# Department of Environmental Management Office of Waste Management

#### FIELD INVESTIGATION REPORT

Facility Name: Portsmouth Town Dump

Date of Investigation: November 2, 2012

Facility Address: East Main Road, Portsmouth

**Investigators:** Mark M. Dennen

#### **Findings:**

I arrived at approximately 1:30 PM to observe recent activity, including a large amount of material from the I-95 bridge project in Pawtucket. Both Art Palmer and David Peter were onsite when I arrived. The attached sketch has numbered areas for areas of activity.

In Area I, I observed chain link fencing material and posts. David Peter noted that they had recently been purchased and delivered (photo 1) and will be erected onsite as soon as possible.

In area A they were spreading soil, reportedly from the I-95 project to a height of about 4' (photo 4). This was a brown sandy loam. There was no C&D debris or other solid waste. There was also no odor to the material. It had fragment of the following solids:

- Grey-black massive fine grained rock with abundant micaceous material.
- ♦ Purpose meta-sandstone or meta-siltstone
- Rare pieces of asphalt

It took a composite of 4 samples about 5 feet apart from the northern slope of the graded area for metals and SVOC analysis. I took 1 VOC sample from the north slope at the eastern (terminal) end of the graded area.

Area B was a pile, about 10' high, of material from Newport that reportedly meets residential standards. This material was composed of gray well bedded phyllite.

Areas C and D were the site of previous deposits of material with elevated naturally occurring arsenic that have been covered over (area C was vegetated).

Area E was a fenced area of material that reportedly met industrial/commercial standards that was fenced.

A road had been placed heading north to within 30 feet of the northern silt fence along the property boundary with Levasque. There were some area where material had been spread out east or west of the road. David Peter reported that the roads and most of these spread out areas was material from the I-95 project in Pawtucket (areas G, H and J) although the material in area F meets residential standards. He reported they have accepted about 6000 tons of material.

Mr. Peter said the overall plan was to complete work near the southern end of the site in the fall/winter so as to be less intrusive during the summer months, when the beach area and adjacent restaurant experience peak visitation. He also said their plan is to place any material with elevated arsenic west of the road they constructed to lessen concern with the residents. I told him both sounded reasonable. Mr. Peter said he has lost a large job due to the bridge to Tiverton being out, but when the bridge is open in May, he expects to be

able to get material in larger quantities to complete the project sooner.					
Mark M. Dennen	Date				

### DIGITAL PHOTOGRAPHS

Site Name:	Former Portsmouth Town Dump	Date Photographs T	aken: 11/2/11
Site Address:	Portsmouth	Inspector(s)	Mark Dennen
Photo #			gration and a second se
Description:			
	Fencing m	naterial onsite (area I)	
Site Sketch			
	North		
Description:		and the second s	L. East Dive

Site Sketch showing areas photographed

### DIGITAL PHOTOGRAPHS

Site Name: Former Portsmouth Town Dump Date Photographs Taken: 11/2/2011
Site Address: Portsmouth

Site Address: Portsmouth

Town Dump Date Photographs Taken: 11/2/2011

Inspector(s) Mark Dennen

Photo #

3



Description:

Road along center of site looking north

Photo 4



Description:

Looking southeast at Area A- material being spread out from I-95 project showing slope where samples were taken.

### DIGITAL PHOTOGRAPHS

Site Name: Former Portsmouth Town Dump Date Photographs Taken: 9/8/2011

Site Address: Portsmouth

Site Address: Portsmouth

Photo #

5



Description:

Area F to east of road showing material previously spread out

Photo #6



Description:

Entrance road looking north, Area D visible to left with Area E in left background



The Microbiology Division of Thielsch Engineering, Inc.



#### CERTIFICATE OF ANALYSIS

Mark Dennen RIDEM - Office of Waste Management 235 Promenade Street Providence, RI 02908

**RE:** Portsmouth Town Dump (PLF)

ESS Laboratory Work Order Number: 1111038

This signed Certificate of Analysis is our approved release of your analytical results. These results are only representative of sample aliquots received at the laboratory. ESS Laboratory expects its clients to follow all regulatory sampling guidelines. Beginning with this page, the entire report has been paginated. This report should not be copied except in full without the approval of the laboratory. Samples will be disposed of thirty days after the final report has been delivered. If you have any questions or concerns, please feel free to call our Customer Service Department.

Laurel Stoddard

Laboratory Director

### REVIEWED

By mpagliarini at 3:12 pm, Nov 12, 2011

#### **Analytical Summary**

The project as described above has been analyzed in accordance with the ESS Quality Assurance Plan. This plan utilizes the following methodologies: US EPA SW-846, US EPA Methods for Chemical Analysis of Water and Wastes per 40 CFR Part 136, APHA Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials (ASTM), and other recognized methodologies. The analyses with these noted observations are in conformance to the Quality Assurance Plan. In chromatographic analysis, manual integration is frequently used instead of automated integration because it produces more accurate results.

ESS Laboratory certifies that the test results meet the requirements of NELAC and A2LA, except where noted within this project narrative.



The Microbiology Division of Thielsch Engineering, Inc.



### CERTIFICATE OF ANALYSIS

Client Name: RIDEM - Office of Waste Management

Client Project ID: Portsmouth Town Dump ESS Laboratory Work Order: 1111038

### **SAMPLE RECEIPT**

The following samples were received on November 03, 2011 for the analyses specified on the enclosed Chain of Custody Record.

**Lab Number** 1111038-01

SampleName PTD-2 **Matrix** Soil Analysis

6010B, 7471A, 8260B Low, 8270C



The Microbiology Division of Thielsch Engineering, Inc.



#### CERTIFICATE OF ANALYSIS

Client Name: RIDEM - Office of Waste Management

Client Project ID: Portsmouth Town Dump ESS Laboratory Work Order: 1111038

#### PROJECT NARRATIVE

8270C Semi-Volatile Organic Compounds

CK10413-BS1 Blank Spike recovery is below lower control limit (B-).

Hexachlorocyclopentadiene (32% @ 40-140%), N-Nitrosodimethylamine (34% @ 40-140%), Pyridine

(27% @ 40-140%)

CK10413-BSD1 Blank Spike recovery is below lower control limit (B-).

Pyridine (36% @ 40-140%)

CK10413-BSD1 Relative percent difference for duplicate is outside of criteria (D+).

1,1-Biphenyl (45%), 1,2,4-Trichlorobenzene (55%), 1,2-Dichlorobenzene (40%), 1,3-Dichlorobenzene (41%), 1,4-Dichlorobenzene (41%), 2,4,5-Trichlorophenol (31%), 2,4,6-Trichlorophenol (37%), 2,4-Dichlorophenol (50%), 2,4-Dimethylphenol (31%), 2-Chloronaphthalene (44%), 2-Chlorophenol (41%), 2-Methylnaphthalene (48%), 2-Nitrophenol (39%), 4-Bromophenyl-phenylether (37%),

4-Chloroaniline (35%), 4-Chloro-phenyl-phenyl ether (31%), Acenaphthene (31%), bis(2-Chloroethyl)ether (43%), Hexachlorobenzene (32%), Hexachlorobutadiene (67%),

Hexachlorocyclopentadiene (65%), Naphthalene (45%), Nitrobenzene (33%), N-Nitrosodimethylamine

(33%), Phenol (35%)

CUK0031-CCV1 <u>Benzidine tailing factor >2.</u>

CUK0031-CCV1 Calibration required quadratic regression (Q).

Benzoic Acid (110% @ 70-130%), Hexachlorocyclopentadiene (78% @ 70-130%)

CUK0031-CCV1 Continuing Calibration recovery is below lower control limit (C-).

Pyridine (64% @ 70-130%)

CUK0031-CCV1 Initial Calibration Verification recovery is outside of control limit (ICV).

Hexachlorocyclopentadiene

No other observations noted.

**End of Project Narrative.** 

### **DATA USABILITY LINKS**

**Definitions of Quality Control Parameters** 

Semivolatile Organics Internal Standard Information

Semivolatile Organics Surrogate Information

Volatile Organics Internal Standard Information

Volatile Organics Surrogate Information

**EPH and VPH Alkane Lists** 

185 Frances Avenue, Cranston, RI 02910-2211

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http://www.ESSLaboratory.com



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### CERTIFICATE OF ANALYSIS

Client Name: RIDEM - Office of Waste Management

Client Project ID: Portsmouth Town Dump

Client Sample ID: PTD-2 Date Sampled: 11/02/11 14:08

Percent Solids: 90

ESS Laboratory Work Order: 1111038 ESS Laboratory Sample ID: 1111038-01

Sample Matrix: Soil Units: mg/kg dry

### 3050B/6000/7000 Total Metals

<u>Analyte</u>	Results (MRL)	Method	<u>Limit</u>	<u>DF</u>	Analyst	Analyzed	I/V	F/V	Batch
Arsenic	<b>6.1</b> (2.4)	6010B		1	SVD	11/04/11 18:39	2.33	100	CK10411
Barium	<b>35.1</b> (2.4)	6010B		1	SVD	11/04/11 18:39	2.33	100	CK10411
Cadmium	ND (0.48)	6010B		1	SVD	11/04/11 18:39	2.33	100	CK10411
Chromium	<b>11.5</b> (1.0)	6010B		1	SVD	11/04/11 18:39	2.33	100	CK10411
Lead	<b>99.4</b> (4.8)	6010B		1	SVD	11/04/11 18:39	2.33	100	CK10411
Mercury	<b>0.132</b> (0.035)	7471A		1	JP	11/05/11 11:21	0.62	40	CK10416
Selenium	ND (23.9)	6010B		5	SVD	11/07/11 22:36	2.33	100	CK10411
Silver	ND (0.48)	6010B		1	SVD	11/04/11 18:39	2.33	100	CK10411



The Microbiology Division of Thielsch Engineering, Inc.



### CERTIFICATE OF ANALYSIS

Client Name: RIDEM - Office of Waste Management

Client Project ID: Portsmouth Town Dump

Client Sample ID: PTD-2 Date Sampled: 11/02/11 14:08

Percent Solids: 90 Initial Volume: 4.9 Final Volume: 10

Extraction Method: 5035

ESS Laboratory Work Order: 1111038 ESS Laboratory Sample ID: 1111038-01

Sample Matrix: Soil Units: mg/kg dry Analyst: MD

### 5035/8260B Volatile Organic Compounds / Low Level

Analyte 1,1,1,2-Tetrachloroethane	<u>Results (MRL)</u> ND (0.0057)	<u>Limit</u>	<u><b>DF</b></u>	<u>Analyzed</u> 11/09/11 14:28	Sequence CUK0049	Batch CK10915
1,1,1-Trichloroethane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,1,2,2-Tetrachloroethane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,1,2-Trichloroethane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,1-Dichloroethane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,1-Dichloroethene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,1-Dichloropropene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,2,3-Trichlorobenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,2,3-Trichloropropane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,2,4-Trichlorobenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,2,4-Trimethylbenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,2-Dibromo-3-Chloropropane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,2-Dibromoethane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,2-Dichlorobenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,2-Dichloroethane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,2-Dichloropropane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,3,5-Trimethylbenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,3-Dichlorobenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,3-Dichloropropane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,4-Dichlorobenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
1,4-Dioxane	ND (0.113)		1	11/09/11 14:28	CUK0049	CK10915
1-Chlorohexane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
2,2-Dichloropropane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
2-Butanone	ND (0.0567)		1	11/09/11 14:28	CUK0049	CK10915
2-Chlorotoluene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
2-Hexanone	ND (0.0567)		1	11/09/11 14:28	CUK0049	CK10915
4-Chlorotoluene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
4-Isopropyltoluene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
4-Methyl-2-Pentanone	ND (0.0567)		1	11/09/11 14:28	CUK0049	CK10915
Acetone	ND (0.0567)		1	11/09/11 14:28	CUK0049	CK10915
Benzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915



The Microbiology Division of Thielsch Engineering, Inc.



### CERTIFICATE OF ANALYSIS

Client Name: RIDEM - Office of Waste Management

Client Project ID: Portsmouth Town Dump

Client Sample ID: PTD-2 Date Sampled: 11/02/11 14:08

Percent Solids: 90 Initial Volume: 4.9 Final Volume: 10

Extraction Method: 5035

ESS Laboratory Work Order: 1111038 ESS Laboratory Sample ID: 1111038-01

Sample Matrix: Soil Units: mg/kg dry Analyst: MD

### 5035/8260B Volatile Organic Compounds / Low Level

Analyte Bromobenzene	Results (MRL) ND (0.0057)	<u>Limit</u>	<u><b>DF</b></u>	<u>Analyzed</u> 11/09/11 14:28	Sequence CUK0049	Batch CK10915
Bromochloromethane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Bromodichloromethane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Bromoform	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Bromomethane	ND (0.0113)		1	11/09/11 14:28	CUK0049	CK10915
Carbon Disulfide	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Carbon Tetrachloride	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Chlorobenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Chloroethane	ND (0.0113)		1	11/09/11 14:28	CUK0049	CK10915
Chloroform	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Chloromethane	ND (0.0113)		1	11/09/11 14:28	CUK0049	CK10915
cis-1,2-Dichloroethene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
cis-1,3-Dichloropropene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Dibromochloromethane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Dibromomethane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Dichlorodifluoromethane	ND (0.0113)		1	11/09/11 14:28	CUK0049	CK10915
Diethyl Ether	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Di-isopropyl ether	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Ethyl tertiary-butyl ether	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Ethylbenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Hexachlorobutadiene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Isopropylbenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Methyl tert-Butyl Ether	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Methylene Chloride	ND (0.0283)		1	11/09/11 14:28	CUK0049	CK10915
Naphthalene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
n-Butylbenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
n-Propylbenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
sec-Butylbenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Styrene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
tert-Butylbenzene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Tertiary-amyl methyl ether	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915



The Microbiology Division of Thielsch Engineering, Inc.



### CERTIFICATE OF ANALYSIS

Client Name: RIDEM - Office of Waste Management

Client Project ID: Portsmouth Town Dump

Client Sample ID: PTD-2 Date Sampled: 11/02/11 14:08

Percent Solids: 90 Initial Volume: 4.9 Final Volume: 10

Extraction Method: 5035

ESS Laboratory Work Order: 1111038 ESS Laboratory Sample ID: 1111038-01

Sample Matrix: Soil Units: mg/kg dry Analyst: MD

### 5035/8260B Volatile Organic Compounds / Low Level

<b>Analyte</b>	Results (MRL)	<u>Limit</u>	<u>DF</u>	<b>Analyzed</b>	<b>Sequence</b>	<b>Batch</b>
Tetrachloroethene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Tetrahydrofuran	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Toluene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
trans-1,2-Dichloroethene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
trans-1,3-Dichloropropene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Trichloroethene	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Trichlorofluoromethane	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Vinyl Acetate	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Vinyl Chloride	ND (0.0113)		1	11/09/11 14:28	CUK0049	CK10915
Xylene O	ND (0.0057)		1	11/09/11 14:28	CUK0049	CK10915
Xylene P,M	ND (0.0113)		1	11/09/11 14:28	CUK0049	CK10915
Xylenes (Total)	ND (0.0170)		1	11/09/11 14:28		[CALC]

	%Recovery	Qualifier	Limits
Surrogate: 1,2-Dichloroethane-d4	124 %		70-130
Surrogate: 4-Bromofluorobenzene	88 %		70-130
Surrogate: Dibromofluoromethane	109 %		70-130
Surrogate: Toluene-d8	101 %		70-130

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### CERTIFICATE OF ANALYSIS

Client Name: RIDEM - Office of Waste Management

Client Project ID: Portsmouth Town Dump

Client Sample ID: PTD-2 Date Sampled: 11/02/11 14:08

Percent Solids: 90 Initial Volume: 14.4 Final Volume: 0.5

Extraction Method: 3546

ESS Laboratory Work Order: 1111038 ESS Laboratory Sample ID: 1111038-01

Sample Matrix: Soil Units: mg/kg dry Analyst: IBM

Prepared: 11/4/11 13:15

### 8270C Semi-Volatile Organic Compounds

Analyte 1,1-Biphenyl	Results (MRL) ND (0.385)	<u>Limit</u>	<u><b>DF</b></u>	<u>Analyzed</u> 11/04/11 16:58	Sequence CUK0031	Batch CK10413
1,2,4-Trichlorobenzene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
1,2-Dichlorobenzene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
1,3-Dichlorobenzene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
1,4-Dichlorobenzene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
2,3,4,6-Tetrachlorophenol	ND (1.93)		1	11/04/11 16:58	CUK0031	CK10413
2,4,5-Trichlorophenol	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
2,4,6-Trichlorophenol	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
2,4-Dichlorophenol	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
2,4-Dimethylphenol	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
2,4-Dinitrophenol	ND (1.93)		1	11/04/11 16:58	CUK0031	CK10413
2,4-Dinitrotoluene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
2,6-Dinitrotoluene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
2-Chloronaphthalene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
2-Chlorophenol	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
2-Methylnaphthalene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
2-Methylphenol	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
2-Nitroaniline	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
2-Nitrophenol	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
3,3'-Dichlorobenzidine	ND (0.772)		1	11/04/11 16:58	CUK0031	CK10413
3+4-Methylphenol	ND (0.772)		1	11/04/11 16:58	CUK0031	CK10413
3-Nitroaniline	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
4,6-Dinitro-2-Methylphenol	ND (1.93)		1	11/04/11 16:58	CUK0031	CK10413
4-Bromophenyl-phenylether	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
4-Chloro-3-Methylphenol	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
4-Chloroaniline	ND (0.772)		1	11/04/11 16:58	CUK0031	CK10413
4-Chloro-phenyl-phenyl ether	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
4-Nitroaniline	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
4-Nitrophenol	ND (1.93)		1	11/04/11 16:58	CUK0031	CK10413
Acenaphthene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Acenaphthylene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413



The Microbiology Division of Thielsch Engineering, Inc.



### CERTIFICATE OF ANALYSIS

Client Name: RIDEM - Office of Waste Management

Client Project ID: Portsmouth Town Dump

Client Sample ID: PTD-2 Date Sampled: 11/02/11 14:08

Percent Solids: 90 Initial Volume: 14.4 Final Volume: 0.5

Extraction Method: 3546

ESS Laboratory Work Order: 1111038 ESS Laboratory Sample ID: 1111038-01

Sample Matrix: Soil Units: mg/kg dry Analyst: IBM

Prepared: 11/4/11 13:15

### 8270C Semi-Volatile Organic Compounds

Analyte	Results (MRL)	Limit	DF	Analyzed	Sequence	<b>Batch</b>
Acetophenone	ND (0.772)		1	11/04/11 16:58	CUK0031	CK10413
Aniline	ND (0.772)		1	11/04/11 16:58	CUK0031	CK10413
Anthracene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Azobenzene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Benzo(a)anthracene	<b>0.622</b> (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Benzo(a)pyrene	<b>0.564</b> (0.193)		1	11/04/11 16:58	CUK0031	CK10413
Benzo(b)fluoranthene	<b>0.741</b> (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Benzo(g,h,i)perylene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Benzo(k)fluoranthene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Benzoic Acid	ND (1.93)		1	11/04/11 16:58	CUK0031	CK10413
Benzyl Alcohol	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
bis(2-Chloroethoxy)methane	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
bis(2-Chloroethyl)ether	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
bis(2-chloroisopropyl)Ether	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
bis(2-Ethylhexyl)phthalate	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Butylbenzylphthalate	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Carbazole	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Chrysene	<b>0.639</b> (0.193)		1	11/04/11 16:58	CUK0031	CK10413
Dibenzo(a,h)Anthracene	ND (0.193)		1	11/04/11 16:58	CUK0031	CK10413
Dibenzofuran	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Diethylphthalate	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Dimethylphthalate	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Di-n-butylphthalate	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Di-n-octylphthalate	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Fluoranthene	<b>1.45</b> (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Fluorene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Hexachlorobenzene	ND (0.193)		1	11/04/11 16:58	CUK0031	CK10413
Hexachlorobutadiene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Hexachlorocyclopentadiene	ND (1.93)		1	11/04/11 16:58	CUK0031	CK10413
Hexachloroethane	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Indeno(1,2,3-cd)Pyrene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413



The Microbiology Division of Thielsch Engineering, Inc.



### CERTIFICATE OF ANALYSIS

Client Name: RIDEM - Office of Waste Management

Client Project ID: Portsmouth Town Dump

Client Sample ID: PTD-2 Date Sampled: 11/02/11 14:08

Percent Solids: 90 Initial Volume: 14.4 Final Volume: 0.5

Extraction Method: 3546

ESS Laboratory Work Order: 1111038 ESS Laboratory Sample ID: 1111038-01

Sample Matrix: Soil Units: mg/kg dry Analyst: IBM

Prepared: 11/4/11 13:15

### 8270C Semi-Volatile Organic Compounds

<u>Analyte</u>	Results (MRL)	<u>Limit</u>	<u>DF</u>	<b>Analyzed</b>	<b>Sequence</b>	<b>Batch</b>
Isophorone	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Naphthalene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Nitrobenzene	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
N-Nitrosodimethylamine	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
N-Nitroso-Di-n-Propylamine	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
N-nitrosodiphenylamine	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Pentachlorophenol	ND (1.93)		1	11/04/11 16:58	CUK0031	CK10413
Phenanthrene	<b>0.807</b> (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Phenol	ND (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Pyrene	<b>1.32</b> (0.385)		1	11/04/11 16:58	CUK0031	CK10413
Pyridine	ND (1.93)		1	11/04/11 16:58	CUK0031	CK10413

Qualifier

Limits

Surrogate: 1,2-Dichlorobenzene-d4	67 %	30-130
Surrogate: 2,4,6-Tribromophenol	73 %	30-130
Surrogate: 2-Chlorophenol-d4	62 %	30-130
Surrogate: 2-Fluorobiphenyl	81 %	30-130
Surrogate: 2-Fluorophenol	62 %	30-130
Surrogate: Nitrobenzene-d5	69 %	30-130
Surrogate: Phenol-d6	53 %	30-130
Surrogate: p-Terphenyl-d14	96 %	30-130

%Recovery



http://www.ESSLaboratory.com

Quality