

STL Burlington
South Burlington, VT

Extended Data Package

SDG: NY121221

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Case Narrative

STL

September 4, 2007

Mr. Jon Nickerson
Ecology & Environmental Inc
368 Pleasant View Drive
Lancaster, NY 14086

STL Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403

Tel: 802 660 1990 Fax: 802 660 1919
www.stl-inc.com

Re: Laboratory Project No. 27000
Case: 27000; SDG: NY121221

Dear Mr. Nickerson:

Enclosed are the analytical results for the samples that were received by STL Burlington on August 3rd, 2007. Laboratory identification numbers were assigned, and designated as follows:

<u>Lab ID</u>	<u>Client Sample ID</u>	<u>Sample Date</u>	<u>Sample Matrix</u>
Received: 08/03/07 ETR No: 121221			
719828	OTMi-GT01	08/01/07	SOIL
719829	OTMi-GT02	08/01/07	SOIL

Documentation of the condition of the samples at the time of their receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal.

ASTM Method D422 – Particle Size:

There were no exceptions to the method quality control criteria during the analyses of these samples.

ASTM Method D2216 – Moisture Content:

There were no exceptions to the method quality control criteria during the analyses of these samples.

ASTM Method D4318 – Atterberg Limits:

There were no exceptions to the method quality control criteria during the analyses of these samples.

The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.

If there are any questions regarding this submittal, please contact me at 802 660-1990.

Sincerely,

A handwritten signature in black ink, appearing to read "Ron Pentkowski", written in a cursive style.

Ron Pentkowski
Project Manager

Enclosure

EXHIBIT 6

SUBCONTRACTOR DELIVERABLES CERTIFICATION FORM

TO: ECOLOGY AND ENVIRONMENT ENGINEERING PC.
Corporate Headquarters
368 Pleasant View Drive
Lancaster, NY 14086

Attention: subcontracting@ene.com

Laboratory: Test America Laboratories,
Burlington Vermont

Laboratory Work Order No: 002699.1D09.03

This Exhibit must be completed and returned to EEEPC with each data submittal

Laboratory certifies that the electronic version of the data submitted for the above referenced Work Order is an EXACT DUPLICATE of the hard copy report and that both deliverables conform exactly to the EEEPC project requirements and are being submitted error free.

Any errors identified by EEEPC will be corrected by subcontractor at their cost. If errors are corrected by EEEPC in order to meet EEEPC prime contract responsibilities, the cost will be deducted from the payment made to the laboratory using EEEPC standard commercial rates.

Executed this 4th day of September, 20 07

Test America Laboratories

Subcontractor

C. SL

Signature

WILLIAM S. CICERO

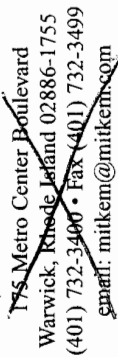
Name

Laboratory Director

Title



Chain of Custody



SEND TO: SIL Burlington, Vermont
30 Community Drive, Suite 11
South Burlington, VT 05403

Phone 802-6601990

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

REPORT TO						INVOICE TO							
COMPANY Ecology + Environment Inc. EEEPCC			PHONE 718 684 8060 FAX 718 684 0844			COMPANY SAME		PHONE		LAB PROJECT #:			
ADDRESS 368 PLEASANTVIEW DRIVE						NAME		FAX		TURNAROUND TIME:			
CITY/ST/ZIP Lancaster, NY 14086			CLIENT PO.#:			ADDRESS							
CLIENT PROJECT NAME: Municipal Incineration Site			CLIENT PROJECT #: 00269A.ID07.03			CITY/ST/ZIP							
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	REQUESTED ANALYSES			COMMENTS	
OTM-GT01	8/107/1345	X			X			1	X	X	X		PARTICULATE SIZE (Sieve + Hydrometry) Moisture Content Attention Limits
OTM-GT02	8/107/1400	X			X			1	X	X	X		
	/												
	/												
	/												
	/												
	/												
	/												
	/												
	/												
TSE#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY		DATE/TIME	ADDITIONAL REMARKS:		COOLER TEMP:					
	J - Mue	8/207/1530			8/307/0940								
		/			/								
		/			/								

WHITE: LABORATORY COPY

YELLOW: REPORT COPY

PINK: CLIENT'S COPY



Sample Report Summary - Geotechnical

Sample Report Summary

OTMi-GT01

% Solids:

Sample Report Summary

OTMi-GT02

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
D2216	Moisture Content	08/25/07		%	1	0.0	11.3	
D4318	Liquid Limit	08/26/07			1		0	
D4318	Plasticity Index	08/26/07			1		NP	
D4318	Plastic Limit	08/26/07			1		0	



Supportive Documentation - Geotechnical



MOISTURE CONTENT

ASTM Method D2216: Standard Test Method for Determination of Water (Moisture) Content of Soil and Rock by Mass Calculations

Client Code:	<u>ECOENV</u>
ETR:	<u>121221</u>
SDG:	<u>NY121221</u>

Start Date:	08/25/07
Start Time:	1200
End Date:	08/26/07
Analyst:	TPB

[illegible]



ATTERBERG LIMITS

Start Date:	8/26/2007
Start Time:	1550
End Date:	8/26/2007
Analyst:	MAP

Start Date: 8/26/2007
Start Time: 1550

Calculations

End Date:	8/26/2007
Analyst:	MAP

[illegible]

ASTM Method D4318: Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils Calculations

Client Code:	ECOENV
ETR:	121221
SDG:	NY121221

Start Date:	8/26/2007
Start Time:	1550
End Date:	8/26/2007
Analyst:	MAP

[illegible]



Particle Size Results

Particle Size of Soils by ASTM D422

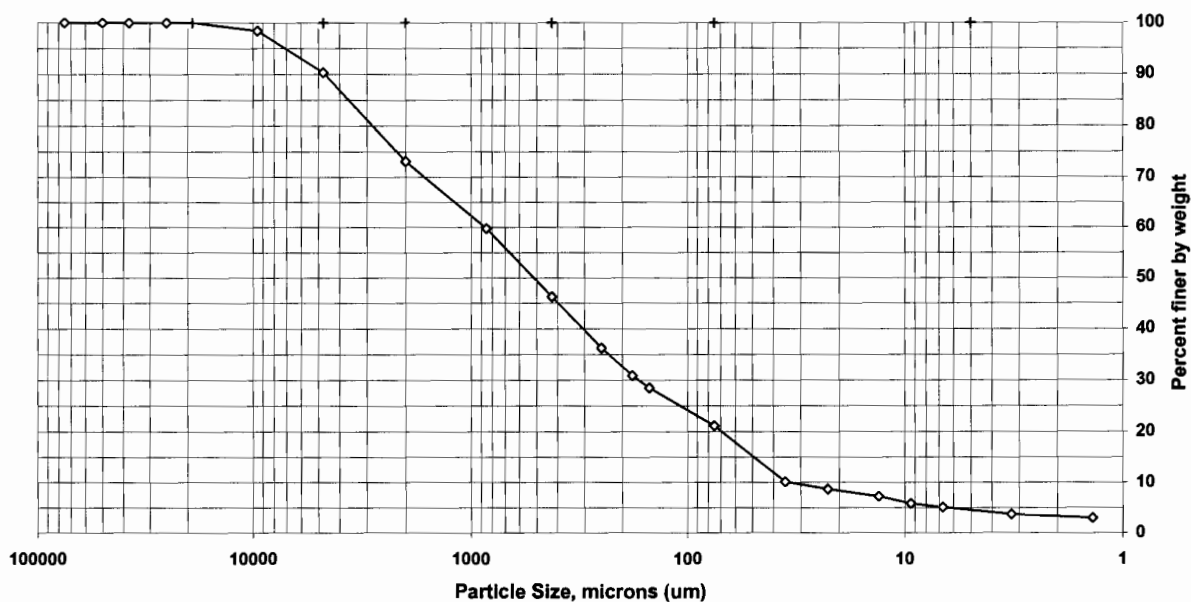
Client Code: ECOENV
Sample ID: OTMI-GT01
Lab ID: 719828

SDG: NY121221
ETR(s): 121221

Date Received: 8/3/2007
Start Date: 8/7/2007
End Date: 8/31/2007

Percent Solids: 88.5%
Specific Gravity: 2.650
Maximum Particle Size: 19 mm

Non-soil material: plant, glass
Shape (> #10): subangular
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.5	1.5
#4	4750	90.4	8.1
#10	2000	73.1	17.2
#20	850	59.8	13.4
#40	425	46.3	13.5
#60	250	36.3	10.0
#80	180	30.9	5.4
#100	150	28.5	2.4
#200	75	21.1	7.4
Hydrometer	35.3	10.1	11.0
	22.5	8.7	1.4
	13.1	7.3	1.4
	9.4	5.8	1.4
	6.7	5.1	0.7
	3.3	3.7	1.4
V	1.4	3.0	0.7

Soil Classification	Percent of Total Sample
Gravel	9.6
Sand	69.3
Coarse Sand	17.2
Medium Sand	26.8
Fine Sand	25.2
Silt	16.0
Clay	5.1

Preparation Method: D2217
Dispersion Device: Mechanical mixer with a metal paddle.
Dispersion Period: 1 minute

Particle Size of Soils by ASTM D422

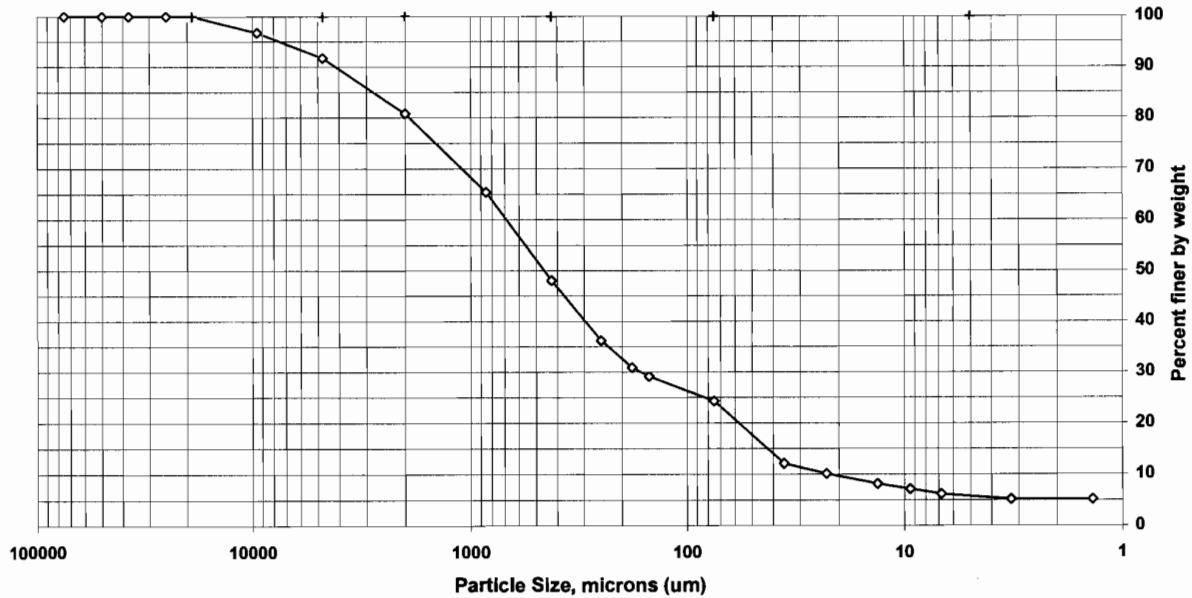
Client Code: ECOENV
 Sample ID: OTMi-GT02
 Lab ID: 719829

SDG: NY121221
 ETR(s): 121221

Date Received: 8/3/2007
 Start Date: 8/7/2007
 End Date: 8/31/2007

Percent Solids: 89.9%
 Specific Gravity: 2.650
 Maximum Particle Size: 19 mm

Non-soil material: plant, glass
 Shape (> #10): subrounded
 Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	96.8	3.2
#4	4750	91.7	5.1
#10	2000	80.8	10.9
#20	850	65.4	15.4
#40	425	48.1	17.3
#60	250	36.2	11.9
#80	180	30.9	5.3
#100	150	29.2	1.7
#200	75	24.3	4.9
Hydrometer	35.6	12.1	12.2
	22.7	10.1	2.0
	13.3	8.2	2.0
	9.4	7.2	1.0
	6.8	6.2	1.0
	3.3	5.2	1.0
V	1.4	5.2	0.0

Soil Classification	Percent of Total Sample
Gravel	8.3
Sand	67.4
Coarse Sand	10.9
Medium Sand	32.7
Fine Sand	23.8
Silt	18.2
Clay	6.2

Preparation Method: D2217
 Dispersion Device: Mechanical mixer with a metal paddle.
 Dispersion Period: 1 minute

Particle Size Analysis of Soils
By ASTM D422
Hydrometer Data

Set Number
NY121221

Client Code: ECOENV
SDG: NY121221
ETR(s): 121221

Date Received: 3-Aug-07
Start Date: 7-Aug-07
End Date: 31-Aug-07

Date and Analyst

Percent Solids	Weighed	Mixed	Hydrometer	Large sieves	Small sieves
TPB 8/25/07	TPB 8/25/07	TPB 8/25/07	MAP 8/29/07	TPB 8/25/07	MAP 8/30/07
MAP 8/26/07			TEH 8/30/07	SED 8/28/07	SED 8/31/07

Test number	1	2	3	4	5	6	7	8	9	10	11	12
Lab number	719828	719829										
Time, min. (2)	2	2	2	2	2	2	2	2	2	2	2	2
Reading	1.0105	1.0095										
Temperature, C	20.5	20.5										
Time, min. (5)	5	5	5	5	5	5	5	5	5	5	5	5
Reading	1.0095	1.0085										
Temperature, C	20.5	20.5										
Time, min. (15)	15	15	15	15	15	15	15	15	15	15	15	15
Reading	1.0085	1.0075										
Temperature, C	20.5	20.5										
Time, min. (30)	30	30	29	29	31	31	31	32	30	30	30	31
Reading	1.0075	1.0070										
Temperature, C	20.5	20.5										
Time, min. (60)	59	58	58	63	60	59	59	60	63	57	63	57
Reading	1.0070	1.0065										
Temperature, C	20.5	20.5										
Time, min. (250)	256	256	250	250	240	234	265	259	253	247	241	235
Reading	1.0060	1.0060										
Temperature, C	20.5	20.5										
Time, min. (1440)	1440	1440	1434	1434	1424	1418	1412	1406	1400	1394	1388	1382
Reading	1.0055	1.0060										
Temperature, C	20.5	20.5										

Hydrometer used:	705151	Model #: ASTM 151H	Manufacturer: HB Instrument	Cal. Date: 10/19/06	Hydrometer start time: 16:42
Calibrations:	L temp. C 17.0	L read 1.0040	H Temp. C 23.0	H read 1.0030	Hydrometer data entered: SED 8/31/07

Particle Size Analysis of Soils By ASTM D422 Hydrometer Data

Client Code:	ECOENV
SDG:	NY121221
ETR(s):	121221

Date Received: 03-Aug-07
Start Date: 07-Aug-07
End Date: 31-Aug-07

Date and Analyst

Percent Solids	Weighted	Mixed	Hydrometer	Large sieves	Small sieves
70/92/28 DM	60/32/80/40	60/32/80/40	10-0.62.8 H ₂ O	60/32/80/40	60/32/80/40
60/32/80/40	60/32/80/40	60/32/80/40	60/32/80/40	60/32/80/40	60/32/80/40

[illegible]

Hydrometer used:	70551		Model #: ASTM 151H		Manufacturer:		Hydrometer start time:	1642
Calibrations:	L temp. C	L read	H Temp. C	H read	Hydrometer data entered:			
	17.0		23.0		530 8/3.607			

FSL024:07.29.05:0
STL Burlington

NY121221PS 08/24/07

Particle Size Analysis of
Soils By ASTM D422
Sieve Data

Client Code: ECOENV

ETR(s): 121221
SDG: NY121221

Date Rec: 3-Aug-07
Start Date: 7-Aug-07
End Date: 31-Aug-07

SET: NY121221

Test	1	2	3	4	5	6	7	8	9	10	11	12
Laboratory No	719828	719829										
Sample ID	OTMI-GT01	OTMI-GT02										

Dry prep = D421
Wet prep = D2217

Sample Prep	D2217	D2217
Pan, g		
Pan/sample, g	126.68	89.50
Pan/dry sample, g		

Hygroscopic Moisture correction factor (HMCf) for dry prep / Percent Solids for dry and wet prep		
Pan, g	4.04	4.14
Pan/sample, g	183.42	242.78
Pan/dry sample, g	162.85	218.63
HMCf	100.0%	100.0%

Description of >#10 particles	plant, glass	plant, glass
Non-soil material	subangular	subrounded
Shape	hard	hard
Hardness		

Sample % Solids	88.5%	89.9%
Dry sample wt, g	112.15	80.44

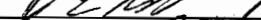
Sieve (tares)		Sieve + Sample Weights											
Size	Mass, g	Size	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g	Mass, g
3 inch		3 inch											
2 inch		2 inch											
1.5 inch		1.5 inch											
1 inch		1 inch											
3/4 inch		3/4 inch											
3/8 inch		3/8 inch											
#4	447.79	#4	449.51	450.38									
#10	485.13	#10	494.22	489.20									
#20	459.31	#20	478.64	468.10									
#40	383.28	#40	398.26	395.66									
#60	355.18	#60	370.28	369.12									
#80	338.57	#80	349.83	348.12									
#100	326.16	#100	332.18	330.41									
#200	334.37	#200	337.03	335.77									
	323.64		331.96	327.55									
Maximum Particle size		19 mm		19 mm									
Specific gravity		2.65		2.650									

Sample Mass Parameters													
Sample Mass >#10, g	30.14	15.45											
Sample mass <#10, g	82.01	64.99											



Sample Handling

STL BURLINGTON SAMPLE RECEIPT & LOG IN CHECKLIST

Client: ECO ENV	Date Received: 8/3/07	Log In Date: 8/6/07
ETR: 121221	Time Received: 0940	By: JEG
SDG: NY121221	Received By: JEG	Signature: 
Project: 27000	# Coolers Received: 1	PM Signature: 
Samples Delivered By: ☒ Shipping Service ☐ Courier ☐ Hand ☐ Other (specify)		Date:
List Air Bill Number(s) or Attach a photocopy of the Air Bill:		

COOLER SCREEN	YES	NO	NA	COMMENTS
There is no evidence to indicate tampering	☒			
Custody seals are present and intact	☒			
Custody seal numbers are present	☒			
If yes, list custody seal numbers: <u>OLD TROY</u>				

Thermal Preservation Type: ☐ Wet Ice ☐ Blue Ice ☒ None ☐ Other (specify)				
IR Gun ID: 62		Correction Factor (CF) = 0 °C		
Cooler 1: 27.5 °C	Cooler 6 °C	Cooler 11 °C	Cooler 16 °C	
Cooler 2: °C	Cooler 7 °C	Cooler 12 °C	Cooler 17 °C	
Cooler 3: °C	Cooler 8 °C	Cooler 13 °C	Cooler 18 °C	
Cooler 4: °C	Cooler 9 °C	Cooler 14 °C	Cooler 19 °C	
Cooler 5: °C	Cooler 10 °C	Cooler 15 °C	Cooler 20 °C	

Unless otherwise documented, the recorded temperature readings are adjusted readings to account for the CF of the IR Gun

EPA Criteria: 0-6°C, except for air and geo samples which should be at ambient temperature and tissue samples, which may be frozen.

Some clients require thermal preservation criteria of 2-4°C or other such criteria. The PM must notify SM when alternate criteria is specified.

SAMPLE CONDITION	YES	NO	NA	COMMENTS
Sample containers were received intact	X			
Legible sample labels are affixed to each container	X			

CHAIN OF CUSTODY (COC)	YES	NO	NA	COMMENTS
------------------------	-----	----	----	----------

COC is present and includes the following information for each container:				
• Sample ID / Sample Description	X			
• Date of Sample Collection	X			
• Time of Sample Collection	X			See below
• Identification of the Sampler		X		
• Preservation Type			X	
• Requested Tests Method(s)	X			
• Necessary Signatures	X			

Internal Chain of Custody (ICOC) Required		X		
If yes to above, ICOC Record initiated for every Worksheet			X	

SAMPLE INTEGRITY /USABILITY	YES	NO	NA	COMMENTS
-----------------------------	-----	----	----	----------

The sample container matches the COC		X		See below
Appropriate sample containers were received for the tests requested	X			
Samples were received within holding time	X			
Sufficient amount of sample is provided for requested analyses	X			
VOA vials do not have headspace or a bubble >6mm (1/4" diameter)			X	
Appropriate preservatives were used for the tests requested			X	
pH of inorganic samples checked and is within method specification			X	
If no. attach Inorganic Sample pH Adjustment Form			X	

ANOMALY/NCR SUMMARY

Sample container labels inconsistent with COC, Sample container labels list only sample ID and date, COC lists ID, date, and time. Used COC w/ login



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