

Raytheon Company

Phase II Comprehensive Site
Assessment

Former Raytheon Facility

430 Boston Post Road

Wayland, Massachusetts

(Volume IV – Appendix H)

27 November 2001

143.51

Environmental Resources Management

399 Boylston Street, 6th Floor

Boston, Massachusetts 02116



Appendix H
Laboratory Analytical Reports -
Sediment

ALPHA ANALYTICAL LABORATORIES

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

MA 086 NH 198958-A CT FH-0574

CERTIFICATE OF ANALYSIS

Client: ERM Laboratory Job Number: 901125
Address: 205 Portland Street Invoice Number: 12324
Boston, MA 02114 Date Received: 03/08/90
Attn: Ben Frothingham Date Reported: 03/22/90
Client Designation: ERM Proj# 14313 Delivery Method: Client Delivered

ALPHA SAMPLE NUMBER	CLIENT IDENTIFICATION	SAMPLE LOCATION
901225.1	SW-1	N/A
901225.2	SW-2	N/A
901225.2D	SW-2 (Duplicate)	N/A
901225.3	SW-3	N/A
901225.3S	SW-3 (Spike Recovery)	N/A
901225.4	SW-4	N/A
901225.5	SS-1	N/A
901225.6	SS-2	N/A
901225.6D	SS-2 (Duplicate)	N/A
901225.7	SS-3	N/A
901225.7S	SS-3 (Spike Recovery)	N/A
901225.8	SS-4	N/A
901225.9	T. Blank	N/A

Authorized by: Scott McLean - Laboratory Director

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ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT HI-0574

55-1

Laboratory Sample Number: 901125.5 Date Received: 03/08/90

Sample Matrix: Soil (results on a dry weight basis) Date Reported: 03/22/90

Condition of Samples: Satisfactory Field Prep: None

Number & Type of Containers: One Glass Jar & Two VOA Vials

Analysis Requested: Analysis as listed below

PARAMETER	RESULT	UNITS	MDL	REF*	METHOD	DATES	
						EXT/PREP	ANALYSIS
HSL Acid/Base/Neutral Extractables **							
Bis (2-ethylhexyl) phthalate	600	ug/Kg	**	1	8270	03/15/90	03/19/90
Di-n-butylphthalate	1,190	ug/Kg	**	1	8270	03/15/90	03/19/90
PCB's	ND	ug/Kg	2.5	1	8080	03/15/90	03/21/90
Pesticides	ND	ug/Kg	0.25	1	8080	03/15/90	03/21/90
Volatile Organics**	ND	ug/Kg	**	1	8240	03/09/90	03/17/90
HSL Acid/Base/Neutral Extractables % Surrogate Recovery							
2-Fluorophenol							35%
Phenol-d5							46%
Nitrobenzene-d5							84%
2-Fluorobiphenyl							97%
2,4,6-Tribromophenol							114%
4-Terphenyl-d14							79%
Volatile Organics % Surrogate Recovery							
1,2-Dichloroethane-d4							105%
Toluene-d8							100%
4-Bromofluorobenzene							89%

COMMENTS: *Complete list of References found in Addendum I
 **A list of HSL acid/base/neutral extractables, PCB's, pesticides, and volatile organics analyzed for and their detection limits accompany this report.
 HSL Acid/Base/Neutral Extractables and Volatile Organics** All compounds were below the detection limits except those listed above.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574

SS-1

Laboratory Sample Number: 901125.5 Date Received: 03/08/90

Sample Matrix: Soil (results on a dry weight basis) Date Reported: 03/22/90

Condition of Samples: Satisfactory Field Prep: None

Number & Type of Containers: One Glass Jar & Two VOA Vials

Analysis Requested: Analysis as listed below

CONTINUED

PARAMETER	RESULT	UNITS	MDL	REF*	METHOD	DATES	
						EXT/PREP	ANALYSIS
Total Priority Pollutant: 13 Metals							
Antimony	ND	mg/Kg	264	1	6010	03/10/90	03/14/90
Arsenic	ND	mg/Kg	2.6	1	7060	03/10/90	03/14/90
Beryllium	ND	mg/Kg	10.6	1	6010	03/10/90	03/14/90
Cadmium	ND	mg/Kg	5.3	1	6010	03/10/90	03/14/90
Chromium	ND	mg/Kg	10.6	1	6010	03/10/90	03/14/90
Copper	ND	mg/Kg	10.6	1	6010	03/10/90	03/14/90
Lead	ND	mg/Kg	26.4	1	6010	03/10/90	03/14/90
Mercury	ND	mg/Kg	0.67	1	7470	03/10/90	03/14/90
Nickel	ND	mg/Kg	26.4	1	6010	03/10/90	03/14/90
Selenium	ND	mg/Kg	2.6	1	7740	03/10/90	03/14/90
Silver	ND	mg/Kg	1.6	1	7761	03/10/90	03/14/90
Thallium	ND	mg/Kg	264	1	6010	03/10/90	03/14/90
Zinc	5.3	mg/Kg	5.33	1	6010	03/10/90	03/14/90
Total Solids	29	%	0.1	2	209A	—	03/22/90

COMMENTS: *Complete list of References found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT FH-0574

55-2

Laboratory Sample Number: 901125.6 Date Received: 03/08/90

Sample Matrix: Soil (results on a dry weight basis) Date Reported: 03/22/90

Condition of Samples: Satisfactory Field Prep: None

Number & Type of Containers: One Glass Jar & Two VOA Vials

Analysis Requested: Analysis as listed below

PARAMETER	RESULT	UNITS	MDL	REF*	METHOD	DATES	
						EXT/PREP	ANALYSIS
HSL Acid/Base/Neutral Extractables **							
Fluoranthene	260	ug/Kg	**	1	8270	03/15/90	03/19/90
Bis (2-ethylhexyl) phthalate	962	ug/Kg	**	1	8270	03/15/90	03/19/90
Di-n-butylphthalate	2,870	ug/Kg	**	1	8270	03/15/90	03/19/90
Benzo(b)fluoranthene	214	ug/Kg	**	1	8270	03/15/90	03/19/90
Chrysene	171	ug/Kg	**	1	8270	03/15/90	03/19/90
Pyrene	200	ug/Kg	**	1	8270	03/15/90	03/19/90
PCB's	ND	ug/Kg	2.5	1	8080	03/15/90	03/21/90
Pesticides	ND	ug/Kg	0.25	1	8080	03/15/90	03/21/90

HSL Acid/Base/Neutral Extractables	‡ Surrogate Recovery
2-Fluorophenol	41‡
Phenol-d5	46‡
Nitrobenzene-d5	84‡
2-Fluorobiphenyl	103‡
2,4,6-Tribromophenol	93‡
4-Terphenyl-d14	84‡

COMMENTS: *Complete list of References found in Addendum I
 **A list of HSL acid/base/neutral extractables, PCB's and pesticides analyzed for and their detection limits accompany this report.
 HSL Acid/Base/Neutral Extractables** All compounds were below the detection limits except those listed above.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT FH-0574

SS-2

Laboratory Sample Number: 901125.6 Date Received: 03/08/90

Sample Matrix: Soil (results on a dry weight basis) Date Reported: 03/22/90

Condition of Samples: Satisfactory Field Prep: None

Number & Type of Containers: One Glass Jar & Two VOA Vials

Analysis Requested: Analysis as listed below

CONTINUED

PARAMETER	RESULT	UNITS	MDL	REF*	METHOD	DATES	
						EXT/PREP	ANALYSIS
Volatile Organics**	ND	ug/Kg	**	1	8240	03/09/90	03/17/90
Total Priority Pollutant 13 Metals							
Antimony	ND	mg/Kg	464	1	6010	03/10/90	03/14/90
Arsenic	25.0	mg/Kg	4.6	1	7060	03/10/90	03/14/90
Beryllium	ND	mg/Kg	18.5	1	6010	03/10/90	03/14/90
Cadmium	9.3	mg/Kg	9.3	1	6010	03/10/90	03/14/90
Chromium	167	mg/Kg	18.5	1	6010	03/10/90	03/14/90
Copper	241	mg/Kg	18.5	1	6010	03/10/90	03/14/90
Lead	631	mg/Kg	46.4	1	6010	03/10/90	03/14/90
Mercury	10.26	mg/Kg	1.17	1	7470	03/10/90	03/14/90
Nickel	ND	mg/Kg	46.4	1	6010	03/10/90	03/14/90
Selenium	ND	mg/Kg	4.6	1	7740	03/10/90	03/14/90
Silver	ND	mg/Kg	2.8	1	7761	03/10/90	03/14/90
Thallium	ND	mg/Kg	464	1	6010	03/10/90	03/14/90
Zinc	389	mg/Kg	9.3	1	6010	03/10/90	03/14/90
Total Solids	25.9	%	0.1	2	209A	---	03/22/90
Volatile Organics % Surrogate Recovery							
1,2-Dichloroethane-d4							94%
Toluene-d8							101%
4-Bromofluorobenzene							94%

COMMENTS: *Complete list of References found in Addendum I
 **A list of volatile organics analyzed for and their detection limits accompany this report.
 Volatile Organics** All compounds were below detection limits except those listed above.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT HI-0574

55-2 (Duplicate)

Laboratory Sample Number: 901125.6D Date Received: 03/08/90

Sample Matrix: Soil (results on a dry weight basis) Date Reported: 03/22/90

Condition of Samples: Satisfactory Field Prep: None

Number & Type of Containers: One Glass Jar

Analysis Requested: Analysis as listed below

PARAMETER	RESULT	UNITS	MDL	REF*	METHOD	DATES	
						EXT/REP	ANALYSIS
Total Priority Pollutant 13 Metals							
Antimony	ND	mg/Kg	464	1	6010	03/10/90	03/14/90
Arsenic	22.9	mg/Kg	4.6	1	7060	03/10/90	03/14/90
Beryllium	ND	mg/Kg	18.5	1	6010	03/10/90	03/14/90
Cadmium	8.8	mg/Kg	9.3	1	6010	03/10/90	03/14/90
Chromium	167	mg/Kg	18.5	1	6010	03/10/90	03/14/90
Copper	220	mg/Kg	18.5	1	6010	03/10/90	03/14/90
Lead	528	mg/Kg	46.4	1	6010	03/10/90	03/14/90
Mercury	8.39	mg/Kg	1.17	1	7470	03/10/90	03/14/90
Nickel	44.0	mg/Kg	46.4	1	6010	03/10/90	03/14/90
Selenium	ND	mg/Kg	4.6	1	7740	03/10/90	03/14/90
Silver	ND	mg/Kg	2.8	1	7761	03/10/90	03/14/90
Thallium	ND	mg/Kg	464	1	6010	03/10/90	03/14/90
Zinc	273	mg/Kg	9.3	1	6010	03/10/90	03/14/90

COMMENTS: *Complete list of References found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT HI-0574

SW-3

Laboratory Sample Number: 901125.3 Date Received: 03/08/90

Sample Matrix: Water Date Reported: 03/22/90

Condition of Samples: Satisfactory Field Prep: None

Number & Type of Containers: One Glass & One Plastic Bottle & Two VOA Vials

Analysis Requested: Analysis as listed below

PARAMETER	RESULT	UNITS	MLL	REF*	METHOD	DATES	
						EXT/PREP	ANALYSIS
HSL Acid/Base/Neutral Extractables **							
Bis (2-ethylhexyl) phthalate	108	ug/L	**	1	8270	03/15/90	03/19/90
PCB's	ND	ug/L	2.5	1	8080	03/15/90	03/21/90
Pesticides	ND	ug/L	0.25	1	8080	03/15/90	03/21/90
Volatile Organics**	ND	ug/L	**	1	8240	---	03/19/90

HSL Acid/Base/Neutral Extractables	% Surrogate Recovery
2-Fluorophenol	34%
Phenol-d5	40%
Nitrobenzene-d5	67%
2-Fluorobiphenyl	80%
2,4,6-Tribromophenol	80%
4-Terphenyl-d14	67%

Volatile Organics	% Surrogate Recovery
1,2-Dichloroethane-d4	100%
Toluene-d8	100%
4-Bromofluorobenzene	99%

COMMENTS: *Complete list of References found in Addendum I
 **A list of HSL acid/base/neutral extractables, PCB's, pesticides, and volatile organics analyzed for and their detection limits accompany this report.
 HSL Acid/Base/Neutral Extractables and Volatile Organics** All compounds were below the detection limits except those listed above.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT EE-0574

55-3

Laboratory Sample Number: 901125.7 Date Received: 03/08/90

Sample Matrix: Soil (results on a dry weight basis). Date Reported: 03/22/90

Condition of Samples: Satisfactory Field Prep: None

Number & Type of Containers: One Glass Jar & One VOA Vial

Analysis Requested: Analysis as listed below

PARAMETER	RESULT	UNITS	MDL	REF*	METHOD	DATES	
						EXT/PRP	ANALYSIS
HSL Acid/Base/Neutral Extractables **							
Fluoranthene	1,110	ug/Kg	**	1	8270	03/15/90	03/19/90
Bis (2-ethylhexyl) phthalate	1,800	ug/Kg	**	1	8270	03/15/90	03/19/90
Di-n-butylphthalate	1,490	ug/Kg	**	1	8270	03/15/90	03/19/90
Benzo(a)pyrene	429	ug/Kg	**	1	8270	03/15/90	03/19/90
Benzo(b)fluoranthene	971	ug/Kg	**	1	8270	03/15/90	03/19/90
Chrysene	543	ug/Kg	**	1	8270	03/15/90	03/19/90
Benzo(ghi)perylene	350	ug/Kg	**	1	8270	03/15/90	03/19/90
Phenanthrene	291	ug/Kg	**	1	8270	03/15/90	03/19/90
Indeno(1,2,3-cd) pyrene	410	ug/Kg	**	1	8270	03/15/90	03/19/90
Pyrene	785	ug/Kg	**	1	8270	03/15/90	03/19/90
Phenol	152	ug/Kg	**	1	8270	03/15/90	03/19/90
PCB's	ND	ug/Kg	2.5	1	8080	03/15/90	03/21/90
Pesticides	ND	ug/Kg	0.25	1	8080	03/15/90	03/21/90
HSL Acid/Base/Neutral Extractables				% Surrogate Recovery			
2-Fluorophenol				28%			
Phenol-d5				41%			
Nitrobenzene-d5				86%			
2-Fluorobiphenyl				109%			
2,4,6-Tribromophenol				93%			
4-Terphenyl-d14				91%			

COMMENTS: *Complete list of References found in Addendum I

**A list of HSL acid/base/neutral extractables, PCB's and pesticides analyzed for and their detection limits accompany this report.
HSL Acid/Base/Neutral Extractables** All compounds were below the detection limits except those listed above.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574

55-3

Laboratory Sample Number: 901125.7 Date Received: 03/08/90

Sample Matrix: Soil (results on a dry weight basis) Date Reported: 03/22/90

Condition of Samples: Satisfactory Field Prep: None

Number & Type of Containers: One Glass Jar & One VOA Vial

Analysis Requested: Analysis as listed below

CONTINUED

PARAMETER	RESULT	UNITS	MDL	REF*	METHOD	DATES	
						EXT/PREP	ANALYSIS
Volatile Organics**	ND	ug/Kg	**	1	8240	03/09/90	03/17/90
Total Priority Pollutant 13 Metals							
Antimony	ND	mg/Kg	105	1	6010	03/10/90	03/14/90
Arsenic	3.6	mg/Kg	1.0	1	7060	03/10/90	03/14/90
Beryllium	ND	mg/Kg	4.2	1	6010	03/10/90	03/14/90
Cadmium	2.1	mg/Kg	2.1	1	6010	03/10/90	03/14/90
Chromium	23.0	mg/Kg	4.2	1	6010	03/10/90	03/14/90
Copper	264	mg/Kg	4.2	1	6010	03/10/90	03/14/90
Lead	14.6	mg/Kg	10.5	1	6010	03/10/90	03/14/90
Mercury	ND	mg/Kg	0.31	1	7470	03/10/90	03/14/90
Nickel	ND	mg/Kg	10.5	1	6010	03/10/90	03/14/90
Selenium	ND	mg/Kg	1.0	1	7740	03/10/90	03/14/90
Silver	12.1	mg/Kg	0.63	1	7761	03/10/90	03/14/90
Thallium	ND	mg/Kg	105.0	1	6010	03/10/90	03/14/90
Zinc	188	mg/Kg	2.1	1	6010	03/10/90	03/14/90
Total Solids	64.3	%	0.1	2	209A	---	03/22/90
Volatile Organics † Surrogate Recovery							
1,2-Dichloroethane-d4							95%
Toluene-d8							1001%
4-Bromofluorobenzene							94%

COMMENTS: *Complete list of References found in Addendum I
 **A list of volatile organics analyzed for and their detection limits accompany this report.
 Volatile Organics** All compounds were below detection limits except those listed above.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT PH-0574

SS-3 (Spike Recovery)

Laboratory Sample Number: 901125.7S Date Received: 03/08/90

Sample Matrix: Soil (results on a dry weight basis) Date Reported: 03/22/90

Condition of Samples: Satisfactory Field Prep: None

Number & Type of Containers: One Glass Jar

Analysis Requested: Analysis as listed below (Spike Recovery)

<u>PARAMETER</u>	<u>%RECOVERY</u>
Total Priority Pollutant Metals	
Antimony	106%
Arsenic	87%
Beryllium	100%
Cadmium	94%
Lead	103%
Mercury	60%
Nickel	106%
Selenium	85%
Thallium	88%

COMMENTS: *Complete list of References found in Addendum I

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT FH-0574

55-4

Laboratory Sample Number: 901125.8 Date Received: 03/08/90

Sample Matrix: Soil (results on a dry weight basis) Date Reported: 03/22/90

Condition of Samples: Satisfactory Field Prep: None

Number & Type of Containers: One Glass Jar & Two VOA Vials

Analysis Requested: Analysis as listed below

PARAMETER	RESULT	UNITS	MDL	REP*	METHOD	DATES	
						EXT/PREP	ANALYSIS
HSL Acid/Base/Neutral Extractables **							
Fluoranthene	228	ug/Kg	**	1	8270	03/15/90	03/19/90
Bis (2-ethylhexyl) phthalate	1,600	ug/Kg	**	1	8270	03/15/90	03/19/90
Di-n-butylphthalate	1,540	ug/Kg	**	1	8270	03/15/90	03/19/90
Benzo(b)fluoranthene	229	ug/Kg	**	1	8270	03/15/90	03/19/90
Pyrene	154	ug/Kg	**	1	8270	03/15/90	03/19/90
PCB's	ND	ug/Kg	2.5	1	8080	03/15/90	03/21/90
Pesticides	ND	ug/Kg	0.25	1	8080	03/15/90	03/21/90

HSL Acid/Base/Neutral Extractables	% Surrogate Recovery
2-Fluorophenol	36%
Phenol-d5	42%
Nitrobenzene-d5	91%
2-Fluorobiphenyl	110%
2,4,6-Tribromophenol	95%
4-Terphenyl-d14	90%

COMMENTS: *Complete list of References found in Addendum I
 **A list of HSL acid/base/neutral extractables, PCB's and pesticides analyzed for and their detection limits accompany this report.
 HSL Acid/Base/Neutral Extractables** All compounds were below the detection limits except those listed above.

ALPHA ANALYTICAL LABORATORIES
CERTIFICATE OF ANALYSIS

MA 086 NH 198958-A CT HI-0574

55-4

Laboratory Sample Number: 901125.8 Date Received: 03/08/90

Sample Matrix: Soil (results on a dry weight basis) Date Reported: 03/22/90

Condition of Samples: Satisfactory Field Prep: None

Number & Type of Containers: One Glass Jar & Two VOA Vials

Analysis Requested: Analysis as listed below

CONTINUED

PARAMETER	RESULT	UNITS	MCL	REF*	METHOD	DATES	
						EKI/PREP	ANALYSIS
Volatile Organics**	ND	ug/Kg	**	1	8240	03/09/90	03/17/90
Total Priority Pollutant 13 Metals							
Antimony	ND	mg/Kg	517	1	6010	03/10/90	03/14/90
Arsenic	10.3	mg/Kg	5.2	1	7060	03/10/90	03/14/90
Beryllium	ND	mg/Kg	20.7	1	6010	03/10/90	03/14/90
Cadmium	10.3	mg/Kg	10.3	1	6010	03/10/90	03/14/90
Chromium	331	mg/Kg	20.7	1	6010	03/10/90	03/14/90
Copper	424	mg/Kg	20.7	1	6010	03/10/90	03/14/90
Lead	621	mg/Kg	51.7	1	6010	03/10/90	03/14/90
Mercury	4.06	mg/Kg	1.27	1	7470	03/10/90	03/14/90
Nickel	ND	mg/Kg	51.7	1	6010	03/10/90	03/14/90
Selenium	ND	mg/Kg	5.2	1	7740	03/10/90	03/14/90
Silver	9.3	mg/Kg	3.1	1	7761	03/10/90	03/14/90
Thallium	ND	mg/Kg	517.0	1	6010	03/10/90	03/14/90
Zinc	259.0	mg/Kg	10.3	1	6010	03/10/90	03/14/90
Total Solids	26.6	%	0.1	2	209A	—	03/22/90
Volatile Organics % Surrogate Recovery							
1,2-Dichloroethane-d4							94%
Toluene-d8							100%
4-Bromofluorobenzene							97%

COMMENTS: *Complete list of References found in Addendum I
 **A list of volatile organics analyzed for and their detection limits accompany this report.
 Volatile Organics** All compounds were below detection limits except those listed above.



RECEIVED NOV 23 1998

Severn Trent Laboratories
Westfield Executive Park
53 Southampton Road
Westfield MA 01085
Tel: (413) 572-4000
Fax: (413) 572-3707

November 19, 1998

Mr. John McTigue

ERM
399 Boylston St.
Boston, MA 02116

Report Number : 13796

Dear Mr. McTigue,

The analysis of your sample(s) submitted on 11/6/98 is now complete and the appropriate analytical report is enclosed. The samples were prepared and analyzed according to EPA established methodologies and protocols. If you have any questions regarding the report or any part of our service, please do not hesitate to contact us. Thank you for using Severn Trent Laboratories, and we look forward to receiving your next samples.

SEVERN TRENT LABORATORIES

Michael F. Wheeler, Ph.D.
Laboratory Director

Other Laboratory Locations:

- 149 Rangeway Road, North Billerica MA 01862
- 55 South Park Drive, Colchester VT 05446
- 16203 Park Row, Suite 110, Houston TX 77084
- 200 Monroe Turnpike, Monroe CT 06468
- 315 Fullerton Avenue, Newburgh NY 12550
- 120 Southcenter Court, Suite 300, Morrisville NC 27560
- 11 East Olive Road, Pensacola FL 32514
- 628 Route 10, Whippany NJ 07981

a part of
Severn Trent Services Inc

CASE NARRATIVE FOR REPORT NUMBER 13796

Client Name : ERM

Project Name : Raytheon-Wayland

Date : November 19, 1998

Sample Number	Comments
113087	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113088	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113089	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113090	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113091	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113092	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113093	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113094	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113095	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113096	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113097	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113098	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113099	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113100	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113101	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113102	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.

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Inorganics Analysis Data Sheet

Client ID : T-1-2	Report No : 13796
Client Name : ERM	STL Sample Number : 113087
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	54700	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	614	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	799	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	550	mg/kg dry	SW8466010A	11/10/98

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Inorganics Analysis Data Sheet

Client ID : T-1-3	Report No : 13796
Client Name : ERM	STL Sample Number : 113088
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	75400	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	876	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	755	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	608	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID : T-2-1	Report No : 13796
Client Name : ERM	STL Sample Number : 113089
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	123000	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	3680	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	4040	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	1220	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID : T-2-2	Report No : 13796
Client Name : ERM	STL Sample Number : 113090
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	49800	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	125	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	1060	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	305	mg/kg dry	SW8466010A	11/10/98

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Inorganics Analysis Data Sheet

Client ID : T-2-3	Report No : 13796
Client Name : ERM	STL Sample Number : 113091
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	21300	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	792	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	1060	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	450	mg/kg dry	SW8466010A	11/10/98

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Inorganics Analysis Data Sheet

Client ID : T-2-4	Report No : 13796
Client Name : ERM	STL Sample Number : 113092
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	44600	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	3760	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	365	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	817	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID : T-2-5	Report No : 13796
Client Name : ERM	STL Sample Number : 113093
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	105000	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	8540	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	4690	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	606	mg/kg dry	SW8466010A	11/10/98

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Inorganics Analysis Data Sheet

Client ID : T-3-4	Report No : 13796
Client Name : ERM	STL Sample Number : 113094
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	47200	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	1890	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	4800	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	308	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID : T-3-5	Report No : 13796
Client Name : ERM	STL Sample Number : 113095
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	66900	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	7350	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	5320	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	851	mg/kg dry	SW8466010A	11/10/98

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Inorganics Analysis Data Sheet

Client ID : T-4-5	Report No : 13796
Client Name : ERM	STL Sample Number : 113096
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	39800	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	2380	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	2590	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	310	mg/kg dry	SW8466010A	11/10/98

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Inorganics Analysis Data Sheet

Client ID : T-4-4	Report No : 13796
Client Name : ERM	STL Sample Number : 113097
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	72600	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	7860	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	7310	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	583	mg/kg dry	SW8466010A	11/10/98

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Inorganics Analysis Data Sheet

Client ID : T-4-3	Report No : 13796
Client Name : ERM	STL Sample Number : 113098
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	77600	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	3600	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	4510	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	526	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID : T-4-2	Report No : 13796
Client Name : ERM	STL Sample Number : 113099
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	118000	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	9500	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	5890	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	986	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID : T-5-1	Report No : 13796
Client Name : ERM	STL Sample Number : 113100
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	98300	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	4140	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	2860	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	501	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID : T-5-3	Report No : 13796
Client Name : ERM	STL Sample Number : 113101
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	19600	mg/kg dry	SW8469060	11/9/98
7440-47-3	Chromium	307	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	880	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	228	mg/kg dry	SW8466010A	11/10/98

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Inorganics Analysis Data Sheet

Client ID : T-5-5	Report No : 13796
Client Name : ERM	STL Sample Number : 113102
Project Name : Raytheon-Wayland	Date Collected : 11/5/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	183000	mg/kg dry	SW8469060	11/11/98
7440-47-3	Chromium	8720	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	10400	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	1180	mg/kg dry	SW8466010A	11/10/98



SW8468082

Client ID : T-1-2

Client Name : ERM

Project Name : Raytheon-Wayland

Matrix : Soil

Sample Wt/Vol : 10.4g

% Solid : 55.6

GPC Clean up :

Sulfur Clean up :

Report No : 13796

STL Sample Number : 113087

Lab File ID : 085R3301.D

Date Collected : 11/5/98

Date Received : 11/6/98

Date Extracted : 11/6/98

Date Analyzed : 11/12/98

Dilution Factor : 250

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	42,000	U
11104-28-2	Arochlor-1221	42,000	U
53469-21-9	Arochlor-1242	42,000	U
12672-29-6	Arochlor-1248	42,000	U
11097-69-1	Arochlor-1254	42,000	U
11096-82-5	Arochlor-1260	42,000	330000

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Pesticides/PCB Organics Analysis Data Sheet

SW8468082

Client ID : T-1-3	Report No : 13796
Client Name : ERM	STL Sample Number : 113088
Project Name : Raytheon-Wayland	Lab File ID : 048R2701.D
Matrix : Soil	Date Collected : 11/5/98
Sample Wt/Vol : 10g	Date Received : 11/6/98
% Solid : 45.67	Date Extracted : 11/6/98
GPC Clean up :	Date Analyzed : 11/11/98
Sulfur Clean up :	Dilution Factor : 180

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	39,000	U
11104-28-2	Arochlor-1221	39,000	U
53469-21-9	Arochlor-1242	39,000	U
12672-29-6	Arochlor-1248	39,000	U
11097-69-1	Arochlor-1254	39,000	U
11096-82-5	Arochlor-1260	39,000	540000



SW8468082

Client ID : T-2-1	Report No : 13796
Client Name : ERM	STL Sample Number : 113089
Project Name : Raytheon-Wayland	Lab File ID : 049R3001.D
Matrix : Soil	Date Collected : 11/5/98
Sample Wt/Vol : 10.27g	Date Received : 11/6/98
% Solid : 22.27	Date Extracted : 11/6/98
GPC Clean up :	Date Analyzed : 11/12/98
Sulfur Clean up :	Dilution Factor : 20

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	8,700	U
11104-28-2	Arochlor-1221	8,700	U
53469-21-9	Arochlor-1242	8,700	U
12672-29-6	Arochlor-1248	8,700	U
11097-69-1	Arochlor-1254	8,700	U
11096-82-5	Arochlor-1260	8,700	66000

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Pesticides/PCB Organics Analysis Data Sheet

SW8468082

Client ID : T-2-2	Report No : 13796
Client Name : ERM	STL Sample Number : 113090
Project Name : Raytheon-Wayland	Lab File ID : 050R3001.D
Matrix : Soil	Date Collected : 11/5/98
Sample Wt/Vol : 10.23g	Date Received : 11/6/98
% Solid : 60.08	Date Extracted : 11/6/98
GPC Clean up :	Date Analyzed : 11/12/98
Sulfur Clean up :	Dilution Factor : 80

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	13,000	U
11104-28-2	Arochlor-1221	13,000	U
53469-21-9	Arochlor-1242	13,000	U
12672-29-6	Arochlor-1248	13,000	U
11097-69-1	Arochlor-1254	13,000	U
11096-82-5	Arochlor-1260	13,000	110000



SW8468082

Client ID : T-2-3	Report No : 13796
Client Name : ERM	STL Sample Number : 113091
Project Name : Raytheon-Wayland	Lab File ID : 051R3101.D
Matrix : Soil	Date Collected : 11/5/98
Sample Wt/Vol : 10.36g	Date Received : 11/6/98
% Solid : 52	Date Extracted : 11/6/98
GPC Clean up :	Date Analyzed : 11/12/98
Sulfur Clean up :	Dilution Factor : 16

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	3,000	U
11104-28-2	Arochlor-1221	3,000	U
53469-21-9	Arochlor-1242	3,000	U
12672-29-6	Arochlor-1248	3,000	U
11097-69-1	Arochlor-1254	3,000	U
11096-82-5	Arochlor-1260	3,000	12000

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Pesticides/PCB Organics Analysis Data Sheet

SW8468082

Client ID : T-2-4	Report No : 13796
Client Name : ERM	STL Sample Number : 113092
Project Name : Raytheon-Wayland	Lab File ID : 052R3101.D
Matrix : Soil	Date Collected : 11/5/98
Sample Wt/Vol : 10.14g	Date Received : 11/6/98
% Solid : 55.53	Date Extracted : 11/6/98
GPC Clean up :	Date Analyzed : 11/12/98
Sulfur Clean up :	Dilution Factor : 20

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	3,600	U
11104-28-2	Arochlor-1221	3,600	U
53469-21-9	Arochlor-1242	3,600	U
12672-29-6	Arochlor-1248	3,600	U
11097-69-1	Arochlor-1254	3,600	U
11096-82-5	Arochlor-1260	3,600	44000



Pesticides/PCB Organics Analysis Data Sheet

SW8468082

Client ID : T-2-5	Report No : 13796
Client Name : ERM	STL Sample Number : 113093
Project Name : Raytheon-Wayland	Lab File ID : 053R3101.D
Matrix : Soil	Date Collected : 11/5/98
Sample Wt/Vol : 10.61g	Date Received : 11/6/98
% Solid : 48.81	Date Extracted : 11/6/98
GPC Clean up :	Date Analyzed : 11/12/98
Sulfur Clean up :	Dilution Factor : 16

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	3,200	U
11104-28-2	Arochlor-1221	3,200	U
53469-21-9	Arochlor-1242	3,200	U
12672-29-6	Arochlor-1248	3,200	U
11097-69-1	Arochlor-1254	3,200	U
11096-82-5	Arochlor-1260	3,200	35000

Pesticides/PCB Organics Analysis Data Sheet

SW8468082

Client ID : T-3-4

Client Name : ERM

Project Name : Raytheon-Wayland

Matrix : Soil

Sample Wt/Vol : 10.18g

% Solid : 39.13

GPC Clean up :

Sulfur Clean up :

Report No : 13796

STL Sample Number : 113094

Lab File ID : 029R2001.D

Date Collected : 11/5/98

Date Received : 11/6/98

Date Extracted : 11/6/98

Date Analyzed : 11/11/98

Dilution Factor : 33

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	750	U
11104-28-2	Arochlor-1221	750	U
53469-21-9	Arochlor-1242	750	U
12672-29-6	Arochlor-1248	750	U
11097-69-1	Arochlor-1254	750	2600
11096-82-5	Arochlor-1260	750	10000

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SW8468082

Client ID : T-3-5

Client Name : ERM

Project Name : Raytheon-Wayland

Matrix : Soil

Sample Wt/Vol : 10.41g

% Solid : 25.96

GPC Clean up :

Sulfur Clean up :

Report No : 13796

STL Sample Number : 113095

Lab File ID : 030R2001.D

Date Collected : 11/5/98

Date Received : 11/6/98

Date Extracted : 11/6/98

Date Analyzed : 11/11/98

Dilution Factor : 9

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	3,300	U
11104-28-2	Arochlor-1221	3,300	U
53469-21-9	Arochlor-1242	3,300	U
12672-29-6	Arochlor-1248	3,300	U
11097-69-1	Arochlor-1254	3,300	U
11096-82-5	Arochlor-1260	3,300	39000

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Client ID : T-4-5	Report No : 13796
Client Name : ERM	STL Sample Number : 113096
Project Name : Raytheon-Wayland	Lab File ID : 034R2301.D
Matrix : Soil	Date Collected : 11/5/98
Sample Wt/Vol : 10.04g	Date Received : 11/6/98
% Solid : 23.44	Date Extracted : 11/6/98
GPC Clean up :	Date Analyzed : 11/11/98
Sulfur Clean up :	Dilution Factor : 42

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	4,200	U
11104-28-2	Arochlor-1221	4,200	U
53469-21-9	Arochlor-1242	4,200	U
12672-29-6	Arochlor-1248	4,200	U
11097-69-1	Arochlor-1254	4,200	U
11096-82-5	Arochlor-1260	4,200	41000



SW8468082

Client ID : T-4-4

Client Name : ERM

Project Name : Raytheon-Wayland

Matrix : Soil

Sample Wt/Vol : 9.97g

% Solid : 36.56

GPC Clean up :

Sulfur Clean up :

Report No : 13796

STL Sample Number : 113097

Lab File ID : 078R3501.D

Date Collected : 11/5/98

Date Received : 11/6/98

Date Extracted : 11/6/98

Date Analyzed : 11/12/98

Dilution Factor : 15

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	4,100	U
11104-28-2	Arochlor-1221	4,100	U
53469-21-9	Arochlor-1242	4,100	U
12672-29-6	Arochlor-1248	4,100	U
11097-69-1	Arochlor-1254	4,100	U
11096-82-5	Arochlor-1260	4,100	70000

11/19/98 11:46 AM

Page 11 of 16



Pesticides/PCB Organics Analysis Data Sheet

SW8468082

Client ID : T-4-3

Client Name : ERM

Project Name : Raytheon-Wayland

Matrix : Soil

Sample Wt/Vol : 10.01g

% Solid : 32.94

GPC Clean up :

Sulfur Clean up :

Report No : 13796

STL Sample Number : 113098

Lab File ID : 032R2301.D

Date Collected : 11/5/98

Date Received : 11/6/98

Date Extracted : 11/6/98

Date Analyzed : 11/11/98

Dilution Factor : 9

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	2,700	U
11104-28-2	Arochlor-1221	2,700	U
53469-21-9	Arochlor-1242	2,700	U
12672-29-6	Arochlor-1248	2,700	U
11097-69-1	Arochlor-1254	2,700	U
11096-82-5	Arochlor-1260	2,700	13000

11/19/98 11:46 AM

Page 12 of 16

MADEP MA014
NCDEHNR 408CTDPH-0494
USACENJ 59424
NY DOH 10843

NH DES 2539

53 Southampton Road
Westfield, MA 01085
Tel: (413) 572-4000
Fax: (413) 572-3707

SW8468082

Client ID : T-4-2

Client Name : ERM

Project Name : Raytheon-Wayland

Matrix : Soil

Sample Wt/Vol : 10.15g

% Solid : 20.53

GPC Clean up :

Sulfur Clean up :

Report No : 13796

STL Sample Number : 113099

Lab File ID : 031R2301.D

Date Collected : 11/5/98

Date Received : 11/6/98

Date Extracted : 11/6/98

Date Analyzed : 11/11/98

Dilution Factor : 10

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	4,800	U
11104-28-2	Arochlor-1221	4,800	U
53469-21-9	Arochlor-1242	4,800	U
12672-29-6	Arochlor-1248	4,800	U
11097-69-1	Arochlor-1254	4,800	U
11096-82-5	Arochlor-1260	4,800	31000

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Page 13 of 16



Pesticides/PCB Organics Analysis Data Sheet

SW8468082

Client ID : T-5-1	Report No : 13796
Client Name : ERM	STL Sample Number : 113100
Project Name : Raytheon-Wayland	Lab File ID : 035R2501.D
Matrix : Soil	Date Collected : 11/5/98
Sample Wt/Vol : 10.07g	Date Received : 11/6/98
% Solid : 25.31	Date Extracted : 11/6/98
GPC Clean up :	Date Analyzed : 11/11/98
Sulfur Clean up :	Dilution Factor : 9

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	3,500	U
11104-28-2	Arochlor-1221	3,500	U
53469-21-9	Arochlor-1242	3,500	U
12672-29-6	Arochlor-1248	3,500	U
11097-69-1	Arochlor-1254	3,500	U
11096-82-5	Arochlor-1260	3,500	8700



SW8468082

Client ID : T-5-3

Client Name : ERM

Project Name : Raytheon-Wayland

Matrix : Soil

Sample Wt/Vol : 9.98g

% Solid : 91.94

GPC Clean up :

Sulfur Clean up :

Report No : 13796

STL Sample Number : 113101

Lab File ID : 081R3601.D

Date Collected : 11/5/98

Date Received : 11/6/98

Date Extracted : 11/6/98

Date Analyzed : 11/12/98

Dilution Factor : 20

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	4,800	U
11104-28-2	Arochlor-1221	4,800	U
53469-21-9	Arochlor-1242	4,800	U
12672-29-6	Arochlor-1248	4,800	U
11097-69-1	Arochlor-1254	4,800	U
11096-82-5	Arochlor-1260	4,800	61000

Pesticides/PCB Organics Analysis Data Sheet

SW8468082

Client ID : T-5-5	Report No : 13796
Client Name : ERM	STL Sample Number : 113102
Project Name : Raytheon-Wayland	Lab File ID : 094R2601.D
Matrix : Soil	Date Collected : 11/5/98
Sample Wt/Vol : 10.05g	Date Received : 11/6/98
% Solid : 19.15	Date Extracted : 11/6/98
GPC Clean up :	Date Analyzed : 11/11/98
Sulfur Clean up :	Dilution Factor : 4

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	1,000	U
11104-28-2	Arochlor-1221	1,000	U
53469-21-9	Arochlor-1242	1,000	U
12672-29-6	Arochlor-1248	1,000	U
11097-69-1	Arochlor-1254	1,000	U
11096-82-5	Arochlor-1260	1,000	11000



Severn Trent Laboratory

Chain of Custody Form



•53 Southampton Rd.
Westfield, MA 01085
(P) 413-572-4000
(F) 413-572-3707

•149 Rangeway Road
N. Billerica, MA 01862
(P) 978-667-1400
(F) 978-667-7871

13796

NOV. 6. 1998 P. 3/5

NOV. 6. 1998 11:15AM STL MA BILLERICA

Client: <u>ERM</u>		Job#: <u>143.45</u>		Job#	Quote#	PO#						
Address: <u>399 Boylston St.</u> <u>Boston, MA 02116</u>		Project Manager: <u>John McTigue</u>		Shaded areas for office use Analysis Requested Check analysis and specify method and analytes in comments section. For example: 500-series for drinking water 800-series for waste water 9900-series for hazardous waste Use comments section to further define.								
Phone: <u>617 267 8377</u> Fax: <u>617 267 6477</u>		Work ID: <u>Raglan - Wayland</u>										
Requested Turn Around Time		Regulatory Classification - Please Specify		Comments (Special Instructions) Please call John McTigue at 617 267 8377 as soon as possible after detection of PCBs in a sample at a concentration estimated to be greater than 2 ppm, Chromium and copper at greater than 110 ppm and lead at greater than 250 ppm. Verbal results is intended to guide selection of additional sample groups. John McTigue @ (617) 267-8377 or (617) 719-5868. PCBs by Method 8081, Chromium, Copper and Lead for metals - Please Extract all PCB sample hold extract and metals for samples T-3-3, 2, 1, T-5-2, 4. Also for metals.								
15 Business Day _____	Rush <u>5 Day</u>	NPDES _____	Drinking Water _____				MCP Other <u>5-1</u>					
10 Business Day _____	Other _____	RCRA _____	MCP GW1 _____				Other _____					
Sample Type Codes		Preservative					Volatiles Semivolatiles PCB & Polynuclear Aroclor Metals Cu, Pb, Zn, Cd, Ni Cyanide TCLP Oil & Grease Total Pet. Hyd. (TPH) General Chemistry Bacteriological Other					
WW- Wastewater	W- Wastewater	SW- Surfacewater	LW- Labwater							Plastic(P) or Glass(G)	Na2S2O3	HNO3 to pH <2
RW- Raw Water	GW- Groundwater	PW- Public Water	SO- Soil	# Containers								
S- Solid/Sol	SL- Sludge	O- Oil	A- Air Z- Other	Grab	Comp.							
Sample ID Use one line per container For volatiles-one line/analysis	Sample Type	Date Time Collected										
T-1-2	S	5/11 1-5 pm	X	26								
T-1-3	S		X	26								
T-2-1	S		X	26								
T-2-2	S		X	26								
T-2-3	S		X	26								
T-2-4	S		X	26								
T-2-5	S		X	26								
T-3-4	S		X	26								
T-3-5	S		X	26								
Sampled by (print): <u>John McTigue</u>		Signature: <u>JOHN MCTIGUE</u>		Cooler #: <u>1</u>								
Relinquished by: <u>John McTigue</u>		Date: <u>5/11/98</u>	Time: <u>1:50 pm</u>	Received by: <u>John McTigue</u>		Date: <u>11/10/98</u>	Time: <u>2:40</u>					
Relinquished by: _____		Date: _____	Time: _____	Received by: _____		Date: _____	Time: _____					
Method of shipment:		Laboratory:		Preservation pH checked								
				By: _____ Date: _____								

Severn Trent Laboratory

Chain of Custody Form



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(P) 413-572-4000
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N. Billerica, MA 01862
(P) 978-667-1400
(F) 978-667-7871

13796

NO. 878 P. 4/5

NOV. 6. 1998 11:15AM STL MA BILLERICA

Client: <u>ERM</u>		Job#: <u>143.45</u>		Job#: _____		Quote# _____		PO# _____										
Address: <u>399 Baylston St.</u> <u>Boston, MA 02116</u>		Project Manager: <u>John McTigue</u>		Analysis Requested Check analysis and specify method and analytes in comments section. For example: 500-series for drinking water 600-series for waste water 800-series for haz/waste Use comments section to further define.						Comments (Special Instructions)								
Phone: <u>617 267 8377</u> Fax <u>617 267 6447</u>		Work ID: <u>Raytheon-Wayland</u>																
Requested Turn Around Time		Regulatory Classification - Please Specify								Please call John McTigue at 617 267 8377 as soon as possible after detection of PCBs in a sample at a concentration estimated to be greater than 2ppm chromium and copper at greater than 110ppm and lead at greater than 250ppm - John McTigue @ (617) 714-5868 or above. Please extract all PCB samples - analyze those indicated and hold extract and metals/TOC for samples T-3-3, 2, 1 and T-5-2, 4								
15 Business Day _____ Rush <u>5 DAY</u> 10 Business Day _____ Other _____		NPDES _____ Drinking Water _____ MCP Other <u>SL</u> RCRA _____ MCP GWI _____ Other _____																
Sample Type Codes WW-Wellwater W-Wastewater SW-Surfacewater LW-Labwater RW-Raw Water GW-Groundwater PW-Public Water SO-Soil S-Solid -SDI SL-Sludge O-Oil A-Air Z-Other				Preservative Plastic(P) or Glass(G) Na2S2O3 HNO3 to pH <2 H2SO4 to pH <2 HCl to pH <2 NaOH to pH >12 Other: _____ A °C				Volatiles Semivolatiles PCB & Organochlorine Metals <u>Cd, Cr, Pb</u> Cyanide TCLP Oil & Grease Total Pet. Hyd. (TPH) General Chemistry Bacteriological Other <u>TOC</u>										
Sample ID Use one line per container For volatiles-one line/analysis		Sample Type	Date Time Collected	Grab	Comp.	# Containers												
<u>T-4-5</u>		<u>S</u>	<u>11/5/98</u>															
<u>T-4-4</u>			<u>11/5/98</u>															
<u>T-4-3</u>																		
<u>T-4-2</u>																		
<u>T-5-1</u>																		
<u>T-5-3</u>																		
<u>T-5-5</u>																		
Sampled by (print): <u>JOHN MCTIGUE</u>		Date: <u>11/5/98</u>		Signature: <u>[Signature]</u>														
Relinquished by: <u>[Signature]</u>		Date: <u>11/6/98</u>		Time: _____		Received by: <u>[Signature]</u>		Date: <u>11/6/98</u>		Time: <u>8</u>		Cooler #:						
Relinquished by: _____		Date: _____		Time: _____		Received by: _____		Date: _____		Time: _____		Temp. @ receipt:						
Method of shipment:						Laboratory:						Preservation pH checked						
												By: _____		Date: _____				

Severn Trent Laboratory

Chain of Custody Form



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13796

NO. 879 P. 5/5

STL MA BILLERICA

NOV. 6. 1998 11:16AM

Client: <u>ERM</u>		Job#: <u>143.45</u>		Job#		Quote#		PO#																															
Address: <u>399 Baylston St.</u> <u>Boston, MA 02116</u>		Project Manager: <u>John McTigue</u>		Shaded areas for office use																																			
Phone: <u>617 267 8377</u> Fax: <u>617 267 6447</u>		Work ID: <u>Ragleen-Wayland</u>		Analysis Requested																																			
Requested Turn Around Time		Contact: <u>John McTigue</u>		Check analysis and specify method and analytes in comments section. For example: 500-series for drinking water 600-series for waste water 8000-series for haz/solid waste Use comments section to further define.																																			
15 Business Day _____ Rush <u>5 DAY</u>		Regulatory Classification - Please Specify																																					
10 Business Day _____ Other _____		NPDES _____ Drinking Water _____ MCP Other <u>5-1</u>		<p style="text-align: center;">Comments (Special Instructions)</p> <p>Please call John McTigue at 617 267-8377 as soon as possible after detection of PCBs in a sample at a concentration estimated to be greater than 2 ppm</p> <p>Please extract these samples for PCBs + Hold - also hold metals + TOC pending results for other samples</p>																																			
Sample Type Codes		RCRA _____ MCP GW1 _____ Other _____																																					
WW-Wellwater W-Wastewater SW-Surfacewater LW-Labwater RW-Raw Water GW-Groundwater PW-Public Water SO-Soil S-Solid-Soil SL-Sludge O-Oil A-Air Z-Other																																							
Sample ID Use one line per container For volatiles-one line/analysis		Date Time Collected		Grab Comp.		# Containers		Plastic(P) or Glass(G) Na2S2O3 HNO3 to pH <2 H2SO4 to pH <2 HCl to pH <2 NaOH to pH >12 Other:		4°C PH		Volatiles		Semivolatiles PCB & Pesticides		Metals Cyanide		TCLP		Oil & Grease		Total Pet. Hyd. (TPH)		General Chemistry		Bacteriological		Other											
<u>T-3-3</u>		<u>11/5/98</u>																																					
<u>T-3-2</u>		<u>1-5pm</u>																																					
<u>T-3-1</u>																																							
<u>T-5-2</u>																																							
<u>T-5-3</u>																																							
<u>T-5-4</u>																																							
Sampled by (print): <u>JOHN MCTIGUE</u>		Date: <u>11/5/98</u>		Time: <u>1-5pm</u>		Signature: <u>[Signature]</u>		Received by: <u>[Signature]</u>		Date: <u>11/6/98</u>		Time: <u>8:10</u>		Cooler #:		Temp. @ receipt:		Preservation pH checked		By:		Date:																	
Relinquished by: <u>[Signature]</u>		Date: <u>11/6/98</u>		Time:		Received by: <u>[Signature]</u>		Date: <u>11/6/98</u>		Time:																													
Relinquished by:		Date:		Time:		Received by:		Date:		Time:																													
Method of shipment:						Laboratory:																																	



Severn Trent Laboratories
Westfield Executive Park
53 Southampton Road
Westfield MA 01085
Tel: (413) 572-4000
Fax: (413) 572-3707

November 19, 1998

Mr. John McTigue

ERM
399 Boylston St.
Boston, MA 02116

Report Number : 13829

Dear Mr. McTigue,

The analysis of your sample(s) submitted on 11/9/98 is now complete and the appropriate analytical report is enclosed. The samples were prepared and analyzed according to EPA established methodologies and protocols. If you have any questions regarding the report or any part of our service, please do not hesitate to contact us. Thank you for using Severn Trent Laboratories, and we look forward to receiving your next samples.

SEVERN TRENT LABORATORIES

Michael F. Wheeler, Ph.D.
Laboratory Director

Other Laboratory Locations:

- 149 Rangeway Road, North Billerica MA 01862
- 55 South Park Drive, Colchester VT 05446
- 16203 Park Row, Suite 110, Houston TX 77084
- 200 Monroe Turnpike, Monroe CT 06468
- 315 Fullerton Avenue, Newburgh NY 12550
- 120 Southcenter Court, Suite 300, Morrisville NC 27560
- 11 East Olive Road, Pensacola FL 32514
- 628 Route 10, Whippany NJ 07981

a part of
Severn Trent Services Inc

Inorganics Analysis Data Sheet

Client ID : FP-1
 Client Name : ERM
 Project Name : Raytheon-Wayland
 Matrix Name : Soil

Report No : 13829
 STL Sample Number : 113228
 Date Collected : 11/9/98
 Date Received : 11/9/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	58400	mg/kg dry	SW8469060	11/16/98
7440-47-3	Chromium	838	mg/kg dry	SW8466010A	11/12/98
7440-50-8	Copper	623	mg/kg dry	SW8466010A	11/12/98
7439-92-1	Lead	148	mg/kg dry	SW8466010A	11/12/98

11/19/98 11:41 AM

Page 1 of 5



MADEP MA014
 NCDEHNR 408

CTDPH-0494
 USACE

NJ 59424
 NY DOH 10843

NH DES 2539

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 Westfield, MA 01085
 Tel: (413) 572-4000
 Fax: (413) 572-3707

Inorganics Analysis Data Sheet

Client ID : FP-2	Report No : 13829
Client Name : ERM	STL Sample Number : 113229
Project Name : Raytheon-Wayland	Date Collected : 11/9/98
Matrix Name : Soil	Date Received : 11/9/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	75800	mg/kg dry	SW8469060	11/16/98
7440-47-3	Chromium	6900	mg/kg dry	SW8466010A	11/12/98
7440-50-8	Copper	3080	mg/kg dry	SW8466010A	11/12/98
7439-92-1	Lead	1120	mg/kg dry	SW8466010A	11/12/98



Inorganics Analysis Data Sheet

Client ID : FP-3	Report No : 13829
Client Name : ERM	STL Sample Number : 113230
Project Name : Raytheon-Wayland	Date Collected : 11/9/98
Matrix Name : Soil	Date Received : 11/9/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	72900	mg/kg dry	SW8469060	11/16/98
7440-47-3	Chromium	22.6	mg/kg dry	SW8466010A	11/12/98
7440-50-8	Copper	17.2	mg/kg dry	SW8466010A	11/12/98
7439-92-1	Lead	90.2	mg/kg dry	SW8466010A	11/12/98

11/19/98 11:41 AM

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Westfield, MA 01085
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Fax: (413) 572-3707

Inorganics Analysis Data Sheet

Client ID : FP-4	Report No : 13829
Client Name : ERM	STL Sample Number : 113231
Project Name : Raytheon-Wayland	Date Collected : 11/9/98
Matrix Name : Soil	Date Received : 11/9/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	46800	mg/kg dry	SW8469060	11/12/98
7440-47-3	Chromium	48.1	mg/kg dry	SW8466010A	11/12/98
7440-50-8	Copper	98.3	mg/kg dry	SW8466010A	11/12/98
7439-92-1	Lead	345	mg/kg dry	SW8466010A	11/12/98

11/19/98 11:41 AM

Page 4 of 5



MADEP MA014
NCDEHNR 408

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Tel: (413) 572-4000
Fax: (413) 572-3707

Inorganics Analysis Data Sheet

Client ID :FP-5	Report No : 13829
Client Name :ERM	STL Sample Number : 113232
Project Name :Raytheon-Wayland	Date Collected : 11/9/98
Matrix Name : Soil	Date Received : 11/9/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	90400	mg/kg dry	SW8469060	11/16/98
7440-47-3	Chromium	92.7	mg/kg dry	SW8466010A	11/12/98
7440-50-8	Copper	597	mg/kg dry	SW8466010A	11/12/98
7439-92-1	Lead	1210	mg/kg dry	SW8466010A	11/12/98

11/19/98 11:41 AM

Page 5 of 5



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N. Billerica, MA 01862
(P) 978-667-1400
(F) 978-667-7871

Client: ELM **Job#:** 143.45 **Quote#:** _____

Address: 399 Boylston St. **Project Manager:** John McTigue

Phone: 617-267-8337 **Work ID:** Ryplem-Wayland

City: Boston, MA 02116 **Contact:** John McTigue

***Requested Turn Around Time:** _____ **Regulatory Classification - Please Specify:** _____

•15 Business Day: _____ **Drinking Water:** _____ **MCP Other:** 5-1

•10 Business Day: _____ **RCRA:** _____ **MCP GW1:** _____

Sample ID	Sample Type	Date Collected	Time Collected	# Containers	Preservative															
					Na2S2O3	HNO3 to pH 2	H2SO4 to pH 2	HCl to pH 2	NaOH to pH 12	Other:	4°C	PH	Volatiles	Semivolatiles	PCB & Pesticides					
T-14-4	So	11/9/98	AM	2																
T-14-5	So	11/9/98	AM	2																
FP-1	So	11/9/98	AM	2																
FP-2	So	11/9/98	AM	2																
FP-3	So	11/9/98	AM	2																
FP-4	So	11/9/98	AM	2																
FP-5	So	11/9/98	AM	2																

Analysis Requested:
Check analysis and specify method and analytes in comments section.
For example:
500-series for drinking water
600-series for waste water
8000-series for hazardous waste
Use comments section to further define.

Analysis of: FP-1 - FP-5 only! Hold other samples - do extraction on PCBs - Hold TOC + Metals.

Sampled by (print): Sue Fracico **Signature:** Joe Saw

Relinquished by: _____ **Time:** _____

Relinquished by: _____ **Date:** 11/9/98 **Date:** 11/9/98 **Time:** _____

Relinquished by: _____ **Date:** _____ **Time:** _____

Method of shipment: _____

Method of shipment: _____

Cooler #: _____

Temp. @ receipt: _____

Preservation pH checked _____

By: _____ **Date:** _____

NOV. 9. 1998 5:52PM STL MR BILLEFCH



Severn Trent Laboratories
Westfield Executive Park
53 Southampton Road
Westfield MA 01085
Tel: (413) 572-4000
Fax: (413) 572-3707

November 19, 1998

Mr. John McTigue

ERM
399 Boylston St.
Boston, MA 02116

Report Number : 13812

Dear Mr. McTigue,

The analysis of your sample(s) submitted on 11/6/98 is now complete and the appropriate analytical report is enclosed. The samples were prepared and analyzed according to EPA established methodologies and protocols. If you have any questions regarding the report or any part of our service, please do not hesitate to contact us. Thank you for using Severn Trent Laboratories, and we look forward to receiving your next samples.

SEVERN TRENT LABORATORIES

Michael F. Wheeler, Ph.D.

Laboratory Director

Other Laboratory Locations:

- 149 Rangeway Road, North Billerica MA 01862
- 55 South Park Drive, Colchester VT 05446
- 16203 Park Row, Suite 110, Houston TX 77084
- 200 Monroe Turnpike, Monroe CT 06468
- 315 Fullerton Avenue, Newburgh NY 12550
- 120 Southcenter Court, Suite 300, Morrisville NC 27560
- 11 East Olive Road, Pensacola FL 32514
- 628 Route 10, Whippany NJ 07981

a part of

Severn Trent Services Inc

CASE NARRATIVE FOR REPORT NUMBER 13812

Client Name : ERM

Project Name : Raytheon-Wayland

Date : November 19, 1998

Sample Number	Comments
113130	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113131	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113132	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113133	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113134	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113135	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113136	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113137	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113138	The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113139	The SW846 8082 PCB analysis was extracted in STL Billerica, MA. The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113140	The SW846 8082 PCB analysis was extracted in STL Billerica, MA. The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113141	The SW846 8082 PCB analysis was extracted in STL Billerica, MA. The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113142	The SW846 8082 PCB analysis was extracted in STL Billerica, MA. The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113144	The SW846 8082 PCB analysis was extracted in STL Billerica, MA. The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113146	The SW846 8082 PCB analysis was extracted in STL Billerica, MA. The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113147	The SW846 8082 PCB analysis was extracted in STL Billerica, MA. The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.

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MADEP MA014
NCDEHNR 408

CTDPH-0494
USACE

NJ 59424
NY DOH 10843

NH DES 2539

53 Southampton Road
Westfield, MA 01085
Tel: (413) 572-4000
Fax: (413) 572-3707

Client Name : ERM

Project Name : Raytheon-Wayland

Date : November 19, 1998

Sample Number	Comments
113148	The SW846 8082 PCB analysis was extracted in STL Billerica, MA. The TOC, Chromium, Copper and Lead analyses were performed at STL Monroe, CT.
113149	The SW846 8082 PCB analysis was extracted in STL Billerica, MA. The Chromium, Copper and Lead analyses were performed at STL Monroe, CT.

Inorganics Analysis Data Sheet

Client ID : T-6-1	Report No : 13812
Client Name : ERM	STL Sample Number : 113130
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	124000	mg/kg dry	SW8469060	11/11/98
7440-47-3	Chromium	12500	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	8230	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	981	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID : T-6-2	Report No : 13812
Client Name : ERM	STL Sample Number : 113131
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	132000	mg/kg dry	SW8469060	11/11/98
7440-47-3	Chromium	5390	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	5570	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	673	mg/kg dry	SW8466010A	11/10/98

Inorganics Analysis Data Sheet

Client ID : T-6-5	Report No : 13812
Client Name : ERM	STL Sample Number : 113132
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	92100	mg/kg dry	SW8469060	11/11/98
7440-47-3	Chromium	956	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	2910	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	290	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID : T-6-6	Report No : 13812
Client Name : ERM	STL Sample Number : 113133
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	139000	mg/kg dry	SW8469060	11/11/98
7440-47-3	Chromium	3400	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	6880	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	487	mg/kg dry	SW8466010A	11/10/98

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Inorganics Analysis Data Sheet

Client ID : T-8-1	Report No : 13812
Client Name : ERM	STL Sample Number : 113134
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	103000	mg/kg dry	SW8469060	11/11/98
7440-47-3	Chromium	312	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	610	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	164	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID :T-8-3	Report No : 13812
Client Name :ERM	STL Sample Number : 113135
Project Name :Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	145000	mg/kg dry	SW8469060	11/11/98
7440-47-3	Chromium	376	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	607	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	119	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID : T-8-5	Report No : 13812
Client Name : ERM	STL Sample Number : 113136
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	110000	mg/kg dry	SW8469060	11/11/98
7440-47-3	Chromium	236	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	329	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	163	mg/kg dry	SW8466010A	11/10/98

Inorganics Analysis Data Sheet

Client ID : T-9-1	Report No : 13812
Client Name : ERM	STL Sample Number : 113137
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	123000	mg/kg dry	SW8469060	11/11/98
7440-47-3	Chromium	35.5	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	97.8	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	100	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID :T-9-3	Report No :	13812
Client Name :ERM	STL Sample Number :	113138
Project Name :Raytheon-Wayland	Date Collected :	11/6/98
Matrix Name : Soil	Date Received :	11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	97300	mg/kg dry	SW8469060	11/12/98
7440-47-3	Chromium	14.0	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	17.7U	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	6.1	mg/kg dry	SW8466010A	11/10/98

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Inorganics Analysis Data Sheet

Client ID : T-9-5	Report No : 13812
Client Name : ERM	STL Sample Number : 113139
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	156000	mg/kg dry	SW8469060	11/12/98
7440-47-3	Chromium	58.1	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	89.3	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	137	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID :T-10-1	Report No : 13812
Client Name :ERM	STL Sample Number : 113140
Project Name :Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	130000	mg/kg dry	SW8469060	11/12/98
7440-47-3	Chromium	175	mg/kg dry	SW8466010A	11/10/98
7440-50-8	Copper	231	mg/kg dry	SW8466010A	11/10/98
7439-92-1	Lead	140	mg/kg dry	SW8466010A	11/10/98



Inorganics Analysis Data Sheet

Client ID : T-10-3	Report No : 13812
Client Name : ERM	STL Sample Number : 113141
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	197000	mg/kg dry	SW8469060	11/12/98
7440-47-3	Chromium	153	mg/kg dry	SW8466010A	11/12/98
7440-50-8	Copper	363	mg/kg dry	SW8466010A	11/12/98
7439-92-1	Lead	60.2	mg/kg dry	SW8466010A	11/12/98



Inorganics Analysis Data Sheet

Client ID : T-10-5	Report No : 13812
Client Name : ERM	STL Sample Number : 113142
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	152000	mg/kg dry	SW8469060	11/12/98
7440-47-3	Chromium	362	mg/kg dry	SW8466010A	11/12/98
7440-50-8	Copper	424	mg/kg dry	SW8466010A	11/12/98
7439-92-1	Lead	233	mg/kg dry	SW8466010A	11/12/98



Inorganics Analysis Data Sheet

Client ID : T-11-3	Report No : 13812
Client Name : ERM	STL Sample Number : 113144
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	133000	mg/kg dry	SW8469060	11/12/98
7440-47-3	Chromium	8.7	mg/kg dry	SW8466010A	11/12/98
7440-50-8	Copper	17.4U	mg/kg dry	SW8466010A	11/12/98
7439-92-1	Lead	3.7	mg/kg dry	SW8466010A	11/12/98



Inorganics Analysis Data Sheet

Client ID :T-12-1	Report No :	13812
Client Name :ERM	STL Sample Number :	113146
Project Name :Raytheon-Wayland	Date Collected :	11/6/98
Matrix Name : Soil	Date Received :	11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	88600	mg/kg dry	SW8469060	11/12/98
7440-47-3	Chromium	14.1	mg/kg dry	SW8466010A	11/12/98
7440-50-8	Copper	19.8	mg/kg dry	SW8466010A	11/12/98
7439-92-1	Lead	6.8	mg/kg dry	SW8466010A	11/12/98



Inorganics Analysis Data Sheet

Client ID : T-12-3	Report No : 13812
Client Name : ERM	STL Sample Number : 113147
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	99700	mg/kg dry	SW8469060	11/12/98
7440-47-3	Chromium	44.6	mg/kg dry	SW8466010A	11/12/98
7440-50-8	Copper	95.5	mg/kg dry	SW8466010A	11/12/98
7439-92-1	Lead	31.0	mg/kg dry	SW8466010A	11/12/98



Inorganics Analysis Data Sheet

Client ID :T-13-3	Report No : 13812
Client Name :ERM	STL Sample Number : 113148
Project Name :Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	96500	mg/kg dry	SW8469060	11/12/98
7440-47-3	Chromium	234	mg/kg dry	SW8466010A	11/12/98
7440-50-8	Copper	383	mg/kg dry	SW8466010A	11/12/98
7439-92-1	Lead	169	mg/kg dry	SW8466010A	11/12/98



Inorganics Analysis Data Sheet

Client ID : T-14-3	Report No : 13812
Client Name : ERM	STL Sample Number : 113149
Project Name : Raytheon-Wayland	Date Collected : 11/6/98
Matrix Name : Soil	Date Received : 11/6/98

CAS NO	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Carbon	97800	mg/kg dry	SW8469060	11/12/98
7440-47-3	Chromium	284	mg/kg dry	SW8466010A	11/12/98
7440-50-8	Copper	422	mg/kg dry	SW8466010A	11/12/98
7439-92-1	Lead	226	mg/kg dry	SW8466010A	11/12/98

