01
Project: BLD. 3 SUBSURFACE Sample: PIT 3-1-386

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
39	2,6-Dinitrotoluene	363	BQL
40	Di-n-octylphthalate	363	BQL
41	Fluoranthene	363	BQL
42	Fluorene	363	BQL
43	Hexachlorobenzene	363	BQL
44	Hexachlorobutadiene	363	BQL
45	Hexachlorocyclopentadiene	363	BQL
46	Hexachloroethane	363	BQL
47	Indeno(1,2,3-cd)pyrene	363	BQL
48	Isophorone	363	BQL
49	2-Methylnaphthalene	363	BQL
50	2-Methylphenol (o-cresol)	363	BQL
51	4-Methylphenol (p-cresol)	363	BQL
52	Naphthalene	363	BQL
53	2-Nitroaniline	1815	BQL
54	3-Nitroaniline	1815	BQL
55	4-Nitroaniline	1815	BQL
56	Nitrobenzene	363	BQL
57	2-Nitrophenol	363	BQL
58	4-Nitrophenol	1815	BQL
59	N-Nitroso-di-n-propylamine	363	BQL
60	N-Nitrosodiphenylamine	363	BQL
61	Pentachlorophenol	1815	BQL
62	Phenanthrene	363	BQL
63	Phenol	363	BQL
64	Pyrene	363	BQL
65	1,2,4-Trichlorobenzene	363	BQL
66	2,4,5-Trichlorophenol	363	BQL
67	2,4,6-Trichlorophenol	363	BQL

Surrogate Standard Recovery:

2-Fluorophenol	97 %
Phenol-d6	83 %
Nitrobenzene-d5	69 %
2-Fluorobiphenyl	83 %
2,4,6-Tribromophenol	90 %
Terphenyl-d14	70 %

Comments:

PQL = Practical quantitation limit.
BQL = Below quantitation limit.

Doc# MSF00200.MA





IEA

An Aquarion Company

Analysis Report: EPA Method 8270A
(PAGE 1 OF 2 PAGES)

Client:	Raytheon - RESD	IEA ID:	R117C-003-02
Project:	BLD. 3 SUBSURFACE	Sample:	MH-13
Report Date:	06/30/95	Type:	Soil
Collected:	06/14/95	Container:	Glass
Received:	06/15/95		
Extracted:	06/20/95		
Analyzed:	06/26/95		
By:	MEW	Dilution Factor:	3.3

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Acenaphthene	1089	BQL
2	Acenaphthylene	1089	BQL
3	Aniline	5445	BQL
4	Anthracene	1089	BQL
5	Benzoic acid	5445	BQL
6	Benzo (a) anthracene	1089	BQL
7	Benzo (b) fluoranthene	1089	BQL
8	Benzo (k) fluoranthene	1089	BQL
9	Benzo (g, h, i) perylene	1089	BQL
10	Benzo (a) pyrene	1089	BQL
11	Benzyl alcohol	2178	BQL
12	bis (2-Chloroethoxy) methane	1089	BQL
13	bis (2-Chloroethyl) ether	1089	BQL
14	bis (2-Chloroisopropyl) ether	1089	BQL
15	bis (2-Ethylhexyl) phthalate	1089	1,400
16	4-Bromophenyl phenyl ether	1089	BQL
17	Benzyl butyl phthalate	1089	BQL
18	4-Chloroaniline	2178	BQL
19	2-Chloronaphthalene	1089	BQL
20	4-Chloro-3-methylphenol	2178	BQL
21	2-Chlorophenol	1089	BQL
22	4-Chlorophenyl phenyl ether	1089	BQL
23	Chrysene	1089	BQL
24	Dibenzo (a, h) anthracene	1089	BQL
25	Dibenzofuran	1089	BQL
26	Di-n-butyl phthalate	1089	BQL
27	1,3-Dichlorobenzene	1089	BQL
28	1,4-Dichlorobenzene	1089	BQL
29	1,2-Dichlorobenzene	1089	BQL
30	1,2-Diphenylhydrazine	1089	BQL
31	3,3'-Dichlorobenzidine	2178	BQL
32	2,4-Dichlorophenol	1089	BQL
33	Diethyl phthalate	1089	BQL
34	2,4-Dimethylphenol	1089	BQL
35	Dimethyl phthalate	1089	BQL
36	2-Methyl-4,6-dinitrophenol	5445	BQL
37	2,4-Dinitrophenol	5445	BQL
38	2,4-Dinitrotoluene	1089	BQL

Doc# MSF00200.MA



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IEA

An Aquarion Company

Analysis Report: EPA Method 8270A
(PAGE 2 OF 2 PAGES)

Client: Raytheon - RESD IEA ID: R117C-003-02
Project: BLD. 3 SUBSURFACE Sample: MH-13

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
39	2,6-Dinitrotoluene	1089	BQL
40	Di-n-octylphthalate	1089	BQL
41	Fluoranthene	1089	BQL
42	Fluorene	1089	BQL
43	Hexachlorobenzene	1089	BQL
44	Hexachlorobutadiene	1089	BQL
45	Hexachlorocyclopentadiene	1089	BQL
46	Hexachloroethane	1089	BQL
47	Indeno (1,2,3-cd) pyrene	1089	BQL
48	Isophorone	1089	BQL
49	2-Methylnaphthalene	1089	BQL
50	2-Methylphenol (o-cresol)	1089	BQL
51	4-Methylphenol (p-cresol)	1089	BQL
52	Naphthalene	1089	BQL
53	2-Nitroaniline	5445	BQL
54	3-Nitroaniline	5445	BQL
55	4-Nitroaniline	5445	BQL
56	Nitrobenzene	1089	BQL
57	2-Nitrophenol	1089	BQL
58	4-Nitrophenol	5445	BQL
59	N-Nitroso-di-n-propylamine	1089	BQL
60	N-Nitrosodiphenylamine	1089	BQL
61	Pentachlorophenol	5445	BQL
62	Phenanthrene	1089	BQL
63	Phenol	1089	BQL
64	Pyrene	1089	BQL
65	1,2,4-Trichlorobenzene	1089	BQL
66	2,4,5-Trichlorophenol	1089	BQL
67	2,4,6-Trichlorophenol	1089	BQL

Surrogate Standard Recovery:

2-Fluorophenol	72 %
Phenol-d6	81 %
Nitrobenzene-d5	46 %
2-Fluorobiphenyl	39 %
2,4,6-Tribromophenol	81 %
Terphenyl-d14	63 %

Comments:

PQL = Practical quantitation limit.
BQL = Below quantitation limit.

Doc# MSF00200.MA



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IEA

An Aquarion Company

149 Rangeway Road
N. Billerica, Massachusetts 01862
508 / 667-1400
Fax 508 / 667-7871

CHAIN OF CUSTODY RECORD

53 56905L00017

REGULATORY CLASSIFICATION - PLEASE SPECIFY

NPDES DRINKING WATER RCRA MCP OTHER _____

TURN AROUND

15 BUSINESS DAY
 10 BUSINESS DAY
 RUSH
 OTHER _____

COMPANY		CONTACT PERSON		PROJECT I.D.		PHONE #	FAX #	REQUESTED PARAMETERS				(COMMENTS)	
Raytheon ^{M/S} 4-2-263		Grace Hwang		Bld 3 Subsurface		508 440 3282	508 440 2051						
ADDRESS													
528 Boston Post Road													
CITY		STATE		ZIP									
Sudbury		Ma.		01776									
DATE	TIME	SAMPLE I.D.		MATRIX	CONTAINER TYPE	# OF CONTAINERS	PRESERVATIVES	PCBS	TPH-IR	RCRAS	TTG	8240	
6/14/95	1:00	PIT 3-1-386		Soil		2	-	✓	✓	✓	✓		
6/14/95	1:00	PIT 3-1-386		Soil		2	-					✓	
6/14/95	1:00	MH-13		Soil		2	-	✓	✓	✓			
6/14/95	1:00	MH-13		Soil		2	-					✓	

SAMPLED BY: Leonard R Leo III <small>(PRINT NAME)</small>		Leonard R Leo III <small>(SIGNATURE)</small>		IEA USE ONLY	
RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY	DATE / TIME	FIELD REMARKS:	
Leonard Leo	6/14/95 3:00pm	John Nanni	6/14/95 3PM		
John Nanni	6/15/95 2PM	Bill Doucette	6-15-95 2:00pm		
RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED FOR LAB BY	DATE / TIME		
Bill Doucette	6-15-95 1430	[Signature]	6-15-95 14:30		



IEA

An Aquarion Company

149 Rangeway Road
North Billerica, MA 01862

Phone 508-667-1400
Fax 508-667-7871

2, 23 (TOP)

Ms. Grace Hwang
Raytheon Company
528 Boston Post Road
Sudbury, MA 01776

July 21, 1995

Dear Ms. Hwang:

Please find enclosed the analytical results of the sample(s) received at our laboratory on June 15, 1995. This report contains sections addressing the following information at a minimum:

- analytical results
- chain-of-custody (if applicable)

Client Project #	N/A	Client Project Name	BLD: 3 SUBSURFACE
IEA Report #	R117C-004	Purchase Order #	535690SL00017

Copies of this analytical report and supporting data are maintained in our files for a minimum of 3 years unless special arrangements are made. Unless specifically indicated, all analytical testing was performed at the IEA-Massachusetts laboratory.

We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (508) 667-1400 for any additional information. Thank you for utilizing our services and we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Sincerely,

Michael F. Wheeler, Ph.D.
Laboratory Director
IEA-Massachusetts

MW/smb

DOC# RPF00300.MA

Monroe,
Connecticut
203-261-4458

Sunrise,
Florida
305-846-1730

Schaumburg,
Illinois
708-705-0740

Whippany,
New Jersey
201-428-8181

Research Triangle Park,
North Carolina
919-677-0090



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IEA

An Aquarion Company

IEA LABORATORY RESULTS

Report Date: 07/21/95
 Client: Raytheon - RESD
 Project: BLD. 3 SUBSURFACE

Received Date: 06/15/95
 IEA Job Number: R117C-004

IEA Sample #	Client ID	Parameter	Leachate Result (mg/L)	PQL (mg/L)	Regulatory Limit (mg/L)	Date Analyzed
=====						
TCLP METALS:						
1	PIT/3-1-386	Arsenic	BQL	0.0050	5	07/17/95
1	PIT/3-1-386	Barium	0.53	0.20	100	07/19/95
1	PIT/3-1-386	Chromium	0.043	0.030	5	07/19/95
1	PIT/3-1-386	Lead	0.12	0.10	5	07/19/95
TCLP METALS:						
2	MH-13	Arsenic	BQL	0.0050	5	07/17/95
2	MH-13	Barium	3.03	0.20	100	07/19/95
2	MH-13	Cadmium	0.071	0.010	1	07/19/95
2	MH-13	Chromium	0.079	0.030	5	07/19/95
2	MH-13	Lead	BQL	0.10	5	07/19/95
2	MH-13	Mercury	BQL	0.00050	0.2	07/12/95
2	MH-13	Silver	BQL	0.020	5	07/19/95

COMMENTS:

PQL = Practical Quantitation Limit.
 BQL = Below Quantitation Limit.

RESTCLP2 Rev. 102893



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IEA

An Aquarion Company

149 Rangeway Road
North Billerica, MA 01862

Phone 508-667-1400
Fax 508-667-7871

Mr. Mark Thompson
Laidlaw Environmental
221 Sutton Street
N. Andover, MA 01810

July 28, 1995

Dear Mr. Thompson:

Please find enclosed the analytical results of the sample(s) received at our laboratory on July 10, 1995. This report contains sections addressing the following information at a minimum:

- analytical results
- chain-of-custody (if applicable)

Client Project #	41508	Client Project Name	N/A
IEA Report #	L114-002	Purchase Order #	N/A

Copies of this analytical report and supporting data are maintained in our files for a minimum of 3 years unless special arrangements are made. Unless specifically indicated, all analytical testing was performed at the IEA-Massachusetts laboratory.

We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (508) 667-1400 for any additional information. Thank you for utilizing our services and we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Sincerely,

Michael F. Wheeler, Ph.D.
Laboratory Director
IEA-Massachusetts

MW/smb

DOC# RPP00300.MA

Monroe,
Connecticut
203-261-4458

Sunrise,
Florida
305-846-1730

Schaumburg,
Illinois
708-705-0740

Whippany,
New Jersey
201-428-8181

Research Triangle Park,
North Carolina
919-677-0090



SUBCONTRACT/INTERLABORATORY NOTIFICATION

Report Date: 07/26/95
Client: Laidlaw Environmental
Project: 41508

Received Date: 07/10/95
IEA Job Number: L114-002

A portion of the analytical work for this project was performed at another laboratory. Analytical methods conducted within the IEA Network are subject to uniform corporate quality control procedures. Non-network laboratories are selected on the basis of appropriate certification. The following parameters were analyzed at the indicated labs.

Subcontract Laboratory

Parameter

Waste Water Environmental Management
IEA-Connecticut
IEA-Connecticut
IEA-Connecticut
IEA-Connecticut
IEA-Connecticut

Oil & Grease-Grav
Barium
Cadmium
Chromium
Lead
Silver



IEA LABORATORY RESULTS

Report Date: 07/31/95
 Client: Laidlaw Environmental
 Project: 41508

Received Date: 07/10/95
 IEA Job Number: L114-002

IEA Sample #	Client ID	Parameter	Results	Units	PQL	Date Analyzed

		TOTAL METALS				
1	41508	Mercury	1.81	mg/kg (dry)	0.14	07/26/95
1	41508	Silver	31.7	mg/kg (dry)	2.0	07/27/95
1	41508	Arsenic	11.1	mg/kg (dry)	0.50	07/26/95
1	41508	Barium	2,210	mg/kg (dry)	10	07/27/95
1	41508	Cadmium	35.2	mg/kg (dry)	1.0	07/27/95
1	41508	Chromium	25,200	mg/kg (dry)	30	07/27/95
1	41508	Lead	666	mg/kg (dry)	10	07/27/95
1	41508	Selenium	BQL	mg/kg (dry)	1.3	07/26/95

COMMENTS:

PQL = Practical Quantitation Limit
 BQL = Below Quantitation Limit

Result3.wk1 Rev. 041393



IEA LABORATORY RESULTS

Report Date: 07/26/95
 Client: Laidlaw Environmental
 Project: 41508

Received Date: 07/10/95
 IEA Job Number: L114-002

IEA Sample #	Client ID	Parameter	Leachate Result (mg/L)	PQL (mg/L)	Regulatory Limit (mg/L)	Date Analyzed

TCLP METALS:						
1	41508	Arsenic	BQL	0.0050	5	07/18/95
1	41508	Barium	1.11	0.20	100	07/19/95
1	41508	Cadmium	0.026	0.010	1	07/19/95
1	41508	Chromium	0.033	0.030	5	07/19/95
1	41508	Lead	0.18	0.10	5	07/19/95
1	41508	Mercury	BQL	0.00050	0.2	07/18/95
1	41508	Selenium	BQL	0.0050	1	07/18/95
1	41508	Silver	BQL	0.020	5	07/19/95

COMMENTS:

PQL = Practical Quantitation Limit.
 BQL = Below Quantitation Limit.



IEA

An Aquarion Company

Analysis Report: EPA Method 8080A
Aroclors

Client:	Laidlaw Environmental	IEA ID:	L114-002-01
Project:	40408	Sample:	41508
Report Date:	07/19/95	Type:	Soil
Collected:	07/10/95	Container:	Glass
Received:	07/10/95		
Extracted:	07/17/95		
Analyzed:	07/18/95		
By:	GAM		

Dilution Factor: 10

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Aroclor 1016	1000	BQL
2	Aroclor 1221	1000	BQL
3	Aroclor 1232	1000	BQL
4	Aroclor 1242	1000	BQL
5	Aroclor 1248	1000	BQL
6	Aroclor 1254	1000	BQL
7	Aroclor 1260	1000	6,700
			2,000

Surrogate Standard Recovery:

Tetrachloro-meta-xylene 95 %

Comments:

BQL = Below Quantitation Limit.
 PQL = Practical Quantitation Limit.
 Quantitation limit elevated due to extract dilution prior to analysis.
 Extract diluted due to the presence of non-target compounds.



IEA

An Aquarion Company

Analysis Report: EPA Method 8240A
(PAGE 1 OF 2 PAGES)

Client:	Laidlaw Environmental	IEA ID:	L114-002-01
Project:	41508	Sample:	41508
Report Date:	07/18/95	Type:	Soil
Collected:	07/10/95	Container:	Glass
Received:	07/10/95		
Analyzed:	07/15/95		
By:	GMT	Dilution Factor:	2.8

Priority Pollutant Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene	14	
2	Bromodichloromethane	14	BQL
3	Bromoform	14	BQL
4	Bromomethane	14	BQL
5	Carbon tetrachloride	28	BQL
6	Chlorobenzene	14	BQL
7	Chloroethane	14	BQL
8	2-Chloroethylvinyl ether	28	BQL
9	Chloroform	14	BQL
10	Chloromethane	14	BQL
11	Dibromochloromethane	28	BQL
12	1,2-Dichlorobenzene	14	BQL
13	1,3-Dichlorobenzene	14	BQL
14	1,4-Dichlorobenzene	14	BQL
15	1,1-Dichloroethane	14	BQL
16	1,2-Dichloroethane	14	BQL
17	1,1-Dichloroethene	14	BQL
18	1,2-Dichloroethene (Total)	14	BQL
19	1,2-Dichloropropane	14	BQL
20	cis-1,3-Dichloropropene	14	BQL
21	trans-1,3-Dichloropropene	14	BQL
22	Ethylbenzene	14	BQL
23	Methylene chloride	14	BQL
24	1,1,2,2-Tetrachloroethane	14	18B
25	Tetrachloroethene	14	BQL
26	Toluene	14	BQL
27	1,1,1-Trichloroethane	14	BQL
28	1,1,2-Trichloroethane	14	BQL
29	Trichloroethene	14	BQL
30	Trichlorofluoromethane	14	BQL
31	Vinyl chloride	28	BQL

Doc# MSF10900.MA



IEA
An Aquarion Company

Analysis Report: EPA Method 8240A
(PAGE 2 OF 2 PAGES)

Client: Laidlaw Environmental IEA ID: L114-002-01
Project: 41508 Sample: 41508

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
Other TCL Compounds:			
32	Acetone	280	BQL
33	2-Butanone	280	BQL
34	Carbon disulfide	14	BQL
35	1,2-Dibromoethane	14	BQL
36	2-Hexanone	140	BQL
37	Methyl-t-butylether	14	BQL
38	4-Methyl-2-pentanone	140	BQL
39	Styrene	14	BQL
40	Vinyl Acetate	140	BQL
41	Xylenes (Total)	14	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	97 %
Toluene-d8	110 %
Bromofluorobenzene	85 %

Comments:

BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
Dilution factor adjusted for % moisture.
B = Compound in blank



IEA

An Aquarion Company

Analysis Report: EPA Method 8240A
(PAGE 1 OF 2 PAGES)

Client:
Project:
Report Date: 07/18/95
Collected:
Received:
Analyzed: 07/15/95
By: GMT

IEA ID: Method Blank (07/15)
Sample:
Type: Soil
Container:

Dilution Factor: 1

Priority Pollutant Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene		
2	Bromodichloromethane	5	BQL
3	Bromoform	5	BQL
4	Bromomethane	5	BQL
5	Carbon tetrachloride	10	BQL
6	Chlorobenzene	5	BQL
7	Chloroethane	5	BQL
8	2-Chloroethylvinyl ether	10	BQL
9	Chloroform	5	BQL
10	Chloromethane	5	BQL
11	Dibromochloromethane	10	BQL
12	1,2-Dichlorobenzene	5	BQL
13	1,3-Dichlorobenzene	5	BQL
14	1,4-Dichlorobenzene	5	BQL
15	1,1-Dichloroethane	5	BQL
16	1,2-Dichloroethane	5	BQL
17	1,1-Dichloroethene	5	BQL
18	1,2-Dichloroethene (Total)	5	BQL
19	1,2-Dichloropropane	5	BQL
20	cis-1,3-Dichloropropene	5	BQL
21	trans-1,3-Dichloropropene	5	BQL
22	Ethylbenzene	5	BQL
23	Methylene chloride	5	BQL
24	1,1,2,2-Tetrachloroethane	5	6B
25	Tetrachloroethene	5	BQL
26	Toluene	5	BQL
27	1,1,1-Trichloroethane	5	BQL
28	1,1,2-Trichloroethane	5	BQL
29	Trichloroethene	5	BQL
30	Trichlorofluoromethane	5	BQL
31	Vinyl chloride	5	BQL
		10	BQL



IEA
An Aquarion Company

Analysis Report: EPA Method 8240A
(PAGE 2 OF 2 PAGES)

Client:
Project:

IEA ID: Method Blank (07/15)
Sample:

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
Other TCL Compounds:			
32	Acetone		
33	2-Butanone	100	BQL
34	Carbon disulfide	100	BQL
35	1,2-Dibromoethane	5	BQL
36	2-Hexanone	5	BQL
37	Methyl-t-butylether	50	BQL
38	4-Methyl-2-pentanone	5	BQL
39	Styrene	50	BQL
40	Vinyl Acetate	5	BQL
41	Xylenes (Total)	50	BQL
		5	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	99 %
Toluene-d8	114 %
Bromofluorobenzene	97 %

Comments:

BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
Dilution factor adjusted for % moisture.
Corresponding Sample: L114-002-01



IEA

An Aquarion Company

Analysis Report: EPA Method 8270A
(PAGE 1 OF 2 PAGES)

Client:	Laidlaw Environmental	IEA ID:	L114-002-01
Project:	41508	Sample:	41508
Report Date:	07/18/95	Type:	Soil
Collected:	07/10/95	Container:	Glass
Received:	07/10/95		
Extracted:	07/13/95		
Analyzed:	07/14/95		
By:	MEW		

Dilution Factor: 2.8

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Acenaphthene	924	BQL
2	Acenaphthylene	924	BQL
3	Aniline	4620	BQL
4	Anthracene	924	BQL
5	Benzoic acid	4620	BQL
6	Benzo(a)anthracene	924	BQL
7	Benzo(b)fluoranthene	924	BQL
8	Benzo(k)fluoranthene	924	BQL
9	Benzo(g,h,i)perylene	924	BQL
10	Benzo(a)pyrene	924	BQL
11	Benzyl alcohol	1848	BQL
12	bis(2-Chloroethoxy)methane	924	BQL
13	bis(2-Chloroethyl)ether	924	BQL
14	bis(2-Chloroisopropyl)ether	924	BQL
15	bis(2-Ethylhexyl)phthalate	924	BQL
16	4-Bromophenyl phenyl ether	924	BQL
17	Benzyl butyl phthalate	924	BQL
18	4-Chloroaniline	1848	BQL
19	2-Chloronaphthalene	924	BQL
20	4-Chloro-3-methylphenol	1848	BQL
21	2-Chlorophenol	924	BQL
22	4-Chlorophenyl phenyl ether	924	BQL
23	Chrysene	924	BQL
24	Dibenzo(a,h)anthracene	924	BQL
25	Dibenzofuran	924	BQL
26	Di-n-butyl phthalate	924	BQL
27	1,3-Dichlorobenzene	924	BQL
28	1,4-Dichlorobenzene	924	BQL
29	1,2-Dichlorobenzene	924	BQL
30	1,2-Diphenylhydrazine	924	BQL
31	3,3'-Dichlorobenzidine	1848	BQL
32	2,4-Dichlorophenol	924	BQL
33	Diethyl phthalate	924	BQL
34	2,4-Dimethylphenol	924	BQL
35	Dimethyl phthalate	924	BQL
36	2-Methyl-4,6-dinitrophenol	4620	BQL
37	2,4-Dinitrophenol	4620	BQL
38	2,4-Dinitrotoluene	924	BQL



IEA
An Aquarion Company

Analysis Report: EPA Method 8270A
(PAGE 2 OF 2 PAGES)

Client: Laidlaw Environmental
Project: 41508

IEA ID: L114-002-01
Sample: 41508

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
39	2,6-Dinitrotoluene		
40	Di-n-octylphthalate	924	BQL
41	Fluoranthene	924	BQL
42	Fluorene	924	BQL
43	Hexachlorobenzene	924	BQL
44	Hexachlorobutadiene	924	BQL
45	Hexachlorocyclopentadiene	924	BQL
46	Hexachloroethane	924	BQL
47	Indeno(1,2,3-cd)pyrene	924	BQL
48	Isophorone	924	BQL
49	2-Methylnaphthalene	924	BQL
50	2-Methylphenol (o-cresol)	924	BQL
51	4-Methylphenol (p-cresol)	924	BQL
52	Naphthalene	924	BQL
53	2-Nitroaniline	924	BQL
54	3-Nitroaniline	4620	BQL
55	4-Nitroaniline	4620	BQL
56	Nitrobenzene	4620	BQL
57	2-Nitrophenol	924	BQL
58	4-Nitrophenol	924	BQL
59	N-Nitroso-di-n-propylamine	4620	BQL
60	N-Nitrosodiphenylamine	924	BQL
61	Pentachlorophenol	924	BQL
62	Phenanthrene	4620	BQL
63	Phenol	924	BQL
64	Pyrene	924	BQL
65	1,2,4-Trichlorobenzene	924	BQL
66	2,4,5-Trichlorophenol	924	BQL
67	2,4,6-Trichlorophenol	924	BQL

Surrogate Standard Recovery:

2-Fluorophenol	
Phenol-d6	48 %
Nitrobenzene-d5	52 %
2-Fluorobiphenyl	40 %
2,4,6-Tribromophenol	48 %
Terphenyl-d14	78 %
	68 %

Comments:

PQL = Practical quantitation limit.
BQL = Below quantitation limit.



IEA
An Aquarion Company

149 Rangeway Road
N. Billerica, Massachusetts 01862
508 / 867-1400
Fax 508 / 667-7871

CHAIN OF CUSTODY RECORD

City well sediment

REGULATORY CLASSIFICATION - PLEASE SPECIFY

NPDES DRINKING WATER RCRA MCP OTHER

REQUIRED

CUST. P.O. #

IEA QUOTE #

TURN AROUND

15 BUSINESS DAY
 10 BUSINESS DAY
 RUSH **ASAP**
 OTHER

COMPANY: **LAIDLAW ENVIRONMENTAL**

CONTACT PERSON: **Mark Thompson**

PROJECT I.D.: **41508**

PHONE #: **508-683-1002**

FAX #:

ADDRESS: **221 Sutton St.**

CITY: **N. Andover** STATE: **MA** ZIP: **01845**

DATE	TIME	SAMPLE I.D.	MATRIX	CONTAINER TYPE	# OF CONTAINERS	PRESERVATIVES	REQUESTED PARAMETERS							(COMMENTS)
							PCP RCRA B	PCB	Oil Grav. Leachate	VOC's BTEX	TTO's BTEX			
7/10/95	8:30 AM	41508-01		G	3	HCL	X	X	X	X	X			
10/1/95	8 AM	41508-02		G	3	HCL	X	X	X	X	X			
10/1/95	8 AM	41508-03		G	3	HCL	X	X	X	X	X			

EMPLOYED BY: **Scott Kendall** (PRINT NAME)

SIGNATURE: *Scott Kendall*

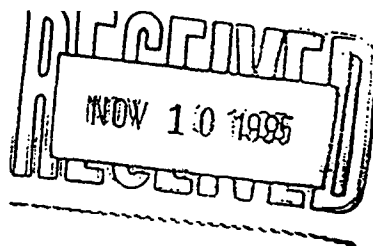
ACQUIRED BY (SIGNATURE)	DATE / TIME	RECEIVED BY	DATE / TIME
<i>Scott Kendall</i>	7/10/95 11:30	<i>Kenn Brown</i>	7/10/95 11:00 AM
ACQUIRED BY (SIGNATURE)	DATE / TIME	RECEIVED FOR LAB BY	DATE / TIME
<i>m d</i>	<i>7/10/95</i>		

IEA USE ONLY

FIELD REMARKS

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220



MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

CERTIFICATE OF ANALYSIS

Client: ERM-New England Laboratory Job Number: L9508187
Address: 205 Portland Street Invoice Number: 78670
Boston, MA 02114 Date Received: 25-OCT-95
Attn: Chris McKenna Date Reported: 08-NOV-95
Project Number: 143-40 Delivery Method: Alpha
Site: Raytheon

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9508187-01	SD-1	Wayland, MA
L9508187-02	SB-3 S1	Wayland, MA
L9508187-03	SB-8 S1	Wayland, MA
L9508187-04	SB-7 S4	Wayland, MA
L9508187-05	SB-6 S5	Wayland, MA
L9508187-06	SB-2 S2	Wayland, MA

Authorized by:

A handwritten signature in dark ink, appearing to read "Scott McLean". The signature is written over a horizontal line.

Scott McLean Laboratory Director

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9508187-02
SB-3 S1

PARAMETER	RESULT	UNITS	SDL	REF	METHOD	DATES PREP ANALYSIS	I
Volatile Organics by GC/MS				1	8260	02-Nov 02-Nov D	
Methylene chloride	ND	ug/kg	42.				
1,1-Dichloroethane	ND	ug/kg	13.				
Chloroform	ND	ug/kg	13.				
Carbon tetrachloride	ND	ug/kg	8.5				
1,2-Dichloropropane	ND	ug/kg	30.				
Dibromochloromethane	ND	ug/kg	8.5				
1,1,2-Trichloroethane	ND	ug/kg	13.				
2-Chloroethylvinyl ether	ND	ug/kg	85.				
Tetrachloroethene	ND	ug/kg	13.				
Chlorobenzene	ND	ug/kg	30.				
Trichlorofluoromethane	ND	ug/kg	42.				
1,2-Dichloroethane	ND	ug/kg	13.				
1,1,1-Trichloroethane	ND	ug/kg	8.5				
Bromodichloromethane	ND	ug/kg	8.5				
trans-1,3-Dichloropropene	ND	ug/kg	13.				
cis-1,3-Dichloropropene	ND	ug/kg	8.5				
Bromoform	ND	ug/kg	8.5				
1,1,2,2-Tetrachloroethane	ND	ug/kg	8.5				
Benzene	ND	ug/kg	8.5				
Toluene	ND	ug/kg	13.				
Ethylbenzene	ND	ug/kg	8.5				
Chloromethane	ND	ug/kg	85.				
Bromomethane	ND	ug/kg	17.				
Vinyl chloride	ND	ug/kg	30.				
Chloroethane	ND	ug/kg	17.				
1,1-Dichloroethene	ND	ug/kg	13.				
trans-1,2-Dichloroethene	ND	ug/kg	13.				
Trichloroethene	ND	ug/kg	8.5				
1,2-Dichlorobenzene	ND	ug/kg	85.				
1,3-Dichlorobenzene	ND	ug/kg	85.				
1,4-Dichlorobenzene	ND	ug/kg	85.				
Methyl tert butyl ether	ND	ug/kg	85.				
Xylenes	ND	ug/kg	8.5				
cis-1,2-Dichloroethene	ND	ug/kg	8.5				
Dibromomethane	ND	ug/kg	85.				
1,4-Dichlorobutane	ND	ug/kg	85.				
Iodomethane	ND	ug/kg	85.				
1,2,3-Trichloropropane	ND	ug/kg	85.				
Styrene	ND	ug/kg	8.5				
Dichlorodifluoromethane	ND	ug/kg	85.				
Acetone	ND	ug/kg	85.				
Carbon Disulfide	ND	ug/kg	85.				
2-Butanone	ND	ug/kg	38.				
Vinyl Acetate	ND	ug/kg	85.				
4-Methyl-2-pentanone	ND	ug/kg	85.				
2-Hexanone	ND	ug/kg	85.				
Ethyl methacrylate	ND	ug/kg	85.				
Acrolein	ND	ug/kg	210				

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9508187-02
SB-3 S1

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	02-Nov 02-Nov	DB
Acrylonitrile	ND	ug/kg	85.				
Bromochloromethane	ND	ug/kg	42.				
2,2-Dichloropropane	ND	ug/kg	42.				
1,2-Dibromoethane	ND	ug/kg	42.				
1,3-Dichloropropane	ND	ug/kg	42.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	42.				
Bromobenzene	ND	ug/kg	42.				
n-Butylbenzene	ND	ug/kg	42.				
sec-Butylbenzene	ND	ug/kg	42.				
tert-Butylbenzene	ND	ug/kg	42.				
o-Chlorotoluene	ND	ug/kg	42.				
p-Chlorotoluene	ND	ug/kg	42.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	42.				
Hexachlorobutadiene	ND	ug/kg	42.				
Isopropylbenzene	ND	ug/kg	42.				
p-Isopropyltoluene	ND	ug/kg	42.				
Naphthalene	ND	ug/kg	42.				
n-Propylbenzene	ND	ug/kg	42.				
1,2,3-Trichlorobenzene	ND	ug/kg	42.				
1,2,4-Trichlorobenzene	ND	ug/kg	42.				
1,3,5-Trimethylbenzene	ND	ug/kg	42.				
1,2,4-Trimethylbenzene	ND	ug/kg	42.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	42.				
Ethyl ether	ND	ug/kg	210				

SURROGATE RECOVERY

Toluene-d8	106.	%
4-Bromofluorobenzene	80.0	%
Dibromofluoromethane	121.	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9508187-02
SB-3 S1

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	II
Semi-volatile Organics by GC/MS				1	8270	31-Oct 08-Nov 10	
Acenaphthene	ND	ug/kg	1200				
Benzidine	ND	ug/kg	10000				
1,2,4-Trichlorobenzene	ND	ug/kg	1500				
Hexachlorobenzene	ND	ug/kg	1200				
Bis(2-chloroethyl) ether	ND	ug/kg	1300				
2-Chloronaphthalene	ND	ug/kg	1300				
1,2-Dichlorobenzene	ND	ug/kg	1200				
1,3-Dichlorobenzene	ND	ug/kg	1400				
1,4-Dichlorobenzene	ND	ug/kg	1000				
3,3'-Dichlorobenzidine	ND	ug/kg	2700				
2,4-Dinitrotoluene	ND	ug/kg	1500				
2,6-Dinitrotoluene	ND	ug/kg	1200				
Azobenzene	ND	ug/kg	1200				
Fluoranthene	ND	ug/kg	1200				
4-Chlorophenyl phenyl ether	ND	ug/kg	1300				
4-Bromophenyl phenyl ether	ND	ug/kg	1200				
Bis(2-chloroisopropyl) ether	ND	ug/kg	850				
Bis(2-chloroethoxy) methane	ND	ug/kg	930				
Hexachlorobutadiene	ND	ug/kg	3400				
Hexachlorocyclopentadiene	ND	ug/kg	3200				
Hexachloroethane	ND	ug/kg	2100				
Isophorone	ND	ug/kg	1000				
Naphthalene	ND	ug/kg	930				
Nitrobenzene	ND	ug/kg	810				
NitrosoDiphenylAmine (NDPA) /DPA	ND	ug/kg	1000				
n-Nitrosodi-n-propylamine	ND	ug/kg	1100				
Bis(2-ethylhexyl) phthalate	ND	ug/kg	3900				
Butyl benzyl phthalate	ND	ug/kg	850				
Di-n-butylphthalate	ND	ug/kg	4200				
Di-n-octylphthalate	ND	ug/kg	1000				
Diethyl phthalate	ND	ug/kg	2100				
Dimethyl phthalate	ND	ug/kg	2100				
Benzo (a) anthracene	ND	ug/kg	1400				
Benzo (a) pyrene	ND	ug/kg	1600				
Benzo (b) fluoranthene	ND	ug/kg	1500				
Benzo (k) fluoranthene	ND	ug/kg	1500				
Chrysene	ND	ug/kg	1400				
Acenaphthylene	ND	ug/kg	1100				
Anthracene	ND	ug/kg	1000				
Benzo (ghi) perylene	ND	ug/kg	2100				
Fluorene	ND	ug/kg	1200				
Phenanthrene	ND	ug/kg	1100				
Dibenzo (a, h) anthracene	ND	ug/kg	2000				
Indeno (1, 2, 3-cd) pyrene	ND	ug/kg	2000				
Pyrene	ND	ug/kg	1200				
Aniline	ND	ug/kg	4200				
4-Chloroaniline	ND	ug/kg	1700				
1-Methylnaphthalene	ND	ug/kg	3000				

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9508187-02
SB-3 S1

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES	ID	
						PREP ANALYSIS		
Semi-volatile Organics by GC/MS continued							31-Oct 08-Nov	IG
				1	8270			
2-Nitroaniline	ND	ug/kg	1400					
3-Nitroaniline	ND	ug/kg	2500					
4-Nitroaniline	ND	ug/kg	2500					
Dibenzofuran	ND	ug/kg	850					
a, a-Dimethylphenethylamine	ND	ug/kg	19000					
Hexachloropropene	ND	ug/kg	8500					
Nitrosodi-n-butylamine	ND	ug/kg	2000					
2-Methylnaphthalene	ND	ug/kg	760					
Tetrachlorobenzene	ND	ug/kg	5300					
Pentachlorobenzene	ND	ug/kg	5400					
a-Naphthalamine	ND	ug/kg	8500					
b-Naphthalamine	ND	ug/kg	3900					
Acetophenetidide	ND	ug/kg	4200					
Dimethoate	ND	ug/kg	8500					
4-Aminobiphenyl	ND	ug/kg	4400					
Pentachloronitrobenzene	ND	ug/kg	1700					
Isodrin	ND	ug/kg	1600					
p-Dimethylaminoazobenzene	ND	ug/kg	3100					
Chlorobenzilate	ND	ug/kg	6800					
Bis (2-ethylhexyl) adipate	ND	ug/kg	1400					
3-Methylcholanthrene	ND	ug/kg	8500					
Ethylmethanesulfonate	ND	ug/kg	6200					
Acetophenone	ND	ug/kg	2000					
Nitrosodipiperidine	ND	ug/kg	8500					
7,12-Dimethylbenz (a) anthracene	ND	ug/kg	10000					
n-Nitrosodimethylamine	ND	ug/kg	17000					
2,4,6-Trichlorophenol	ND	ug/kg	850					
p-Chloro-m-cresol	ND	ug/kg	1300					
2-Chlorophenol	ND	ug/kg	1400					
2,4-Dichlorophenol	ND	ug/kg	4200					
2,4-Dimethylphenol	ND	ug/kg	1000					
2-Nitrophenol	ND	ug/kg	1400					
4-Nitrophenol	ND	ug/kg	5100					
2,4-Dinitrophenol	ND	ug/kg	6400					
4,6-Dinitro-o-cresol	ND	ug/kg	7400					
Pentachlorophenol	ND	ug/kg	3000					
Phenol	ND	ug/kg	3600					
Cresol, Total	ND	ug/kg	3100					
2,4,5-Trichlorophenol	ND	ug/kg	1200					
2,6-Dichlorophenol	ND	ug/kg	2000					
Benzoic Acid	ND	ug/kg	17000					
Benzyl Alcohol	ND	ug/kg	2500					

SURROGATE RECOVERY

2-Fluorophenol	100.	%
Phenol-d6	87.0	%
Nitrobenzene-d5	100.	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9508187-02
SB-3 S1

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	II
Semi-volatile Organics by GC/MS continued				1	8270	31-Oct-08-Nov	I
2-Fluorobiphenyl	86.0	%					
2,4,6-Tribromophenol	74.0	%					
4-Terphenyl-d14	127.	%					
Polychlorinated Biphenyls				1	8080	31-Oct-03-Nov	D
Arochlor 1221	ND	ug/kg	420				
Arochlor 1232	ND	ug/kg	420				
Arochlor 1242/PCB 1016	ND	ug/kg	420				
Arochlor 1248	ND	ug/kg	420				
Arochlor 1254	ND	ug/kg	420				
Arochlor 1260	ND	ug/kg	420				
Arochlor 1262	ND	ug/kg	420				
Arochlor 1268	ND	ug/kg	420				
SURROGATE RECOVERY							
2,4,5,6-Tetrachloro-m-xylene	78.0	%					
Decachlorobiphenyl	69.0	%					
Organochlorine Pesticides				1	8080	31-Oct-03-Nov	D
Delta-BHC	ND	ug/kg	85.				
Lindane	ND	ug/kg	85.				
Alpha-BHC	ND	ug/kg	85.				
Beta-BHC	ND	ug/kg	85.				
Heptachlor	ND	ug/kg	85.				
Aldrin	ND	ug/kg	85.				
Heptachlor epoxide	ND	ug/kg	85.				
Endrin	ND	ug/kg	85.				
Endrin aldehyde	ND	ug/kg	85.				
Endrin ketone	ND	ug/kg	85.				
Dieldrin	ND	ug/kg	85.				
4,4'-DDE	ND	ug/kg	85.				
4,4'-DDD	ND	ug/kg	85.				
4,4'-DDT	ND	ug/kg	85.				
Endosulfan I	ND	ug/kg	85.				
Endosulfan II	ND	ug/kg	85.				
Endosulfan sulfate	ND	ug/kg	85.				
Methoxychlor	ND	ug/kg	85.				
Toxaphene	ND	ug/kg	170				
Chlordane	ND	ug/kg	85.				
SURROGATE RECOVERY							
2,4,5,6-Tetrachloro-m-xylene	78.0	%					
Decachlorobiphenyl	69.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9508187-03
SB-8 S1

PARAMETER	RESULT	UNITS	SDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS				1	8260	02-Nov 02-Nov	DF
Methylene chloride	ND	ug/kg	61.				
1,1-Dichloroethane	ND	ug/kg	18.				
Chloroform	ND	ug/kg	18.				
Carbon tetrachloride	ND	ug/kg	12.				
1,2-Dichloropropane	ND	ug/kg	43.				
Dibromochloromethane	ND	ug/kg	12.				
1,1,2-Trichloroethane	ND	ug/kg	18.				
2-Chloroethylvinyl ether	ND	ug/kg	120				
Tetrachloroethene	90.	ug/kg	18.				
Chlorobenzene	ND	ug/kg	43.				
Trichlorofluoromethane	ND	ug/kg	61.				
1,2-Dichloroethane	ND	ug/kg	18.				
1,1,1-Trichloroethane	ND	ug/kg	12.				
Bromodichloromethane	ND	ug/kg	12.				
trans-1,3-Dichloropropene	ND	ug/kg	18.				
cis-1,3-Dichloropropene	ND	ug/kg	12.				
Bromoform	ND	ug/kg	12.				
1,1,2,2-Tetrachloroethane	ND	ug/kg	12.				
Benzene	ND	ug/kg	12.				
Toluene	ND	ug/kg	18.				
Ethylbenzene	ND	ug/kg	12.				
Chloromethane	ND	ug/kg	120				
Bromomethane	ND	ug/kg	24.				
Vinyl chloride	ND	ug/kg	43.				
Chloroethane	ND	ug/kg	24.				
1,1-Dichloroethene	ND	ug/kg	18.				
trans-1,2-Dichloroethene	ND	ug/kg	18.				
Trichloroethene	ND	ug/kg	12.				
1,2-Dichlorobenzene	ND	ug/kg	120				
1,3-Dichlorobenzene	ND	ug/kg	120				
1,4-Dichlorobenzene	ND	ug/kg	120				
Methyl tert butyl ether	ND	ug/kg	120				
Xylenes	ND	ug/kg	12.				
cis-1,2-Dichloroethene	ND	ug/kg	12.				
Dibromomethane	ND	ug/kg	120				
1,4-Dichlorobutane	ND	ug/kg	120				
Iodomethane	ND	ug/kg	120				
1,2,3-Trichloropropane	ND	ug/kg	120				
Styrene	ND	ug/kg	12.				
Dichlorodifluoromethane	ND	ug/kg	120				
Acetone	ND	ug/kg	120				
Carbon Disulfide	ND	ug/kg	120				
2-Butanone	ND	ug/kg	55.				
Vinyl Acetate	ND	ug/kg	120				
4-Methyl-2-pentanone	ND	ug/kg	120				
2-Hexanone	ND	ug/kg	120				
Ethyl methacrylate	ND	ug/kg	120				
Acrolein	ND	ug/kg	300				

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

Laboratory Sample Number: L9508187-03
SB-8 S1

PARAMETER	RESULT	UNITS	LDL	REF	METHOD	DATES PREP ANALYSIS	ID
Volatile Organics by GC/MS continued				1	8260	02-Nov 02-Nov	DB
Acrylonitrile	ND	ug/kg	120				
Bromochloromethane	ND	ug/kg	61.				
2,2-Dichloropropane	ND	ug/kg	61.				
1,2-Dibromoethane	ND	ug/kg	61.				
1,3-Dichloropropane	ND	ug/kg	61.				
1,1,1,2-Tetrachloroethane	ND	ug/kg	61.				
Bromobenzene	ND	ug/kg	61.				
n-Butylbenzene	ND	ug/kg	61.				
sec-Butylbenzene	ND	ug/kg	61.				
tert-Butylbenzene	ND	ug/kg	61.				
o-Chlorotoluene	ND	ug/kg	61.				
p-Chlorotoluene	ND	ug/kg	61.				
1,2-Dibromo-3-chloropropane	ND	ug/kg	61.				
Hexachlorobutadiene	ND	ug/kg	61.				
Isopropylbenzene	ND	ug/kg	61.				
p-Isopropyltoluene	ND	ug/kg	61.				
Naphthalene	ND	ug/kg	61.				
n-Propylbenzene	ND	ug/kg	61.				
1,2,3-Trichlorobenzene	ND	ug/kg	61.				
1,2,4-Trichlorobenzene	110	ug/kg	61.				
1,3,5-Trimethylbenzene	ND	ug/kg	61.				
1,2,4-Trimethylbenzene	ND	ug/kg	61.				
trans-1,4-Dichloro-2-butene	ND	ug/kg	61.				
Ethyl ether	ND	ug/kg	300				
SURROGATE RECOVERY							
Toluene-d8	83.0	%					
4-Bromofluorobenzene	77.0	%					
Dibromofluoromethane	86.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9508187-03
SB-8 S1

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS
Semi-volatile Organics by GC/MS				1	8270	31-Oct 08-Nov
Acenaphthene	ND	ug/kg	620			
Benzidine	ND	ug/kg	5400			
1,2,4-Trichlorobenzene	5700	ug/kg	800			
Hexachlorobenzene	ND	ug/kg	620			
Bis(2-chloroethyl) ether	ND	ug/kg	670			
2-Chloronaphthalene	ND	ug/kg	670			
1,2-Dichlorobenzene	ND	ug/kg	620			
1,3-Dichlorobenzene	ND	ug/kg	710			
1,4-Dichlorobenzene	ND	ug/kg	540			
3,3'-Dichlorobenzidine	ND	ug/kg	1400			
2,4-Dinitrotoluene	ND	ug/kg	800			
2,6-Dinitrotoluene	ND	ug/kg	620			
Azobenzene	ND	ug/kg	620			
Fluoranthene	ND	ug/kg	620			
4-Chlorophenyl phenyl ether	ND	ug/kg	670			
4-Bromophenyl phenyl ether	ND	ug/kg	620			
Bis(2-chloroisopropyl) ether	ND	ug/kg	450			
Bis(2-chloroethoxy) methane	ND	ug/kg	490			
Hexachlorobutadiene	ND	ug/kg	1800			
Hexachlorocyclopentadiene	ND	ug/kg	1700			
Hexachloroethane	ND	ug/kg	1100			
Isophorone	ND	ug/kg	540			
Naphthalene	640	ug/kg	490			
Nitrobenzene	ND	ug/kg	420			
NitrosoDiphenylAmine (NDPA) /DPA	ND	ug/kg	540			
n-Nitrosodi-n-propylamine	ND	ug/kg	580			
Bis(2-ethylhexyl) phthalate	ND	ug/kg	7600			
Butyl benzyl phthalate	ND	ug/kg	450			
Di-n-butylphthalate	ND	ug/kg	5400			
Di-n-octylphthalate	ND	ug/kg	540			
Diethyl phthalate	ND	ug/kg	1100			
Dimethyl phthalate	ND	ug/kg	1100			
Benzo (a) anthracene	ND	ug/kg	450			
Benzo (a) pyrene	ND	ug/kg	850			
Benzo (b,k) fluoranthene	1500	ug/kg	800			
Chrysene	ND	ug/kg	710			
Acenaphthylene	ND	ug/kg	580			
Anthracene	ND	ug/kg	540			
Benzo (ghi) perylene	ND	ug/kg	1100			
Fluorene	ND	ug/kg	620			
Phenanthrene	ND	ug/kg	580			
Dibenzo (a, h) anthracene	ND	ug/kg	1100			
Indeno (1, 2, 3-cd) pyrene	ND	ug/kg	1100			
Pyrene	1200	ug/kg	620			
Aniline	ND	ug/kg	2200			
4-Chloroaniline	ND	ug/kg	890			
1-Methylnaphthalene	ND	ug/kg	1600			
2-Nitroaniline	ND	ug/kg	710			

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9508187-03
SB-8 S1

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	ID
Semi-volatile Organics by GC/MS continued				1	8270	31-Oct 08-Nov	IG
3-Nitroaniline	ND	ug/kg	1300				
4-Nitroaniline	ND	ug/kg	1300				
Dibenzofuran	ND	ug/kg	450				
a,a-Dimethylphenethylamine	ND	ug/kg	10000				
Hexachloropropene	ND	ug/kg	4500				
Nitrosodi-n-butylamine	ND	ug/kg	1100				
2-Methylnaphthalene	ND	ug/kg	400				
Tetrachlorobenzene	13000	ug/kg	2800				
Pentachlorobenzene	17000	ug/kg	2900				
a-Naphthalamine	ND	ug/kg	4500				
b-Naphthalamine	ND	ug/kg	2100				
Acetophenetidide	ND	ug/kg	2200				
Dimethoate	ND	ug/kg	4500				
4-Aminobiphenyl	ND	ug/kg	2300				
Pentachloronitrobenzene	ND	ug/kg	890				
Isodrin	ND	ug/kg	850				
p-Dimethylaminoazobenzene	ND	ug/kg	1600				
Chlorobenzilate	ND	ug/kg	3600				
Bis (2-ethylhexyl) adipate	ND	ug/kg	710				
3-Methylcholanthrene	ND	ug/kg	4500				
Ethylmethanesulfonate	ND	ug/kg	3300				
Acetophenone	ND	ug/kg	1100				
Nitrosodipiperidine	ND	ug/kg	4500				
7,12-Dimethylbenz (a) anthracene	ND	ug/kg	5400				
n-Nitrosodimethylamine	ND	ug/kg	8900				
2,4,6-Trichlorophenol	ND	ug/kg	450				
p-Chloro-m-cresol	ND	ug/kg	670				
2-Chlorophenol	ND	ug/kg	710				
2,4-Dichlorophenol	ND	ug/kg	2200				
2,4-Dimethylphenol	ND	ug/kg	540				
2-Nitrophenol	ND	ug/kg	710				
4-Nitrophenol	ND	ug/kg	2700				
2,4-Dinitrophenol	ND	ug/kg	3300				
4,6-Dinitro-o-cresol	ND	ug/kg	3900				
Pentachlorophenol	ND	ug/kg	1600				
Phenol	ND	ug/kg	1900				
Cresol, Total	ND	ug/kg	1600				
2,4,5-Trichlorophenol	ND	ug/kg	620				
2,6-Dichlorophenol	ND	ug/kg	1100				
Benzoic Acid	ND	ug/kg	8900				
Benzyl Alcohol	ND	ug/kg	1300				

SURROGATE RECOVERY

2-Fluorophenol	64.0	%
Phenol-d6	64.0	%
Nitrobenzene-d5	78.0	%
2-Fluorobiphenyl	78.0	%

Comments: Complete list of References and Glossary of Terms found in Addendum I

**ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS**

Laboratory Sample Number: L9508187-03
SB-8 S1

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS
Semi-volatile Organics by GC/MS continued						
				1	8270	31-Oct 08-Nov
2,4,6-Tribromophenol	55.0	%				
4-Terphenyl-d14	98.0	%				
Polychlorinated Biphenyls						
				1	8080	31-Oct 06-Nov
Arochlor 1221	ND	ug/kg	12000			
Arochlor 1232	ND	ug/kg	12000			
Arochlor 1242/PCB 1016	ND	ug/kg	12000			
Arochlor 1248	ND	ug/kg	12000			
Arochlor 1254	ND	ug/kg	12000			
Arochlor 1260	240000	ug/kg	12000			
Arochlor 1262	ND	ug/kg	12000			
Arochlor 1268	ND	ug/kg	12000			
Organochlorine Pesticides						
				1	8080	31-Oct 06-Nov
Delta-BHC	ND	ug/kg	2400			
Lindane	ND	ug/kg	2400			
Alpha-BHC	ND	ug/kg	2400			
Beta-BHC	ND	ug/kg	2400			
Heptachlor	ND	ug/kg	2400			
Aldrin	ND	ug/kg	2400			
Heptachlor epoxide	ND	ug/kg	2400			
Endrin	ND	ug/kg	2400			
Endrin aldehyde	ND	ug/kg	2400			
Endrin ketone	ND	ug/kg	2400			
Dieldrin	ND	ug/kg	2400			
4,4'-DDE	ND	ug/kg	2400			
4,4'-DDD	ND	ug/kg	2400			
4,4'-DDT	ND	ug/kg	2400			
Endosulfan I	ND	ug/kg	2400			
Endosulfan II	ND	ug/kg	2400			
Endosulfan sulfate	ND	ug/kg	2400			
Methoxychlor	ND	ug/kg	2400			
Toxaphene	ND	ug/kg	4900			
Chlordane	ND	ug/kg	2400			

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9508187-05
 SB-6 S5
 Sample Matrix: SOIL
 Condition of Sample: Satisfactory
 Number & Type of Containers: 1 Glass

Date Collected: 20-OCT-95
 Date Received : 25-OCT-95
 Date Reported : 08-NOV-95
 Field Prep: None

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES PREP ANALYSIS	II
Solids, Total	80.	%	0.10	3	2540B	06-Nov S	
Hydrocarbon Scan GC 8100 Modified				1	8100M	30-Oct 01-Nov DI	
Mineral Spirits	ND	mg/kg	100				
Gasoline	ND	mg/kg	100				
Fuel Oil #2/Diesel	ND	mg/kg	100				
Fuel Oil #4	ND	mg/kg	100				
Fuel Oil #6	ND	mg/kg	100				
Motor Oil	ND	mg/kg	100				
Kerosene	ND	mg/kg	100				
SURROGATE RECOVERY							
o-Terphenyl	69.0	%					

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L9508187

Parameter	Value 1	Value 2	RPD	Units
Total Metals	DUPLICATE for sample(s) 01-03			
Mercury, Total	ND	ND	NC	mg/kg

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L9508187

Parameter	% Recovery
Semi-volatile Organic by GC/MS LCS for sample(s) 01-03	
p-Chloro-m-cresol	87
2-Chlorophenol	70
4-Nitrophenol	85
Pentachlorophenol	100
Phenol	74
Acenaphthene	99
1,2,4-Trichlorobenzene	101
1,4-Dichlorobenzene	85
2,4-Dinitrotoluene	130
N-Nitrosodipropylamine	80
Pyrene	115
SURROGATE RECOVERY	
2-Fluorophenol	107
Phenol-d6	85
Nitrobenzene-d5	77
2-Fluorobiphenyl	74
2,4,6-Tribromophenol	63
4-Terphenyl-d14	81
Total Metals SPIKE for sample(s) 01-03	
Arsenic, Total	88
Barium, Total	89
Cadmium, Total	100
Chromium, Total	84
Lead, Total	112
Silver, Total	80
Total Metals SPIKE for sample(s) 01-03	
Mercury, Total	70

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH MS/MSD ANALYSIS

Laboratory Job Number: L9508187

Parameter	MS %	MSD %	RPD
Volatile Organics by GC/MS Spike Recovery MS/MSD for sample(s) 01-03			
1,1-Dichloroethene	79	87	10
Trichloroethene	93	94	1
Benzene	93	97	4
Toluene	98	99	1
Chlorobenzene	92	94	2
Semi-volatile Organic by GC/MS MS/MSD for sample(s) 01-03			
p-Chloro-m-cresol	61	70	14
2-Chlorophenol	64	74	14
4-Nitrophenol	6	20	108
Pentachlorophenol	12	13	8
Phenol	88	90	2
Acenaphthene	90	90	0
1,2,4-Trichlorobenzene	87	88	1
1,4-Dichlorobenzene	94	91	3
2,4-Dinitrotoluene	41	41	0
N-Nitrosodipropylamine	73	80	9
Pyrene	119	107	11
SURROGATE RECOVERY			
2-Fluorophenol	123	140	13
Phenol-d6	107	123	14
Nitrobenzene-d5	73	80	9
2-Fluorobiphenyl	83	91	9
2,4,6-Tribromophenol	46	52	12
4-Terphenyl-d14	86	92	7
Pesticide Spike Recovery MS/MSD for sample(s) 01-03			
Lindane	103	87	17
Heptachlor	93	79	16
Aldrin	106	85	22
Endrin	134	87	43
Dieldrin	99	67	39
4,4'-DDT	91	78	15
SURROGATE RECOVERY			
2,4,5,6-Tetrachloro-m-xylene	121	102	17
Decachlorobiphenyl	130	99	27

ALPHA ANALYTICAL LABS
ADDENDUM I

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. 1986.
3. Standard Methods for Examination of Water and Waste Water. APHA-AWWA-WPCF. 17th Edition. 1989.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.

SOIL

Sample Chain of Custody

143-40		Project Name: Raytheon - Wayland										
sampler: Chris McKenna				Number of Containers								
ERM T.R. Number	Date	Time	COMP	GRAB	Sample Location		PC260	8270 (Fall 11 APT)	RCRA B	8080 PCBs	TPH 8100	Remarks
	10/20/95		✓	X	SD-1	4	X	X	X			
	↓		✓	X	SB-3 S1		X	X	X			
			✓	X	SB-8 S1		X	X	X			
			✓	X	SB-7 S4	1				X		
			✓	X	SB-6 S5	1					X	
			✓	X	SB-2 S2					X		
Sample Relinquished	Date	Time	Sample Received by:			Date	Time	Reason for Transfer				
<i>Chris McKenna</i>	10/25/95		<i>[Signature]</i>			10/25/95	11:45	to lab courier				
			ALBOK			10/25	1430					

COPIES: White & Yellow copies accompany sample shipment to laboratory. Yellow copy retained by laboratory. White copy to be returned to ERM for files. Pink copy retained by sampler. Gold copy extra copy as needed (warehouse).

ALPHA ANALYTICAL LABORATORIES

Eight Walkup Drive
Westborough, Massachusetts 01581-1019
(508) 898-9220

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

CERTIFICATE OF ANALYSIS

Client: ERM-New England

Laboratory Job Number: L9508090

Address: 205 Portland Street

Invoice Number: 78162

Boston, MA 02114

Date Received: 20-OCT-95

Attn: John McTigue

Date Reported: 23-OCT-95

Project Number: 179-39

Delivery Method: Client

Site: WAY

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
L9508090-01	SB-5 (S-4)	
L9508090-02	MW-4	

Authorized by: James R. Roth

James R. Roth, PhD - Laboratory Manager

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574 NY 11148 NC 320 SC 88006 RI A65

Laboratory Sample Number: L9508090-01
SB-5 (S-4)
Sample Matrix: SOLID

Date Collected: 20-OCT-95
Date Received : 20-OCT-95
Date Reported : 23-OCT-95

Condition of Sample: Satisfactory

Field Prep: None

Number & Type of Containers: 1 Glass

PARAMETER	RESULT	UNITS	RDL	REF	METHOD	DATES		ID
						PREP	ANALYSIS	
Solids, Total	95.	%	0.10	3	2540B		23-Oct	ST
Total Metals					1	3005/3050		
Arsenic, Total	7.2	mg/kg	0.20	1	6010		20-Oct	23-Oct GF
Barium, Total	23.	mg/kg	2.0	1	6010		20-Oct	23-Oct GF
Cadmium, Total	ND	mg/kg	0.40	1	6010		20-Oct	23-Oct GF
Chromium, Total	70.	mg/kg	0.80	1	6010		20-Oct	23-Oct GF
Lead, Total	6.3	mg/kg	2.0	1	6010		20-Oct	23-Oct GF
Mercury, Total	ND	mg/kg	0.25	1	7470/7471		20-Oct	23-Oct DM
Selenium, Total	ND	mg/kg	0.40	1	6010		20-Oct	23-Oct GF
Silver, Total	ND	mg/kg	0.40	1	6010		20-Oct	23-Oct GF
Polychlorinated Biphenyls					1	8080		23-Oct 23-Oct DE
Arochlor 1221	ND	ug/kg	250					
Arochlor 1232	ND	ug/kg	250					
Arochlor 1242/PCB 1016	ND	ug/kg	250					
Arochlor 1248	ND	ug/kg	250					
Arochlor 1254	ND	ug/kg	250					
Arochlor 1260	ND	ug/kg	250					
Arochlor 1262	ND	ug/kg	250					
Arochlor 1268	ND	ug/kg	250					

SURROGATE RECOVERY

2,4,5,6-Tetrachloro-m-xylene	97.0	%						
Decachlorobiphenyl	72.0	%						

Comments: Complete list of References and Glossary of Terms found in Addendum I

ALPHA ANALYTICAL LABORATORIES
 QUALITY ASSURANCE BATCH DUPLICATE ANALYSIS

Laboratory Job Number: L9508090

Parameter	Value 1	Value 2	RPD	Units
Total Metals DUPLICATE for sample(s) 01				
Arsenic, Total	7.2	6.3	12	mg/kg
Barium, Total	23.	24.	2	mg/kg
Cadmium, Total	ND	ND	NC	mg/kg
Chromium, Total	70.	92.	26	mg/kg
Lead, Total	6.3	7.3	14	mg/kg
Selenium, Total	ND	ND	NC	mg/kg
Silver, Total	ND	ND	NC	mg/kg
Dissolved Metals DUPLICATE for sample(s) 02				
Arsenic, Dissolved	ND	ND	NC	mg/l
Barium, Dissolved	0.28	0.29	4	mg/l
Cadmium, Dissolved	ND	ND	NC	mg/l
Chromium, Dissolved	ND	ND	NC	mg/l
Lead, Dissolved	ND	ND	NC	mg/l
Selenium, Dissolved	ND	ND	NC	mg/l
Silver, Dissolved	ND	ND	NC	mg/l
Dissolved Metals DUPLICATE for sample(s) 02				
Mercury, Dissolved	ND	ND	NC	mg/l

ALPHA ANALYTICAL LABORATORIES
QUALITY ASSURANCE BATCH SPIKE ANALYSES

Laboratory Job Number: L9508090

Parameter	% Recovery
Total Metals	SPIKE for sample(s) 01
Arsenic, Total	100
Barium, Total	89
Cadmium, Total	100
Lead, Total	90
Silver, Total	60
Dissolved Metals	SPIKE for sample(s) 02
Arsenic, Dissolved	98
Barium, Dissolved	85
Cadmium, Dissolved	84
Chromium, Dissolved	80
Lead, Dissolved	82
Selenium, Dissolved	80
Silver, Dissolved	80
Total Metals	SPIKE for sample(s) 01
Mercury, Total	95
Dissolved Metals	SPIKE for sample(s) 02
Mercury, Dissolved	79

ALPHA ANALYTICAL LABS
ADDENDUM I

REFERENCES

1. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. 1986.
3. Standard Methods for Examination of Water and Waste Water. APHA-AWWA-WPCF. 17th Edition. 1989.

GLOSSARY OF TERMS AND SYMBOLS

REF Reference number in which test method may be found.

METHOD Method number by which analysis was performed.

ID Initials of the analyst.



IEA

An Aquarion Company

149 Rangeway Road
North Billerica, MA 01862

Phone 508-667-1400
Fax 508-667-7871

Ms. Grace Hwang
Raytheon Company
528 Boston Post Road
Sudbury, MA 01776

November 7, 1995

Dear Ms. Hwang:

Please find enclosed the analytical results of the sample(s) received at our laboratory on October 24, 1995. This report contains sections addressing the following information at a minimum:

- analytical results
- chain-of-custody (if applicable)

Client Project #	N/A	Client Project Name	WAY ESA
IEA Report #	R117C-005	Purchase Order #	535690S200017

Copies of this analytical report and supporting data are maintained in our files for a minimum of 3 years unless special arrangements are made. Unless specifically indicated, all analytical testing was performed at the IEA-Massachusetts laboratory.

We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (508) 667-1400 for any additional information. Thank you for utilizing our services and we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Sincerely,

Michael F. Wheeler, Ph.D.
Laboratory Director
IEA-Massachusetts

MW/smb

DOC# KPF00300.MA

Monroe,
Connecticut
203-251-4458

Sunrise,
Florida
305-846-1730

Schaumburg,
Illinois
708-705-0740

Whippany,
New Jersey
201-428-8181

Research Triangle Park,
North Carolina
919-677-0080



IEA LABORATORY RESULTS

Report Date: 11/07/95
 Client: Raytheon - RESD
 Project: WAY ESA

Received Date: 10/24/95
 IEA Job Number: R117C-005

Sample #	Client ID	Parameter	Results	Units	PQL	Date Analyzed
TOTAL METALS						
1	SB-1	Arsenic	5.96	mg/kg (dry)	0.50	11/01/95
1	SB-1	Barium	62	mg/kg (dry)	10	10/31/95
1	SB-1	Cadmium	2.2	mg/kg (dry)	1.0	10/31/95
1	SB-1	Chromium	19.6	mg/kg (dry)	3.0	10/31/95
1	SB-1	Lead	4.40	mg/kg (dry)	0.50	11/01/95
1	SB-1	Mercury	BQL	mg/kg (dry)	0.10	10/31/95
1	SB-1	Selenium	BQL	mg/kg (dry)	0.50	11/01/95
1	SB-1	Silver	BQL	mg/kg (dry)	2.0	10/31/95
TOTAL METALS						
2	SB-4	Arsenic	3.56	mg/kg (dry)	0.50	11/01/95
2	SB-4	Barium	21	mg/kg (dry)	10	10/31/95
2	SB-4	Cadmium	BQL	mg/kg (dry)	1.0	10/31/95
2	SB-4	Chromium	13.4	mg/kg (dry)	3.0	10/31/95
2	SB-4	Lead	7.73	mg/kg (dry)	0.50	11/01/95
2	SB-4	Mercury	BQL	mg/kg (dry)	0.10	10/31/95
2	SB-4	Selenium	BQL	mg/kg (dry)	0.50	11/01/95
2	SB-4	Silver	BQL	mg/kg (dry)	2.0	10/31/95
TOTAL METALS						
3	SB-9	Arsenic	4.73	mg/kg (dry)	0.50	11/01/95
3	SB-9	Barium	22	mg/kg (dry)	10	10/31/95
3	SB-9	Cadmium	BQL	mg/kg (dry)	1.0	10/31/95
3	SB-9	Chromium	9.6	mg/kg (dry)	3.0	10/31/95
3	SB-9	Lead	4.39	mg/kg (dry)	0.50	11/01/95
3	SB-9	Mercury	BQL	mg/kg (dry)	0.10	10/31/95
3	SB-9	Selenium	0.84	mg/kg (dry)	0.50	11/01/95
3	SB-9	Silver	BQL	mg/kg (dry)	2.0	10/31/95

COMMENTS:

PQL = Practical Quantitation Limit
 BQL = Below Quantitation Limit



IEA
An Aquarion Company

Analysis Report: EPA Method 8080A
Aroclors

Client:	Raytheon - RESD	IEA ID:	R117C-005-01
Project:	WAY ESA	Sample:	SB-1
Report Date:	11/06/95	Type:	Soil
Collected:	10/13/95	Container:	Glass
Received:	10/24/95		
Extracted:	10/27/95		
Analyzed:	10/30/95		
By:	GAM	Dilution Factor:	2.4

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Aroclor 1016	240	BQL
2	Aroclor 1221	240	BQL
3	Aroclor 1232	240	BQL
4	Aroclor 1242	240	BQL
5	Aroclor 1248	240	BQL
6	Aroclor 1254	240	BQL
7	Aroclor 1260	240	BQL

Surrogate Standard Recovery:

Tetrachloro-meta-xylene 95 %

Comments:

BQL = Below Quantitation Limit.
 PQL = Practical Quantitation Limit.
 Quantitation limit elevated due to extract dilution prior to analysis.
 Extract diluted due to the presence of non-target compounds.



Analysis Report: EPA Method 8080A
Aroclors

Client: Raytheon - RESD
Project: WAY ESA
Report Date: 11/06/95
Collected: 10/24/95
Received: 10/24/95
Extracted: 10/27/95
Analyzed: 10/30/95
By: GAM

IEA ID: R117C-005-02
Sample: SB-4
Type: Soil
Container: Glass

Dilution Factor: 2.2

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Aroclor 1016	220	BQL
2	Aroclor 1221	220	BQL
3	Aroclor 1232	220	BQL
4	Aroclor 1242	220	BQL
5	Aroclor 1248	220	BQL
6	Aroclor 1254	220	BQL
7	Aroclor 1260	220	BQL

Surrogate Standard Recovery:

Tetrachloro-meta-xylene 110 %

Comments:

BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
Quantitation limit elevated due to extract dilution prior to analysis.
Extract diluted due to the presence of non-target compounds.



Analysis Report: EPA Method 8080A
Aroclors

Client: Raytheon - RESD
Project: WAY ESA
Report Date: 11/06/95
Collected: 10/13/95
Received: 10/24/95
Extracted: 10/27/95
Analyzed: 10/30/95
By: GAM

IEA ID: R117C-005-03
Sample: SB-9
Type: Soil
Container: Glass

Dilution Factor: 2.2

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Aroclor 1016	220	BQL
2	Aroclor 1221	220	BQL
3	Aroclor 1232	220	BQL
4	Aroclor 1242	220	BQL
5	Aroclor 1248	220	BQL
6	Aroclor 1254	220	BQL
7	Aroclor 1260	220	BQL

Surrogate Standard Recovery:

Tetrachloro-meta-xylene 76 %

Comments:

BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
Quantitation limit elevated due to extract dilution prior to analysis.
Extract diluted due to the presence of non-target compounds.



Analysis Report: EPA Method 8260A
(PAGE 1 OF 2 PAGES)

Client:	Raytheon - RESD	IEA ID:	R117C-005-01
Project:	WAY ESA	Sample:	SB-1
Report Date:	11/07/95	Type:	Soil
Collected:	10/13/95	Container:	Glass
Received:	10/24/95		
Analyzed:	10/27/95		
By:	GMT	Dilution Factor:	1.2

Priority Pollutant Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene	6	BQL
2	Bromodichloromethane	6	BQL
3	Bromoform	6	BQL
4	Bromomethane	12	BQL
5	Carbon tetrachloride	6	BQL
6	Chlorobenzene	6	BQL
7	Chloroethane	12	BQL
8	2-Chloroethylvinyl ether	6	BQL
9	Chloroform	6	BQL
10	Chloromethane	12	BQL
11	Dibromochloromethane	6	BQL
12	1,2-Dichlorobenzene	6	BQL
13	1,3-Dichlorobenzene	6	BQL
14	1,4-Dichlorobenzene	6	BQL
15	1,1-Dichloroethane	6	BQL
16	1,2-Dichloroethane	6	BQL
17	1,1-Dichloroethene	6	BQL
18	1,2-Dichloroethenes (Total)	6	BQL
19	1,2-Dichloropropane	6	BQL
20	cis-1,3-Dichloropropene	6	BQL
21	trans-1,3-Dichloropropene	6	BQL
22	Ethylbenzene	6	BQL
23	Methylene chloride	6	BQL
24	1,1,2,2-Tetrachloroethane	6	10B
25	Tetrachloroethene	6	BQL
26	Toluene	6	BQL
27	1,1,1-Trichloroethane	6	BQL
28	1,1,2-Trichloroethane	6	BQL
29	Trichloroethene	6	BQL
30	Trichlorofluoromethane	6	BQL
31	Vinyl chloride	12	BQL



Analysis Report: EPA Method 8260A
(PAGE 2 OF 2 PAGES)

Client: Raytheon - RESD IEA ID: R117C-005-01
Project: WAY ESA Sample: SB-1

Other TCL Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
32	Acetone	120	BQL
33	2-Butanone	120	BQL
34	n-Butylbenzene	6	BQL
35	s-Butylbenzene	6	BQL
36	t-Butylbenzene	6	BQL
37	Carbon disulfide	6	BQL
38	2-Chlorotoluene	6	BQL
39	4-Chlorotoluene	6	BQL
40	1,2-Dibromoethane	6	BQL
41	2-Hexanone	24	BQL
42	Hexachlorobutadiene	6	BQL
43	Isopropylbenzene	6	BQL
44	p-Isopropyltoluene	6	BQL
45	4-Methyl-2-pentanone	24	BQL
46	Methyl-t-butyl ether	6	BQL
47	Naphthalene	60	BQL
48	n-Propylbenzene	6	BQL
49	Styrene	6	BQL
50	1,1,1,2-Tetrachloroethane	6	BQL
51	1,2,3-Trichlorobenzene	6	BQL
52	1,2,4-Trichlorobenzene	6	BQL
53	1,2,4-Trimethylbenzene	6	BQL
54	1,3,5-Trimethylbenzene	6	BQL
55	Vinyl acetate	24	BQL
56	Xylenes (Total)	6	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	86 %
Toluene-d8	104 %
Bromofluorobenzene	100 %

COMMENTS:

BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
B = Compound in blank.

Doc# MSF11901.MR

Analysis Report: EPA Method 8260A
(PAGE 1 OF 2 PAGES)

Client:	Raytheon - RESD	IEA ID:	R117C-005-02
Project:	WAY ESA	Sample:	SB-4
Report Date:	11/07/95	Type:	Soil
Collected:	10/24/95	Container:	Glass
Received:	10/24/95		
Analyzed:	10/27/95		
By:	GMT	Dilution Factor:	1.1

Priority Pollutant Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene	6	BQL
2	Bromodichloromethane	6	BQL
3	Bromoform	6	BQL
4	Bromomethane	11	BQL
5	Carbon tetrachloride	6	BQL
6	Chlorobenzene	6	BQL
7	Chloroethane	11	BQL
8	2-Chloroethylvinyl ether	6	BQL
9	Chloroform	6	BQL
10	Chloromethane	11	BQL
11	Dibromochloromethane	6	BQL
12	1,2-Dichlorobenzene	6	BQL
13	1,3-Dichlorobenzene	6	BQL
14	1,4-Dichlorobenzene	6	BQL
15	1,1-Dichloroethane	6	BQL
16	1,2-Dichloroethane	6	BQL
17	1,1-Dichloroethene	6	BQL
18	1,2-Dichloroethenes (Total)	6	BQL
19	1,2-Dichloropropane	6	BQL
20	cis-1,3-Dichloropropene	6	BQL
21	trans-1,3-Dichloropropene	6	BQL
22	Ethylbenzene	6	BQL
23	Methylene chloride	6	BQL
24	1,1,2,2-Tetrachloroethane	6	9B
25	Tetrachloroethene	6	BQL
26	Toluene	6	BQL
27	1,1,1-Trichloroethane	6	BQL
28	1,1,2-Trichloroethane	6	BQL
29	Trichloroethene	6	BQL
30	Trichlorofluoromethane	6	BQL
31	Vinyl chloride	11	BQL



Analysis Report: EPA Method 8260A
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Client: Raytheon - RESD
Project: WAY ESA

IEA ID: R117C-005-02
Sample: SB-4

Other TCL Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
32	Acetone	110	BQL
33	2-Butanone	110	BQL
34	n-Butylbenzene	6	BQL
35	s-Butylbenzene	6	BQL
36	t-Butylbenzene	6	BQL
37	Carbon disulfide	6	BQL
38	2-Chlorotoluene	6	BQL
39	4-Chlorotoluene	6	BQL
40	1,2-Dibromoethane	6	BQL
41	2-Hexanone	22	BQL
42	Hexachlorobutadiene	6	BQL
43	Isopropylbenzene	6	BQL
44	p-Isopropyltoluene	6	BQL
45	4-Methyl-2-pentanone	22	BQL
46	Methyl-t-butyl ether	6	BQL
47	Naphthalene	55	BQL
48	n-Propylbenzene	6	BQL
49	Styrene	6	BQL
50	1,1,1,2-Tetrachloroethane	6	BQL
51	1,2,3-Trichlorobenzene	6	BQL
52	1,2,4-Trichlorobenzene	6	BQL
53	1,2,4-Trimethylbenzene	6	BQL
54	1,3,5-Trimethylbenzene	6	BQL
55	Vinyl acetate	22	BQL
56	Xylenes (Total)	6	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	77 %
Toluene-d8	103 %
Bromofluorobenzene	97 %

COMMENTS:

BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
B = Compound in blank.

Doc# MSF11901.MA



Analysis Report: EPA Method 8260A
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Client:	Raytheon - RESD	IEA ID:	R117C-00S-03
Project:	WAY ESA	Sample:	SB-9
Report Date:	11/07/95	Type:	Soil
Collected:	10/13/95	Container:	Glass
Received:	10/24/95		
Analyzed:	10/27/95		
By:	GMT	Dilution Factor:	1.1

Priority Pollutant Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene	6	BQL
2	Bromodichloromethane	6	BQL
3	Bromoform	6	BQL
4	Bromomethane	11	BQL
5	Carbon tetrachloride	6	BQL
6	Chlorobenzene	6	BQL
7	Chloroethane	11	BQL
8	2-Chloroethylvinyl ether	6	BQL
9	Chloroform	6	BQL
10	Chloromethane	11	BQL
11	Dibromochloromethane	6	BQL
12	1,2-Dichlorobenzene	6	BQL
13	1,3-Dichlorobenzene	6	BQL
14	1,4-Dichlorobenzene	6	BQL
15	1,1-Dichloroethane	6	BQL
16	1,2-Dichloroethane	6	BQL
17	1,1-Dichloroethene	6	BQL
18	1,2-Dichloroethenes (Total)	6	BQL
19	1,2-Dichloropropane	6	BQL
20	cis-1,3-Dichloropropene	6	BQL
21	trans-1,3-Dichloropropene	6	BQL
22	Ethylbenzene	6	BQL
23	Methylene chloride	6	14B
24	1,1,2,2-Tetrachloroethane	6	BQL
25	Tetrachloroethene	6	BQL
26	Toluene	6	BQL
27	1,1,1-Trichloroethane	6	BQL
28	1,1,2-Trichloroethane	6	BQL
29	Trichloroethene	6	BQL
30	Trichlorofluoromethane	6	BQL
31	Vinyl chloride	11	BQL



Analysis Report: EPA Method 8260A
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Client: Raytheon - RESD IEA ID: R117C-005-03
Project: WAY ESA Sample: SB-9

Other TCL Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
32	Acetone	110	BQL
33	2-Butanone	110	BQL
34	n-Butylbenzene	6	BQL
35	s-Butylbenzene	6	BQL
36	t-Butylbenzene	6	BQL
37	Carbon disulfide	6	BQL
38	2-Chlorotoluene	6	BQL
39	4-Chlorotoluene	6	BQL
40	1,2-Dibromoethane	6	BQL
41	2-Hexanone	22	BQL
42	Hexachlorobutadiene	6	BQL
43	Isopropylbenzene	6	BQL
44	p-Isopropyltoluene	6	BQL
45	4-Methyl-2-pentanone	22	BQL
46	Methyl-t-butyl ether	6	BQL
47	Naphthalene	55	BQL
48	n-Propylbenzene	6	BQL
49	Styrene	6	BQL
50	1,1,1,2-Tetrachloroethane	6	BQL
51	1,2,3-Trichlorobenzene	6	BQL
52	1,2,4-Trichlorobenzene	6	BQL
53	1,2,4-Trimethylbenzene	6	BQL
54	1,3,5-Trimethylbenzene	6	BQL
55	Vinyl acetate	22	BQL
56	Xylenes (Total)	6	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	79 %
Toluene-d8	105 %
Bromofluorobenzene	92 %

COMMENTS:

BQL = Below Quantitation Limit.
PQL = Practical Quantitation Limit.
B = Compound in blank.

Doc# MSP11901.MA



Analysis Report: EPA Method 8260A
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Client: IEA ID: Method Blank (10/27)
Project: Sample:
Report Date: 11/07/95 Type: Soil
Collected: Container:
Received:
Analyzed: 10/27/95
By: GMT Dilution Factor: 1

Priority Pollutant Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene	5	BQL
2	Bromodichloromethane	5	BQL
3	Bromoform	5	BQL
4	Bromomethane	10	BQL
5	Carbon tetrachloride	5	BQL
6	Chlorobenzene	5	BQL
7	Chloroethane	10	BQL
8	2-Chloroethylvinyl ether	5	BQL
9	Chloroform	5	BQL
10	Chloromethane	10	BQL
11	Dibromochloromethane	5	BQL
12	1,2-Dichlorobenzene	5	BQL
13	1,3-Dichlorobenzene	5	BQL
14	1,4-Dichlorobenzene	5	BQL
15	1,1-Dichloroethane	5	BQL
16	1,2-Dichloroethane	5	BQL
17	1,1-Dichloroethene	5	BQL
18	1,2-Dichloroethenes (Total)	5	BQL
19	1,2-Dichloropropane	5	BQL
20	cis-1,3-Dichloropropene	5	BQL
21	trans-1,3-Dichloropropene	5	BQL
22	Ethylbenzene	5	BQL
23	Methylene chloride	5	4J
24	1,1,2,2-Tetrachloroethane	5	BQL
25	Tetrachloroethene	5	BQL
26	Toluene	5	BQL
27	1,1,1-Trichloroethane	5	BQL
28	1,1,2-Trichloroethane	5	BQL
29	Trichloroethene	5	BQL
30	Trichlorofluoromethane	5	BQL
31	Vinyl chloride	10	BQL



Analysis Report: EPA Method 8260A
(PAGE 2 OF 2 PAGES)

Client: IEA ID: Method Blank (10/27)
Project: Sample:

Other TCL Compounds

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
32	Acetone	100	BQL
33	2-Butanone	100	BQL
34	n-Butylbenzene	5	BQL
35	s-Butylbenzene	5	BQL
36	t-Butylbenzene	5	BQL
37	Carbon disulfide	5	BQL
38	2-Chlorotoluene	5	BQL
39	4-Chlorotoluene	5	BQL
40	1,2-Dibromoethane	5	BQL
41	2-Hexanone	20	BQL
42	Hexachlorobutadiene	5	BQL
43	Isopropylbenzene	5	BQL
44	p-Isopropyltoluene	5	BQL
45	4-Methyl-2-pentanone	20	BQL
46	Methyl-t-butyl ether	5	BQL
47	Naphthalene	50	BQL
48	n-Propylbenzene	5	BQL
49	Styrene	5	BQL
50	1,1,1,2-Tetrachloroethane	5	BQL
51	1,2,3-Trichlorobenzene	5	BQL
52	1,2,4-Trichlorobenzene	5	BQL
53	1,2,4-Trimethylbenzene	5	BQL
54	1,3,5-Trimethylbenzene	5	BQL
55	Vinyl acetate	20	BQL
56	Xylenes (Total)	5	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	82 %
Toluene-d8	103 %
Bromofluorobenzene	100 %

COMMENTS:

BQL = Below Quantitation Limit.

PQL = Practical Quantitation Limit.

J = Approximate result. Quantitation below calibration.

Corresponding Samples: R117C-005-01, R117C-005-02, R117C-005-03

Doc# MSF11901.MA



IEA

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Analysis Report: EPA Method 8270A
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Client:	Raytheon - RESD	IEA ID:	R117C-005-01
Project:	WAY ESA	Sample:	SB-1
Report Date:	11/07/95	Type:	Soil
Collected:	10/13/95	Container:	Glass
Received:	10/24/95		
Extracted:	10/27/95		
Analyzed:	11/02/95		
By:	MEW	Dilution Factor:	5.4

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Acenaphthene	1782	BQL
2	Acenaphthylene	1782	BQL
3	Aniline	8910	BQL
4	Anthracene	1782	BQL
5	Benzoic acid	8910	BQL
6	Benzo(a)anthracene	1782	3,200
7	Benzo(b)fluoranthene	1782	2,900
8	Benzo(k)fluoranthene	1782	BQL
9	Benzo(g,h,i)perylene	1782	BQL
10	Benzo(a)pyrene	1782	2,900
11	Benzyl alcohol	3564	BQL
12	bis(2-Chloroethoxy)methane	1782	BQL
13	bis(2-Chloroethyl) ether	1782	BQL
14	bis(2-Chloroisopropyl) ether	1782	BQL
15	bis(2-Ethylhexyl)phthalate	1782	BQL
16	4-Bromophenyl phenyl ether	1782	BQL
17	Benzyl butyl phthalate	1782	BQL
18	4-Chloroaniline	3564	BQL
19	2-Chloronaphthalene	1782	BQL
20	4-Chloro-3-methylphenol	3564	BQL
21	2-Chlorophenol	1782	BQL
22	4-Chlorophenyl phenyl ether	1782	BQL
23	Chrysene	1782	3,100
24	Dibenzo(a,h)anthracene	1782	BQL
25	Dibenzofuran	1782	BQL
26	Di-n-butyl phthalate	1782	BQL
27	1,3-Dichlorobenzene	1782	BQL
28	1,4-Dichlorobenzene	1782	BQL
29	1,2-Dichlorobenzene	1782	BQL
30	1,2-Diphenylhydrazine	1782	BQL
31	3,3'-Dichlorobenzidine	3564	BQL
32	2,4-Dichlorophenol	1782	BQL
33	Diethyl phthalate	1782	BQL
34	2,4-Dimethylphenol	1782	BQL
35	Dimethyl phthalate	1782	BQL
36	2-Methyl-4,6-dinitrophenol	8910	BQL
37	2,4-Dinitrophenol	8910	BQL
38	2,4-Dinitrotoluene	1782	BQL

Analysis Report: EPA Method 8270A
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Client: Raytheon - RESD IEA ID: R117C-005-01
Project: WAY ESA Sample: SB-1

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
39	2,6-Dinitrotoluene	1782	BQL
40	Di-n-octylphthalate	1782	BQL
41	Fluoranthene	1782	4,300
42	Fluorene	1782	BQL
43	Hexachlorobenzene	1782	BQL
44	Hexachlorobutadiene	1782	BQL
45	Hexachlorocyclopentadiene	1782	BQL
46	Hexachloroethane	1782	BQL
47	Indeno(1,2,3-cd)pyrene	1782	BQL
48	Isophorone	1782	BQL
49	2-Methylnaphthalene	1782	BQL
50	2-Methylphenol (o-cresol)	1782	BQL
51	4-Methylphenol (p-cresol)	1782	BQL
52	Naphthalene	1782	BQL
53	2-Nitroaniline	8910	BQL
54	3-Nitroaniline	8910	BQL
55	4-Nitroaniline	8910	BQL
56	Nitrobenzene	1782	BQL
57	2-Nitrophenol	1782	BQL
58	4-Nitrophenol	8910	BQL
59	N-Nitroso-di-n-propylamine	1782	BQL
60	N-Nitrosodiphenylamine	1782	BQL
61	Pentachlorophenol	8910	BQL
62	Phenanthrene	1782	BQL
63	Phenol	1782	BQL
64	Pyrene	1782	5,100
65	1,2,4-Trichlorobenzene	1782	BQL
66	2,4,5-Trichlorophenol	1782	BQL
67	2,4,6-Trichlorophenol	1782	BQL

Surrogate Standard Recovery:

2-Fluorophenol	D %
Phenol-d6	D %
Nitrobenzene-d5	D %
2-Fluorobiphenyl	D %
2,4,6-Tribromophenol	D %
Terphenyl-d14	D %

Comments:

PQL = Practical quantitation limit.

BQL = Below quantitation limit.

D = Diluted below calibration.

Quantitation limit elevated due to extract dilution prior to analysis.

Extract diluted due to high concentration of target compounds present.



Analysis Report: EPA Method 8270A
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Client:	Raytheon - RESD	IEA ID:	R117C-005-02
Project:	WAY ESA	Sample:	SB-4
Report Date:	11/07/95	Type:	Soil
Collected:	10/24/95	Container:	Glass
Received:	10/24/95		
Extracted:	10/27/95		
Analyzed:	10/31/95		
By:	MEW	Dilution Factor:	1.1

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Acenaphthene	363	BQL
2	Acenaphthylene	363	BQL
3	Aniline	1815	BQL
4	Anthracene	363	BQL
5	Benzoic acid	1815	BQL
6	Benzo (a) anthracene	363	BQL
7	Benzo (b) fluoranthene	363	BQL
8	Benzo (k) fluoranthene	363	BQL
9	Benzo (g, h, i) perylene	363	BQL
10	Benzo (a) pyrene	363	BQL
11	Benzyl alcohol	726	BQL
12	bis (2-Chloroethoxy) methane	363	BQL
13	bis (2-Chloroethyl) ether	363	BQL
14	bis (2-Chloroisopropyl) ether	363	BQL
15	bis (2-Ethylhexyl) phthalate	363	BQL
16	4-Bromophenyl phenyl ether	363	BQL
17	Benzyl butyl phthalate	363	BQL
18	4-Chloroaniline	726	BQL
19	2-Chloronaphthalene	363	BQL
20	4-Chloro-3-methylphenol	726	BQL
21	2-Chlorophenol	363	BQL
22	4-Chlorophenyl phenyl ether	363	BQL
23	Chrysene	363	BQL
24	Dibenzo (a, h) anthracene	363	BQL
25	Dibenzofuran	363	BQL
26	Di-n-butyl phthalate	363	BQL
27	1,3-Dichlorobenzene	363	BQL
28	1,4-Dichlorobenzene	363	BQL
29	1,2-Dichlorobenzene	363	BQL
30	1,2-Diphenylhydrazine	363	BQL
31	3,3'-Dichlorobenzidine	726	BQL
32	2,4-Dichlorophenol	363	BQL
33	Diethyl phthalate	363	BQL
34	2,4-Dimethylphenol	363	BQL
35	Dimethyl phthalate	363	BQL
36	2-Methyl-4,6-dinitrophenol	1815	BQL
37	2,4-Dinitrophenol	1815	BQL
38	2,4-Dinitrotoluene	363	BQL



Analysis Report: EPA Method 8270A
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Client: Raytheon - RESD IEA ID: R117C-005-02
Project: WAY ESA Sample: SB-4

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
39	2,6-Dinitrotoluene	363	BQL
40	Di-n-octylphthalate	363	BQL
41	Fluoranthene	363	BQL
42	Fluorene	363	BQL
43	Hexachlorobenzene	363	BQL
44	Hexachlorobutadiene	363	BQL
45	Hexachlorocyclopentadiene	363	BQL
46	Hexachloroethane	363	BQL
47	Indeno(1,2,3-cd)pyrene	363	BQL
48	Isophorone	363	BQL
49	2-Methylnaphthalene	363	BQL
50	2-Methylphenol (o-cresol)	363	BQL
51	4-Methylphenol (p-cresol)	363	BQL
52	Naphthalene	363	BQL
53	2-Nitroaniline	1815	BQL
54	3-Nitroaniline	1815	BQL
55	4-Nitroaniline	1815	BQL
56	Nitrobenzene	363	BQL
57	2-Nitrophenol	363	BQL
58	4-Nitrophenol	1815	BQL
59	N-Nitroso-di-n-propylamine	363	BQL
60	N-Nitrosodiphenylamine	363	BQL
61	Pentachlorophenol	1815	BQL
62	Phenanthrene	363	BQL
63	Phenol	363	BQL
64	Pyrene	363	BQL
65	1,2,4-Trichlorobenzene	363	BQL
66	2,4,5-Trichlorophenol	363	BQL
67	2,4,6-Trichlorophenol	363	BQL

Surrogate Standard Recovery:

2-Fluorophenol	54 %
Phenol-d6	63 %
Nitrobenzene-d5	40 %
2-Fluorobiphenyl	48 %
2,4,6-Tribromophenol	80 %
Terphenyl-d14	88 %

Comments:

PQL = Practical quantitation limit.
BQL = Below quantitation limit.



IEA

An Aquarion Company

Analysis Report: EPA Method 8270A
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Client:	Raytheon - RESD	IEA ID:	R117C-005-03
Project:	WAY ESA	Sample:	SB-9
Report Date:	11/07/95	Type:	Soil
Collected:	10/13/95	Container:	Glass
Received:	10/24/95		
Extracted:	10/27/95		
Analyzed:	10/31/95		
By:	MEW	Dilution Factor:	1.1

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Acenaphthene	363	BQL
2	Acenaphthylene	363	BQL
3	Aniline	1815	BQL
4	Anthracene	363	BQL
5	Benzoic acid	1815	BQL
6	Benzo(a)anthracene	363	BQL
7	Benzo(b)fluoranthene	363	BQL
8	Benzo(k)fluoranthene	363	BQL
9	Benzo(g,h,i)perylene	363	BQL
10	Benzo(a)pyrene	363	BQL
11	Benzyl alcohol	726	BQL
12	bis(2-Chloroethoxy)methane	363	BQL
13	bis(2-Chloroethyl)ether	363	BQL
14	bis(2-Chloroisopropyl)ether	363	BQL
15	bis(2-Ethylhexyl)phthalate	363	BQL
16	4-Bromophenyl phenyl ether	363	BQL
17	Benzyl butyl phthalate	363	BQL
18	4-Chloroaniline	726	BQL
19	2-Chloronaphthalene	363	BQL
20	4-Chloro-3-methylphenol	726	BQL
21	2-Chlorophenol	363	BQL
22	4-Chlorophenyl phenyl ether	363	BQL
23	Chrysene	363	BQL
24	Dibenzo(a,h)anthracene	363	BQL
25	Dibenzofuran	363	BQL
26	Di-n-butyl phthalate	363	BQL
27	1,3-Dichlorobenzene	363	BQL
28	1,4-Dichlorobenzene	363	BQL
29	1,2-Dichlorobenzene	363	BQL
30	1,2-Diphenylhydrazine	363	BQL
31	3,3'-Dichlorobenzidine	726	BQL
32	2,4-Dichlorophenol	363	BQL
33	Diethyl phthalate	363	BQL
34	2,4-Dimethylphenol	363	BQL
35	Dimethyl phthalate	363	BQL
36	2-Methyl-4,6-dinitrophenol	1815	BQL
37	2,4-Dinitrophenol	1815	BQL
38	2,4-Dinitrotoluene	363	BQL



Analysis Report: EPA Method 8270A
(PAGE 2 OF 2 PAGES)

Client: Raytheon - RESD IEA ID: R117C-005-03
Project: WAY ESA Sample: SB-9

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
39	2,6-Dinitrotoluene	363	BQL
40	Di-n-octylphthalate	363	BQL
41	Fluoranthene	363	BQL
42	Fluorene	363	BQL
43	Hexachlorobenzene	363	BQL
44	Hexachlorobutadiene	363	BQL
45	Hexachlorocyclopentadiene	363	BQL
46	Hexachloroethane	363	BQL
47	Indeno (1,2,3-cd) pyrene	363	BQL
48	Isophorone	363	BQL
49	2-Methylnaphthalene	363	BQL
50	2-Methylphenol (o-cresol)	363	BQL
51	4-Methylphenol (p-cresol)	363	BQL
52	Naphthalene	363	BQL
53	2-Nitroaniline	1815	BQL
54	3-Nitroaniline	1815	BQL
55	4-Nitroaniline	1815	BQL
56	Nitrobenzene	363	BQL
57	2-Nitrophenol	363	BQL
58	4-Nitrophenol	1815	BQL
59	N-Nitroso-di-n-propylamine	363	BQL
60	N-Nitrosodiphenylamine	363	BQL
61	Pentachlorophenol	1815	BQL
62	Phenanthrene	363	BQL
63	Phenol	363	BQL
64	Pyrene	363	BQL
65	1,2,4-Trichlorobenzene	363	BQL
66	2,4,5-Trichlorophenol	363	BQL
67	2,4,6-Trichlorophenol	363	BQL

Surrogate Standard Recovery:

2-Fluorophenol	46 %
Phenol-d6	69 %
Nitrobenzene-d5	29 %
2-Fluorobiphenyl	48 %
2,4,6-Tribromophenol	81 %
Terphenyl-d14	97 %

Comments:

PQL = Practical quantitation limit.
BQL = Below quantitation limit.

