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 PH-0574

CERTIFICATE OF ANALYSIS

CLIENT IDENTIFICATION

Client: ERM

Address: 205 Portland Street

Boston, MA 02114

Attn: Ben Frothingham

Client Designation: ERM Proj# 14313

ALFHA SAMPLE NUMBER 901225.1 901225.2 901225.2D 901225.3 901225.3 901225.4 901225.5 901225.6 901225.6D 901225.6D 901225.7 901225.7 901225.7 901225.7 901225.8 901225.8

SAMPLE LOCATION

Delivery Method: Client Delivered

Laboratory Job Number: 901125

Invoice Number: 12324

Date Received: 03/08/90

Date Reported: 03/22/90

SW-1		N/A
SW-2		Ń/A
SW-2	(Duplicate)	N/A
SW-3		N/A
SW-3	(Spike Recovery)	N/A
SW-4		N/A
SS-1		N/A
SS-2		N/A
	(Duplicate)	N/A
SS- 3		N/A
SS3	(Spike Recovery)	N/A
SS-4		N/A
T. B	lank	N/A

Authorized by:

Scott McLean - Laboratory Director

mar

MA 086 NH 198958-A CT HI-0574

Date Received: 03/08/90

Date Reported: 03/22/90

Sample Hatrix: Soil (results on a dry weight basis)

Laboratory Sample Number: 901125.5

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	UNITES	MDL	RICF*	COHIEN METHOD	DR	TES
						EXI/HREP	ANALYSIS
HSL Acid/Base/Neutral Bis (2-ethylhexyl)	. Extract						
phthalate	600	ug/Kg	**	1	8270		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	. Extract	ables	% S		e Recover	Y	
2-Fluorophenol				35%			
Phenol-d5				468			
Nitrobenzene-d5				84%			
2-Fluorobiphenyl 2,4,6-Tribromophenol				978 1148			
	•			798			
4-Terphenyl-d14				134			
Volatile Organics			*		te Recover	ry	
1,2-Dichloroethane-d	4		•	105%			
				100%			
Toluene-d8 4-Bromofluorobenzene				898		•	

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.

MA 086 NH 198958-A CT PH-0574

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

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

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	ONLES	HEE.	REF*	METHOD	DA	TES
						EXT/PREP	ANALYSIS
lotal Priority Po	llutant 13 M	etals				•	
Antimony	ND	mg/Kg	264	1	6010	03/10/90	03/14/90
Arsenic	ND	ng/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
Chronium	ND	ng/Kg	10.6	1	6010	03/10/90	03/14/90
Copper	ND	mg/Kg	10.6	l	6010	03/10/90	03/14/90
Iead	ND	ng/Kg	26.4	1	6010	03/10/90	03/14/90
Mercany	ND	ng/Kg	0.67	1	7470	03/10/90	03/14/90
Nickel	ND	ng/Kg	26.4	1	6010	03/10/90	03/14/90
Selenium	ND	mg/Kg	2.6	I	7740	03/10/90	03/14/90
Silver	ND	mg/Kg	1.6	1	7761	03/10/90	03/14/90
Thallium	ND		264	1	6010	03/10/90	03/14/90
Zinc	5.3	mg/Kg	5.33	1	601.0	03/10/90	03/14/90
otal Solids	29	*	0.1	2	209A		03/22/90

CONTINUED

COMMENTS: *Complete list of References found in Addendum I

MA 086 NH 198958-A CT PH-0574

Taboratory Sample Number: 901125.6	Date Received: 03/08/9	D
Sample Matrix: Soil (results on a dry weight basis)	Date Reported: 03/22/9	0

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	UNLES	MDL	REF*	METHOD	DA	les
						EXT/IREP	ANALYSIS
HSL Acid/Base/Neutral	Extract	ables **	, •				
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	2,870	ug/Kg	**	1.	8270		03/19/90
Benzo (b) fluoranthene	214	ug/Kg	**	1	8270		03/19/90
Chrysene	171	ug/Kg	**	1	8270		03/19/90
Pyrene	200	ug/Kg	**	1	8270		03/19/90
PCB's	ND	ug/Kg	2.5 [.]	l	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	418
Phenol~d5	46%
Nitrobenzene-d5	848
2-Fluorobiphenyl	103%
2,4,6-Tribromophenol	93*
4-Terphenyl-d14	848

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.

MA 086 NH 198958-A CT PH-0574

Laboratory Sample Number: 901125.6Date Received: 03/08/90Sample Matrix: Soil (results on a dry
weight basis)Date Reported: 03/22/90Condition of Samples: SatisfactoryField Prep: None

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

Analysis Requested: Analysis as listed below

PARAMETER	RESULT UNITS	UNITIS	MDL R	REP*	METHOD	D	ADES
						EXT/PREP	ANALYSIS
Volatile Organics**	ND	ug/Kg	**	1	8240	03/09/90	03/17/90
Total Priority Pollu	tant 13 M	etals					
Antimony	ND	ng/Kg	464	1	6010	03/10/90	03/14/90
Arsenic	25.0	ng/Kg	4.6	1	7060	03/10/90	03/14/90
Beryllium	ND	ng/Kg	18.5	1	6010	03/10/90	03/14/90
Cadmium	9.3	ng/Kg	9.3	1	601.0	03/10/90	03/14/90
Chromium	167	ng/Kg	18.5	1	6010	03/10/90	03/14/90
Copper	241	ng/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	ng/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	38 9	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		5	Surrog	ate Rec	overy		
1,2-Dichloroethane-	d 4			-			
Toluens d8			1				
4-Bromofluorobenzen	e			948			

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.

MA 086 NH 198958-A CT HI-0574 55-2 (Duplicabe)

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 Condition of the		

Condition of Samples: Satisfactory Field Prep: None

Number & Type of Containers: One Glass Jar

Analysis Requested: Analysis as listed below

PARAMETRR					~		
	RESULT	UNUTS	is MDL	REF*	MENHOD	DATES	
						EXT/FREP	ANALYSIS
Notal Priority :	Pollutant 13 M	ietals.				· · · · · · · · · · · · · · · · · · ·	
Antimony	ND	ng/Kg	464	1	6010	03/10/90	03/34/00
Arsenia	22.9	mg/Kg	4.6	ī	7060	03/10/90	03/14/90
Beryllium	ND	mg/Kg	18.5	ī	6010	03/10/90	03/14/90
Cadmium	8.8	mg/Kg	9.3	ī	6010	03/10/90	03/14/90 03/14/90
Chromium	167	ng/Kg	18.5	ī	6010	03/10/90	03/14/90
Copper	220	mg/Kg	18.5	ī	6010	03/10/90	03/14/90
Iead	528	mg/Kg	46.4	ĩ	6010	03/10/90	03/14/90
Mercury	8.39	mg/Kg	1.17	ĩ	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	ng/Kg	2.8	1	7761	03/10/90	03/14/90
Challium	ND	ng/Kg	464	1	6010	03/10/90	03/14/90
Zinc	273	ng/Kg	9.3	l	6010	03/10/90	03/14/90

MA 086 NEI 198958-A CT PH-0574

5W-3

Laboratory Sample Number:901125.3Date Received:03/08/90Sample Matrix:WaterDate Reported:03/22/90Condition of Samples:SatisfactoryField Prep: None

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

Analysis Requested: Analysis as listed below

PARAMETER	RESULT	UNITES	MDE	REF	METHOD	DA	TES
						EXT/PREP	ANALYSIS
HSL Acid/Base/Neutral Bis (2-ethylhexyl)	Extract	ables **	, ,				
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	348
Phenol-d5	40%
Nitrobenzene-d5	67%
2-Fluorobiphenyl	80%
2,4,6-Tribromophenol	80%
4-Terpheny1-d14	67%
Volatile Organics	% Surrogate Recovery
1,2-Dichloroethane-d4	100%
Toluene-d8	. 100%
4-Branofluorobenzene	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.

MA 086 NH 198958-A CT HH-0574

laboratory Sample Number: 901125.7	Date Received: 03/08/90
Sample Matrix: Soil (results on a dry weight basis).	Data 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		MOL	REF*	MERCOD	DATES	
						EXT/PREP	ANALYSIS
HSL Acid/Base/Neutral	Extract	ables **	•				
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		ug/Kg	**	1	8270		03/19/90
Benzo(a)pyrene	429	ug/Kg	**	1	8270		03/19/90
Benzo(b) fluoranthene		ug/Kg	**	1	8270		03/19/90
Chrysene	543	ug/Kg	**	1	8270		03/19/90
Benzo(ghi)perylene	350	ug/Kg	**	1	8270		03/19/90
Phenanthrene	291	ug/Kg	**	1	8270		03/19/90
Indeno(1,2,3-cd)						•	
pyrene	410	ug/Kg	**	1	8270	03/15/90	03/19/90
Pyrene	785	ug/Kg	**	l	8270		03/19/90
Phenol	152	ug/Kg	**	1	8270		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
SL Acid/Base/Neutral 2-Fluorophenol	Extract	ables	* S	urrogata 28%	a Recover	Y	
Phenol-d5				418			
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.

MA 086 NEI 198958-A CI 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

11	N.U	50

PARAMETER	RESOLE	UNITS	MOL	REF*	METHOD		ATES
······································					EXT/PREP		
Volatile Organics**	ND	ug/Kg	**	1	8240	03/09/90	03/17/90
Total Priority Pollu	tant 13 M	etals					·
Antimony	ND	mg/Kg	105	1	6010	03/10/00	02/14/06
Arsenic	3.6	ng/Kg	1.0	ī	7060	03/10/90	03/14/90
Beryllium	ND	mg/Kg	4.2	1	6010	03/10/90	03/14/90
Cadmium	2.1	ng/Kg	2.1	ī	6010	03/10/90	03/14/90
Chromium	23.0	mg/Kg	4.2	ì	6010	03/10/90	03/14/90
Copper	264	ng/Kg	4.2	ĩ	6010	03/10/90	03/14/90
Lead	14.6	mg/Kg	10.5	1	6010	03/10/90	03/14/90
Mercury	ND	ng/Kg	0.31	i		03/10/90	03/14/90
Nickel	ND	ng/Kg	10.5	i	7470	03/10/90	03/14/90
Selenium	ND	mg/Kg	1.0	1	6010	03/10/90	03/14/90
Silver	12.1	mg/Kg	0.63	1	7740	03/10/90	03/14/90
Thallium	ND	ng/Kg	105.0		7761	03/10/90	03/14/90
Zinc	188			1	6010	03/10/90	03/14/90
	100	ng/Kg	2.1	1	6010	03/10/90	03/14/90
otal Solids	64.3	\$	0.1	2	209A		03/22/90
olatile Organics 1,2-Dichloroethane-d Toluene-d8 4-Bromofluorobenzene		ę	100	5 % 18	very		- •
	•		9	48			

COMMENIS: *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.

MA 086 NH 198958-A CT PH-0574

55-3 (spike Recovery Taboratory Sample Number: 901125.7S

Date Received:

03/08/90

Sample Matrix: Soil (results on a dry weight basis)

Condition of Samples: Satisfactory

Field Prep: None

Date Reported: 03/22/90

Number & Type of Containers: One Glass Jar

Analysis Requested: Analysis as listed below (Spike Recovery)

PARAMETER	*RECOVERY			
Total Priority Pollutant Metals				
Antimony	106%			
Arsenic	87%			
Beryllium	100%			
Cadmium	94%			
lead	103\$			
Mercury	60%			
Nickel	106%			
Selenium	85%			
Thallium	88*			

MA 086 NH 198958-A CT PH-0574 55-4-

Laboratory Sample Number:901125.8Date Received:03/08/90Sample 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	UNITES	MDL	REF*	METHOD	· DA	TES
						EXT/PREP	ANALYSIS
HSL Acid/Base/Neutral	Extract	ables **					
Fluoranthene Bis (2-ethylhexyl)	228	ug/Kg	**	1	8270	03/15/90	03/19/90
phthalate	1,600	ug/Kg	**	1	8270	03/15/90	03/19/90
Di-n-butylphthalate	1,540	ug/Kg	**	ī	8270	03/15/90	03/19/90
Benzo(b) fluoranthene	229	ug/Kg	**	ī	8270	03/15/90	03/19/90
Pyrene	154	ug/Kg	**	ī	8270	03/15/90	03/19/90
PCB's	ND	ug/Kg	2.5	ı	8080		03/21/90
Pesticides	ND	ug/Kg	0.25	1	8080	03/15/90	03/21/90
HSL Acid/Base/Neutral 2-Fluorophenol Fhenol-d5 Nitrobenzene-d5 2-Fluorobiphenyl 2,4,6-Tribronophenol 4-Terphenyl-d14	Extract	ables	* S	00000000000000000000000000000000000000	Recovery	7	

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.

MA 086 NH 198958-A CT HI-0574

Date Received: 03/08/90

Date Reported: 03/22/90

Sample Matrix: Soil (results on a dry weight basis)

Laboratory Sample Number: 901125.8

Condition of Samples: Satisfactory Field Prep: None

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

Analysis Requested: Analysis as listed below

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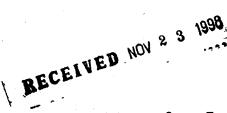
PARAMETER	RESULT U	UNITS	MDL	REF*	METHOD	D	ATES
						EXT/PREP	ANALYSTS
Volatile Organics**	ND	ug/Kg	**	1	8240	03/09/90	03/17/90
Total Priority Pollu	tant 13 M	etals					
Antimony	ND	ng/Kg	517	1	6010	03/10/90	03/14/90
Arsenic	10.3	ng/Kg	5.2	1	7060	03/10/90	03/14/90
Beryllium	ND	ng/Kg	20.7	1	6010	03/10/90	03/14/90
Cadmium	10.3	mg/Kg	10.3	1	6010	03/10/90	03/14/90
Chromium	331	ng/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	ng/Kg	517.0	1	6010	03/10/90	03/14/90
Zinc	259.0	ng/Kg	10.3	1	6010	03/10/90	03/14/90
Total Solids	26.6	*	0.1	2	209A		03/22/90
Volatile Organics		ş	Surroga	ate Reca	very		,
1,2-Dichloroethane-	34) 48	-		
Toluene-d8			10	208			
4-Bromofluorobenzen	3			978			

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.





November 19, 1998 Mr. John McTigue 399 Boylston St. Boston, MA 02116

13796

Severn Trent Laboratories Westfield Executive Park 53 Southampton Road Westfield MA 01085

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

Dear Mr. McTigue,

Report Number:

ERM

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, Ne wburgh NY 12550 ● 120 Southcenter Court, Suite 300, Morrisville NC 27560 • 11 East Olive Road, Pensacola FL 32514 628 Route 10, Whippany NJ 07981



CASE NARRATIVE FOR REPORT NUMBER 13796

Client Name : ERM

Project Name : Raytheon-Wayland

Date : November 19, 1998

Sample Num	iber Comments
113087	The TOC, Chromium, Copper and Lead analyses were perfoemed at STL Monroe, CT.
113088	The TOC, Chromium, Copper and Lead analyses were perfoemed at STL Monroe, CT.
113089	The TOC, Chromium, Copper and Lead analyses were perfoemed at STL Monroe, CT.
113090	The TOC, Chromium, Copper and Lead analyses were perfoemed at STL Monroe, CT.
113091	The TOC, Chromium, Copper and Lead analyses were perfoemed at STL Monroe, CT.
113092	The TOC, Chromium, Copper and Lead analyses were perfoemed 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 perfoemed 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 perfoemed at STL Monroe, CT.
113102	The TOC, Chromium, Copper and Lead analyses were perfoemed at STL Monroe, CT.



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

Client ID :T-1-2 Client Name :ERM Project Name :Raytheon-Wayland Matrix Name : Soil			Da	Report No : nple Number : ate Collected : ate Received :	13796 113087 11/5/98 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		550	mg/kg dry	SW8466010A	11/10/98



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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

Clien Projec	Client ID : T-1-3 Client Name : ERM Project Name : Raytheon-Wayland Matrix Name : Soil			Report No : STL Sample Number : Date Collected : Date Received :		13796 113088 11/5/98 11/6/98
CAS NO	Analyte		Result	Units	Method	Date Analyzed
	Total Organic Carbon	A Contractor	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



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Client ID :T-2-1 Client Name :ERM Project Name :Raytheon-Wayland Matrix Name : Soil		Client Name :ERM Project Name :Raytheon-Wayland		Report No : STL Sample Number : Date Collected : Date Received :		
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	





NH DES 2539

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Inorganics Analysis Data Sheet

Proj	Client ID :T-2-2 ent Name :ERM ect Name :Raytheon-Wayland trix Name : Soil		Report No : STL Sample Number : Date Collected : Date Received :		13796 113090 11/5/98 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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Pr	Client ID : T-2-3 Client Name : ERM roject Name : Raytheon-Wayland Matrix Name : Soil			Report No : STL Sample Number : Date Collected : Date Received :		13796 113091 11/5/98 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	an a	450	mg/kg dry	SW8466010A	11/10/98	



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Client ID : T-2-4 Client Name : ERM Project Name : Raytheon-Wayland Matrix Name : Soil				Report No :		13796
)		nple Number : ate Collected :	113092	
					ate Received :	11/5/98 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



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NJ 59424 NY DOH 10843

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Clien Projec	lient ID :T-2-5 t Name :ERM t Name :Raytheon-Wayland c Name : Soil		Report No : STL Sample Number : Date Collected : Date Received :		13796 113093 11/5/98 11/6/98	
CAS NO	Analyte	Result	Units	Method	Date Analyzed	
5	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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Client ID :T-3-4	Report No :	13796	
Client Name : ERM	STL Sample Number : 11		
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



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Clien Projec	Client ID :T-3-5 It Name :ERM It Name :Raytheon-Wayland Ix Name : Soil			D	Report No : STL Sample Number : Date Collected : Date Received :	
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	l mg/kg dry	SW8466010A	11/10/98



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Client Na	l ID :T-4-5 me :ERM me :Raytheon-Wayland me : Soil		Da	Report No : nple Number : nte Collected : nte Received :	13796 113096 11/5/98 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 Client Name : ERM Project Name : Raytheon-Wayland Matrix Name : Soil				Report No : STL Sample Number : Date Collected : Date Received :		13796 113097 11/5/98 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	na da	7310	mg/kg dry	SW8466010A	11/10/98	
7439-92-1	Lead		583	mg/kg dry	SW8466010A	11/10/98	

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CAS NO Analyte	Result	Units Method	Date Analyzed		
	· · · · · · · · · · · · · · · · · · ·				
Matrix Name : Soil		Date Received :	11/6/98		
Project Name : Raytheon-Wayland		Date Collected :	11/5/98		
Client Name : ERM		STL Sample Number :			
Client ID : T-4-3		Report No :	13796		

CASINU	Analyte	Resuit	Onits	Method	Date Analyzeu
	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



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



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	Total Organic Carbon	98300	mg/kg dry	SW8469060	11/9/98
CAS NO	Analyte	Result	Units	Method	Date Analyzed
Mat	rix Name : Soil		Da	ate Received :	11/6/98
Client Name : ERM Project Name : Raytheon-Wayland			Da	11/5/98	
			STL San	nple Number :	113100
Client ID : T-5-1				13796	

4140

2860

501

mg/kg dry

mg/kg dry

mg/kg dry

SW8466010A

SW8466010A

SW8466010A

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7440-47-3

7440-50-8

7439-92-1

Chromium

Copper

Lead



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



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SW8468082

Client ID : T-1-2	and the second sec	Report No: 13796
Client Name : ERM		STL Sample Number: 113087
Project Name : Raytheon-Wayland		Lab File ID : 085R3301.
Matrix : Soil		Date Collected : 11/5/98
Sample WtVol : 10.4g		Date Received : 11/6/98
% Solid :55.6	the state of the s	Date Extracted : 11/6/98
GPC Clean up :		Date Analyzed : 11/12/98
Sulfur Clean up :		Dilution Factor: 250

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

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SW8468082

Client ID :T-1-3	Report No: 13796
Client Name : ERM	STL Sample Number: 113088
Project Name : Raytheon-Wayland	Lab File ID : 048R2701.
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	Ŭ
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	Ŭ
11096-82-5	Arochlor-1260	39,000	540000

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SW8468082

Report No: 13796
STL Sample Number: 113089
Lab File ID: 049R3001.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	n
12674-11-2	Arochlor-1016		8,700	U	n na Marina An International Anna Anna Anna Anna Anna Anna Anna A
11104-28-2	Arochlor-1221	1	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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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

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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		
11097-69-1	Arochior-1254	3,000	U	1997 - 19
11096-82-5	Arochlor-1260	3,000	12000	

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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	
11097-6 9-1	Arochlor-1254	3,600	U	
11096-82-5	Arochlor-1260	3,600	44000	

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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	in an an U raint	
53469-21-9	Arochlor-1242	3,200	аны — С. <mark>О</mark> ,	
12672-29-6	Arochlor-1248	3,200	U	
11097-69-1	Arochlor-1254	3,200	U	
11096-82-5	Arochlor-1260	3,200	35000	

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SW8468082

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 U
11104-28-2	Arochlor-1221	750	U 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

Report No: 137	96
STL Sample Number : 1130)95
nd Lab File ID : 030F	R2001.D
Date Collected : 11/5	/98
Date Received : 11/6	/98
Date Extracted: 11/6	/98
Date Analyzed : 11/1	1/98
Dilution Factor: 9	
	Date Collected : 11/5 Date Received : 11/6 Date Extracted : 11/6 Date Analyzed : 11/1

CAS NO	Compound		Quantitation Limit ug/kg dry	Concentration ug/kg dry	
12674-11-2	Arochlor-1016	n an	3,300	a di la jac U	, .
11104-28-2	Arochlor-1221		3,300	$\mathbf{U}_{\mathbf{r}}$, $\mathbf{U}_{\mathbf{r}}$	
53469-21-9	Arochlor-1242		3,300		
12672 - 29-6	Arochlor-1248		3,300	$\mathbf{U}_{\mathrm{res}}$, $\mathbf{U}_{\mathrm{res}}$	
11097-69-1	Arochlor-1254		3,300	U De la Compañía de la	
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	e.	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 NATIONAL AND	
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	$E_{\rm g}^{-1}$	4,200	41000	

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Client ID : T-4-4	Report No: 13796	
Client Name : ERM	STL Sample Number : 113097	
Project Name : Raytheon-Wayland	Lab File ID : 078R3501.D	
Matrix : Soil	Date Collected: 11/5/98	
Sample Wt/Vol : 9.97g	Date Received: 11/6/98	
% Solid :36.56	Date Extracted: 11/6/98	
GPC Clean up :	Date Analyzed : 11/12/98	
Sulfur Clean up :	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	t system U
12672-29-6	Arochlor-1248		4,100	e da U
11097-69-1	Arochlor-1254		4,100	U
11096-82-5	Arochlor-1260	$(1, 1) \in \mathbb{R}^{n \times n}$	4,100	70000

11/19/98 11:46 AM



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Client ID :T-4-3	Report No: 13796
Client Name : ERM	STL Sample Number: 113098
Project Name : Raytheon-Wayland	Lab File ID : 032R2301.D
Matrix : Soil	Date Collected: 11/5/98
Sample Wt/Vol : 10.01g	Date Received : 11/6/98
% Solid :32.94	Date Extracted : 11/6/98
GPC Clean up :	Date Analyzed : 11/11/98
Sulfur Clean up :	Dilution Factor: 9

CAS NO	Compound	2	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 U	
53469-21-9	Arochlor-1242		2,700	U state	
12672-29-6	Arochlor-1248		2,700	Ŭ	
11097-69-1	Arochlor-1254		2,700	Ŭ	
11096-82-5	Arochlor-1260		2,700	13000	4. A.

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SW8468082

Client ID : T-4-2	Report No: 13796
Client Name : ERM	STL Sample Number: 113099
Project Name : Raytheon-Wayland	Lab File ID : 031R2301.D
Matrix : Soil	Date Collected : 11/5/98
Sample Wt/Vol : 10.15g	Date Received : 11/6/98
% Solid :20.53	Date Extracted : 11/6/98
GPC Clean up :	Date Analyzed : 11/11/98
Sulfur Clean up :	Dilution Factor: 10

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

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NH DES 2539

SW8468082

Client ID : T-5-1	Report No: 13796
Client Name : ERM	STL Sample Number: 113100
Project Name : Raytheon-Wayland	Lab File ID : 035R2501.0
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	
11097-6 9 -1	Arochlor-1254	 3,500	U	
11096- 82- 5	Arochlor-1260	3,500	8700	-

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NH DES 2539

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SW8468082

Client ID : T-5-3	Report No: 13796
Client Name : ERM	STL Sample Number : 113101
Project Name : Raytheon-Wayland	Lab File ID : 081R3601.D
Matrix : Soil	Date Collected: 11/5/98
Sample Wt/Vol : 9.98g	Date Received : 11/6/98
% Solid :91.94	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		4,800	U	
11104-28-2	Arochlor-1221		4,800		
53469-21-9	Arochlor-1242		4,800	U	
12672-29-6	Arochlor-1248		4,800	U	
11097-69-1	Arochlor-1254	11. ×	4,800	U	
11096-82-5	Arochlor-1260		4,800	61000	-

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NJ 59424 NY DOH 10843

NH DES 2539

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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	Arochior-1016	1,000	U
11104-28-2	Arochlor-1221	1,000	U
53469-21-9	Arochlor-1242	1,000	U C
12672-2 9-6	Arochlor-1248	1,000	U
11097-69-1	Arochlor-1254	1,000	U
11096-82-5	Arochlor-1260	1,000	11000

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MADEP MA014 NCDEHNR 408 NJ 59424 NY DOH 10843

NH DES 2539

Severn Trent Laborato **Chain of Custody Form**

RW-Raw Water GW-Groundwater

15 Business Day

10 Business Day

Sample Type Codes

WW-Welwater

S-Solid/Suj

Address.

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Severn Trent Laborat	or	y				Co	mmilted to	Your S	T Lucces	5			13	79	ĩl		Wes (P	Southampton Rd, slifield, MA 01085 9 413-572-4000 9 413-572-3707	•149 Rangeway Road N. Billerica, MA 01862 (P) 978-667-1400 (F) 978-667-7871
Client: ERM	· .	oL	b#:		147	3.4	5				ĴΟ	b#			Q	uote	# .		PO#
address. <u>399 Boylston St.</u> Boston, MA 02116	<u></u> 1	Project Manag Work			7		Mc Tigue 2001 - W	_			Ŧ	A	e de a p nalysiu nalysiu	is R	eque	stec	j	1	Comments Cial Instructions)
Phone: 617 2678377 Fax: 617 26 Requested Turn Around Time	76		act:		الحل	nn i	Mc Tiqu	e			"]an	t anal exam \$90-e	ytes ir ple: enes fi	1. COMI or drini	ments áng wa	i secti ner		1	11 John McTigue at 377 as soon as
5 Business Day Rush 5 0 A Y 9 Business Day Other		NPDES D RCRA M	rinki	ing 1	Wate	эг _	M	CP OIL		-1	Usi	8000	anes fi Senes nenis s	for has	/solid	weste	īne.	possible af	ter talection of PCBs at a concontration
ample Type Codes W-Wellwater W-Wastewater SW-Surface W-Raw Water GW-Groundwater PW-Public \ Solid/S ₂₀ 7/ SL-Sludge O-OI					3Jass(G)			pH>12	/e			150	93		d.(TPH)	mistry	ي م	2 ppm, Ch	to be greater than
Sample ID Use one line per container For volatiles-one line/analysis	Type	Date Time p Collected of	Comp.	# Containen	Plastic(P) or (Na2S2O3	HNO3 to pH H2SO4 to pH HCl to pH<2	NaOH to pH Other	4• C	Volatiles	Semivolatile	PCB & Pecificider	Cyanide 4	TOLP	Ju a drease Total Pet Hyd. (TPH)	General Chemis	Bacteriologic Other 20	110 pom	ond lead orthan 250ppr
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T-1-2	5	5/11 1-5 pm	X	2	6							X	X		·		K	odelitio	nul sample
T-1-3	5		X	2	6						T	X	K	Π			K		John McTique 267-8377 or
T-2-1	5	· · · · · · · · · · · · · · · · · · ·	Y	2	C						T	V	Ň			11	Ň		719-5868.

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luished by:	Qale: 7mme:	and the second	Data:LI T	ine:	Preservation pH checked
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led by (print):		Signature:			Also Toc Son. Metals.
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-3-4	5	V26	ХХ	IIK	which the fails that the first of
-2-5	5	X26			Extractall PCB Sample hold extract
	5	126		<u> </u>	for metals - Ptease
-2-4	<u> </u>			+++	Copper and Lead
-2-3	5	126			8081, Chronium,
-2-2	5	X2G	X X X	X	PCBs by Method
- 2- 1	5	X 26			(817) 719-5060,
<u> </u>	- <u>+</u> +	No -	Ι Ι Ι Ι Ι Ι Ι Ι Ι Ι Ι Ι Ι Ι Ι Ι Ι Ι Ι	<u> </u>	@(617) 267-8377 or (817) 719-5868.
-1-3	5-1-	VDC			groups, John McTique
-1-2	5 5711 1-5 pm	X26			odilitional sample

Severn Trent Laborato Chain of Custody Form	ry	Com	STL mitted to Your Success		3 Southampton Rd. •149 Rangeway Road. estifield, MA 01085 N. Billerica, MA 01862 (P) 413-572-4000 (P) 978-667-1400 (F) 413-572-3707 (F) 978-667-7871
Client ERM	Jobi	t (43	.45	Job# Quote#	PO#
Address: 399 Boylston St. Beston, MA 02116	Project Manager	rJoh	~ McTique	Analysis Requested	Comments
			m - Wayland	Check analysis and specify method and analytes in comments section.	(Special Instructions)
Phone: 617 267 8377 Fax 617 267 Requested Turn Around Time		ىلى ئ	-MicTique	For example:	Diease call John Mc Tique
15 Business Day Rush 5 DAY	NPDES Drin	ISSUICAUON	- Please Specify	500-secies for drinking water 600-secies for waste water	at 617 267 8377 as son as
10 Business Day Other	NPDES Drin RCRA MCF	GW1	NiCP Other	8000-series for hezisofid waste Use comments sectors to further define,	possible after detection of PCBs
Sample Type Codes WW-Wellwater W-Wastewater SW-Surfacewal W-Raw Water, GW-Groundwater PW-Public Wate S-Solid — S.J. (SL-Sludge O-Oji)	er LW-Labwater ar SO-Soil	0	Preservative		in a sample at a conconstration estimated to be greater than 2pp
Sample ID	A-Air Z-Other	F Containers Plastic(P) or Gia Va2S203		Semivaletties PCB & Control Metals C.L. C. C. Cyanide Carate Oil & Grease Oil & Grease Oil & Grease Oil & Grease Oil & Grease Canaral Chemistry Ganaral Chemistry	at greater than 110ppm
Use one line per container	Time Collected	# Containe Plastic(P) or Na2S203 HN03 to bi	H2SO4 tr HCI to pH NaOH to Other: A* C Volatiles	Semivalatiles PCB & Postic Metals Cur, C Cyanide Cyanide Oli & Grease TCLP Total Pet. Hy Ganaral Chen Bacterfologic	than 250 ppm -
$\frac{7-4-5}{7-4-5}$	ISON X	$\left\{ + + + + + + + + + + + + + + + + + + +$		XX	John Marique @ (617) 719-5868 or
<u>7-4-</u> 2		╉┼┨┼			above.
T-4-2					PCB samples - analy those indicated and
T-5-1					hose indicated and
<u>T-5-3</u>					metals/TOC for samples
T-5-5				XX	T-3-3,2,1
					and T-5-24
ampled by (print): JOHN MCTIG	AE. SHISA	Signature:	Shaltrain		
einquished by: Date: Date:	Les uls 48	Received by:	What hat	Dete:/ 48 Tugart	ιουρία της το
Aethod of shipment:	Time:	Received by: Laboratory:		Delle: L	Preservation pH checked
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Severn Trent Laborato	эгу	Committed to Your Success	13796 (P	Southampion Rd. •149 Rangeway Road tifield, MA 01085 N. Billerica, MA 01862) 413-572-4000 (P) 978-667-1400) 413-572-3707 (F) 978-667-7871
Client: ERM	Job#	43.45	Job# Quote#	PO#
Address: 399 Boylston St. Boston MA 02116	Project Manager		Analysis Requested Check analysis and specify method	Comments (Special Instructions)
Phone: 6172678377 Fax: 617267 Requested Turn Around Time 15 Business Day Rush _5 DAY	Regulatory Cl	lassification - Please Specify king Water MCP Other	and analytes in comments section. For example: 500-series for dricting water 604-series for waste water 8000-series for kaz/solid waste	Please call John Me Tigue at 617 267 8377 as soon
10 Business Day Other Sample Type Codes	RCRA MCP	GW1Other	Use comments section to harther define,	as possible attendestetion
WW-Wellwater W-Wastewater SW-Surfacewa RW-Raw Water, GW-Groundwater PW-Public Wa S-Solid - Sol / SL-Studge O-Oil	ler SO-Soil A-Air Z-Other		Ministers CLU, ID Ma (TPH) Nu (TPH) Idal	of PCBs in a sample at a concontration estimated to be greater than 2 mm
Sample ID Use one line per container For volatiles-one line/analysis		# Containers Plastic(P) or Glass Na2S203 HN03 to pH <2 H2504 to pH <2 H2504 to pH >12 H2504 to pH >12 Na0H to pH>12 0ther other other other	Semivolatiles PCB & Perileides Metals C, C, J, Cvanide TCLP TCLP Oil & Grease Oil & Grease Oil & Grease Total Pet. Hyd, (TPH General Chemistry Bacteriological	Please extract
<u>T-3-3</u> T-3-2	<u>е и/-5748</u> 1-55ри-			Please extract these samples for PCBs +
T-3-1 T-5-2				Hold metalst hold metalst
V-5-3 T-5-4				
				other sample
Sampled by (print):		Signature: Show Me	some	Cooler #
Relinquished by: Da	1/6/98	Boosived by Jawl	Date: Time:	Temp. @ receipt
Relinquished by: Da	e: / Time:	Received by:	Date: Time:	
Method of shipment:	·····	Laboratory:		Pieservation pH checked By:Date:
Temp80 x2/semplans		Page of		By:Date:



November 19, 1998 Mr. John McTigue ERM 399 Boylston St. Boston, MA 02116

Report Number: 13829

Dear Mr. McTigue,

Severn Trent Laboratories Westfield Executive Park 53 Southampton Road Westfield MA 01085

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

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 Tumpike, 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, Whippary NJ 07961

a part of Severn Trent Services Inc

	Total Organic Carbon	58400	mg/kg dry	SW8469060	11/16/98		
CAS NO	Analyte	Result	Units	Method	Date Analyzed		
Matri	k Name : Soil	,	Da	ate Received :	11/9/98		
Project Name : Raytheon-Wayland			Da	ate Collected :	11/9/98		
Clien	t Name : ERM	STL San	113228				
C	lient ID : FP-1		Report No :				

838

623

148

mg/kg dry

mg/kg dry

mg/kg dry

SW8466010A

SW8466010A

SW8466010A

11/12/98

11/12/98

11/12/98

				•

Chromium

Copper

Lead

7440-47-3

7440-50-8

7439-92-1

11/19/98 11:41 AM



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

MADEP MA014 NCDEHNR 408

CTDPH-0494 USACE

NJ 59424 NY DOH 10843

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

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NH DES 2539

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Client ID :FP-3 Client Name :ERM Project Name :Raytheon-Wayland Matrix Name : Soil		ect Name : Raytheon-Wayland		Da	Report No : nple Number : ate Collected : ate Received :	13829 113230 11/9/98 11/9/98
CAS NO	Analyte		Result	Units	Method	Date Analyzed
<u></u>	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

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NH DES 2539

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

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MADEP MA014 NCDEHNR 408 CTDPH-0494 USACE NJ 59424 NY DOH 10843

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/k g dry	SW8466010A	11/12/98

11/19/98 11:41 AM



Page 4 of 5

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

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Clien Projec	Client ID :FP-5 Client Name :ERM Project Name :Raytheon-Wayland Matrix Name : Soil		STL San Da Da	13829 113232 11/9/98 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

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NH DES 2539

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

Page 5 of 5

 Soubrampton Rd. 149 Rangeway Road Westfield, MA 01085 N. Billerica, MA 01862 (P) 413-572-4000 (P) 978-667-1400 (F) 413-572-3707 (F) 978-667-7871 	PO#	Comments	(Special insuracions)		•							Analysis of	1 FP-1 - FP-5	mus plett ; hivo	(Samples-do	extraction on	plan cox	in juniar .		Cooler #:	Temp. @ receipt:	Preservation pH chacked	By. Date:	
west ₩	Job# Quote#	<u>Analysis Requested use</u> Analysis Requested	Check analysis and specify method	تو لغ	out-termes for through water 600-terines for wester water	00-series fo	Use comments section to further definit.	مه ارد: برای (۱۳۹۱) مرابق مرابع	Dither JOH Secteriologi Colei Per H Vetals Vetals Vetals Semivolatie Semivolatie	XX	XX										1,14,18 Time of	ljate! Tind		
Committee to Your Success		John me Tigue	Raylen Waybud		Regulatory Classification - Please Specify	MCP Other Se	Other	C Preservative	Volaties Volaties Vacto pH<2 VacOH to pH<2 VacOH to pH VacOH to pH		2 C	26	26	26	26	92				signature: Joe Lieu	Received by IL hugh	Received by:	Laboratory:	
ttory		Project Manager.	Work ID:	Fax 617 267 6447 Contact:		NPDES	RCRAMCP GW1	LW-Labwater SO-Sol A.Air Z-Other	ype Sample Somp Samp Samp Samp Samp Samp Samp Samp Sa				X			16 6 m 35				Wer AM	Time:	Date: Tune:		
Severn 1 rent Laboratory Chain of Custody Form	Client. F.2M	1 1	Boston, MA 02116	Phone: 617-267 8337	I C .	215 Businees Day Rush 5 04Y		Sample Type Codes VMV-Weilwaller W-Westewater SM-Surfacewater RW-Raw Water GW-Groundwater PM-Public Water SSolid SL-Skudge O-Oil	Sample ID Use one line per container For volatiles-one lineJanshots	1-14-4	7-14-5	FP-1	FP-2	FP3		FP.S	6	Was	G:9	Bampled by (print):		. Relinquished by:	Z Method of shipment:	



November 19, 1998 Mr. John McTigue ERM 399 Boylston St. Boston, MA 02116 Report Number : 13812

Dear Mr. McTigue,

Severn Trent Laboratories Westfield Executive Park 53 Southampton Road Westfield MA 01085

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

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 72084

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

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CASE NARRATIVE FOR REPORT NUMBER 13812

Client Name : ERM

Project Name : Raytheon-Wayland

Date : November 19, 1998

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

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NJ 59424 NY DOH 10843

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



CTDPH-0494 USACE

NH DES 2539

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



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	Total Organic Carbon	92100	mg/kg dry	SW8469060	11/11/98	
CAS NO	Analyte	Result	Units	Method	Date Analyzed	
Matri	x Name : Soil		Da	ate Received :	11/6/98	
-	t Name : Raytheon-Wayland	Da	ate Collected :	11/6/98		
	nt Name : ERM		STL Sample Number :			
Ċ	Client ID : T-6-5		Report No :			

956

290

2910

mg/kg dry

mg/kg dry

mg/kg dry

SW8466010A

SW8466010A

SW8466010A

11/10/98

11/10/98

11/10/98

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7440-47-3

7440-50-8

7439-92-1

Chromium

Copper

Lead



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MADEP MA014 NODEHNR 408 NJ 59424 NY DOH 10843

Client Project	ent ID : T-6-6 Name :ERM Name :Raytheon-Wayland Name : Soil		STL Şan Da Da	13812 113133 11/6/98 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

487

mg/kg dry

SW8466010A

11/10/98

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7439-92-1

Lead



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Clien Projec	Client Name : ERMSTL Sample NProject Name : Raytheon-WaylandDate Co		Report No : nple Number : ate Collected : ate Received :	13812 113134 11/6/98 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



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Client N Project N	nt ID :T-8-3 ame :ERM ame :Raytheon-Wa ame : Soil		STL San Da Da	13812 113135 11/6/98 11/6/98		
CAS NO	Analyte		Result	Units	Method	Date Analyze
	Total Organic C	arbon	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



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CAS NO	Analyte			Result	Units	Method	Date Analyzed
	ect Name :Raytheon trix Name : Soil	-Wayland				ate Collected : ate Received :	11/6/98 11/6/98
	Client ID : T-8-5 ent Name : ERM					Report No : nple Number :	13812 113136

	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



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MADEP MAD14 NCDEHNR 408 CTDPH-0494 USACE NJ 59424 NY DOH 10843

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



NH DES 2539

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Client ID : T-9-3 Client Name : ERM Project Name : Raytheon-Wayland Matrix Name : Soil			Report No : STL Sample Number : Date Collected : Date Received :		STL Sample Number : Date Collected :		13812 113138 11/6/98 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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	Total Organic Carbon	156000	mg/kg dry	SW8469060	11/12/98
CAS NO	Analyte	Result	Units	Method	Date Analyzed
Matri	x Name : Soil		Date Received : 11		11/6/98
Project Name : Raytheon-Wayland			Date Collected :		11/6/98
Clier	Client Name : ERM		STL San	nple Number :	113139
	Client ID : T-9-5		Report No : 138		13812

58.1

89.3

137

mg/kg dry

mg/kg dry

mg/kg dry

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Chromium

Copper

Lead

7440-47-3

7440-50-8

7439-92-1

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SW8466010A

SW8466010A

SW8466010A

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



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



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NJ 59424 NY DOH 10843

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
And the Article of Art		

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



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NH DES 2539

Clien Projec	Iame : ERMSTL Sample NumberIame : Raytheon-WaylandDate Collecte		oject Name : Raytheon-Wayland		Client ID : T-11-3Report No :Client Name : ERMSTL Sample Number :Project Name : Raytheon-WaylandDate Collected :Matrix Name : SoilDate Received :		13812 113144 11/6/98 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		



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Client ID :T-12-1 Client Name :ERM Project Name :Raytheon-Wayland Matrix Name : Soil		Report No : STL Sample Number : Date Collected : Date Received :		Client Name : ERM Project Name : Raytheon-Wayland		STL Sample Number : Date Collected :	
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		



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MADEP MA014 NCDEHNR 408 CTDPH-0494 USACE NJ 59424 NY DOH 10843

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



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MADEP MA014 NCDEHNR 408 CTDPH-0494 USACE NJ 59424 NY DOH 10843

CAS NO	Analyte	Result	Units	Method	Date Analyzed
Matrix Name : Soil			Date		11/6/98
Project Name : Raytheon-Wayland			Date Collected :		11/6/98
Client	Client Name : ERM			STL Sample Number :	
Cli		Report No :			

	/				
	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



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Inorganics Analysis Data Sheet

Client ID : T-14-3 Client Name : ERM Project Name : Raytheon-Wayland			Report No : STL Sample Number : Date Collected :		13812 113149 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

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