GW-199

(AP - 014)

APPENDIX B - WASTE DISPOSAL DOCUMENTATION

REPORT

GEOTECH

YEAR(S):
JULY 2005

SEVERN TRENT STL

NARRATIVE

SEVERN TRENT STL

STL Burlington
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Colchester, VT 05446

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August 23, 2005

Mr. Manley Tom
Environmental Stratagies Corp.
4600 South Ulster
Suite 930
Denver, CO 80237

Re: Laboratory Project No. 25000
Case: 25000; SDG: 108587

Dear Mr. Tom:

Enclosed are analytical results for the samples that received by STL Burlington on July 25th, 2005. This report is sequentially numbered starting with page 0001 and ending with page 010. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 07/25/05 ETR No: 108587		
630461	ESCSB-04 (5'-7')	07/19/05	Soil
630462	ESCSB-0 4(15'-17')	07/19/05	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.

Based on the instructions that were received, sample ESCSB-0 4(15'-17') was placed on "analytical hold". Sample ESCSB-04 (5'-7') was analyzed for hydraulic conductivity by ASTM D5084.

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 802 655-1203.

Sincerely,

Lori Arnold
Project Manager

Enclosure

STL Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified in project QA plan, the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P	ICP-AES
MS	ICP-MS
CV	Cold Vapor AA
AS	Semi-Automated Spectrophotometric

CHAIN OF CUSTODY RECORD

No. 036152

Project Number: 131042-1

Site and Location: CHAMPION TECHNOLOGIES, HOBBS, NM

Sampler's Name(s): MANLEY TOM

Sampler's Signature(s): [signature]

Matrices: S = Soil; Aq = Water; A = Air; Bu = Bulk; W = Wipe; Bi = Biota; OW = Oily Waste; O = Other

Requested Analyses: ASTM D5084-HYD COND

Sample Identification	Date	Time	Matrix	Number of Containers	ASTM D5084-HYD COND									Remarks
ESCSB-04 (5-7')	7/19/05	1555	S	2	X									RUN THE 5'-7' SAMPLE
ESCSB-04 (15-17')	7/19/05	1620	S	2	(HOLD)									ONLY

Relinquished by (Signature): [signature] Date: 7/22/05 Time: 1100

Received by (Signature): Angela Patnaude 07.25.05 0930

Relinquished by (Signature): Date | Time

Received by (Signature):

Turn-Around Time: NORMAL

Tracking Number: 7929 8127 6384

Laboratory Name: STL

Laboratory Location: BURLINGTON, VT

Custody Seal Numbers:

Method of Shipment:

0003

ENVIRONMENTAL STRATEGIES CONSULTING LLC
A QUANTA TECHNICAL SERVICES COMPANY

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Tel: (703) 709-6500, Fax: (703) 709-8505

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☐ Minneapolis Office: 123 North 3rd St, #706, Minneapolis, MN 55401
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SEVERN TRENT STL

Geotechnical Sample Report Summary

0004

GEOTECHNICAL / GENERAL CHEMISTRY

Sample Report Summary

Client Sample No.
ESCSB-04 (5'-7')

Lab Name: STL BURLINGTON | Contract: 18580018 | SDG No.: 108587

Lab Code: STLVT | Case No.: 25000 | Lab Sample ID: 630461

Matrix: SOIL | Client: ENVST3 | Date Received: 07/25/05

% Solids:

Method	Parameter	Analytical Run Date	Analytical Batch	Units	DF	RL	Conc.	Qual.
D5084	Hydraulic Conductivity	08/01/05		cm/sec	1		2.39E-6	

Printed on: 08/05/05 07:08 AM

SEVERN TRENT STL

Hydraulic Conductivity

ASTM Method D5084: Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter
Method D: Constant Rate of Flow

Client Code: ENVST3
ETR: 108587
SDG: 108587
Laboratory ID: 630461

Analysis Date: 08/01/2005
Analysis Start Time: 1926
Analyst: PAD

Consolidation Stress, Max: 3.5 psi
Consolidation Stress, Min: 0.6 psi
Permeant Used: RO Water

Area of Burette: 0.906 cm^2
Spec. Gravity: 2.65 (assumed)
Sample Disturbed: Y (Y/N)

Sample Information

	Mass (g)	Length (cm)	Diameter (cm)	Area (cm^2)	Volume (cm^3)	Moisture Content (%)	Dry Unit Weight (g/cm^3)	Saturation (%)	Temperature °C
Initial	316.48	9.00	4.80	18.10	162.9	11.70	1.74	59.3	21.5
Final	312.54	8.50	4.80	18.10	153.8	18.70	1.71	90.4	20.5

C307

Trial Data

	Cell		Upper		Lower		Time			Results	
	Burette (mL)	Pressure (psi)	Burette (mL)	Pressure (psi)	Burette (mL)	Pressure (psi)	Hours	Minutes	Seconds	Elapsed Time (sec)	Hydraulic Conductivity (cm/sec)
Trial 1 Initial	12.8	8.1	15.5	4.6	4.8	7.5	0	18	58	2152	2.56E-06
Trial 1 Final	12.8	8.1	13.0	4.6	7.3	7.5	0	54	50		
Trial 2 Initial	12.8	8.1	13.0	4.6	7.3	7.5	0	54	50	2563	2.57E-06
Trial 2 Final	12.9	8.1	10.1	4.6	10.2	7.5	1	37	33		
Trial 3 Initial	12.9	8.1	10.1	4.6	10.2	7.5	1	37	33	4472	2.40E-06
Trial 3 Final	13.0	8.1	5.5	4.6	14.7	7.5	2	52	5		
Trial 4 Initial	13.0	8.1	5.5	4.6	14.7	7.5	2	52	5	4623	2.28E-06
Trial 4 Final	13.1	8.1	1.3	4.6	19.0	7.5	4	9	8		

Hydraulic Conductivity (cm/sec): 2.45E-06
Hydraulic Conductivity (cm/sec) at 20°C: 2.39E-06

SEVERN TRENT STL

SAMPLE HANDLING

STL BURLINGTON
SAMPLE RECEIPT & LOG IN CHECKLIST

Client: ENVST3	Date Received: 7/25/05	Log In Date: 07-26-05
ETR: 108587	Time Received: 0930	By: Angela Patmon
SDG: 108587	Received By: AP	Signature: Angela Patmon
Project: 25000	# Coolers Received: 1	PM Signature: Lori Arnold
Samples Delivered By: ☐ Shipping Service ☐ Courier ☐ Hand ☐ Other (specify)		Date: 7/26/05
List Air bill Number(s) or Attach a photocopy of the Air Bill: FedEx – 792981276384		

COOLER SCREEN	YES	NO	NA	COMMENTS
Cooler screened with geiger counter and radioactivity is < 0.05 mr/hr	X			
There is ***no*** evidence to indicate tampering	X			
Custody seals are present and intact	X			
Custody seal numbers are present	X			
If yes, list custody seal numbers: 618701				

Thermal Preservation Type: ☐ Wet Ice ☐ Blue Ice ☒ None ☐ Other (specify)

IR Gun ID: 25 Correction Factor (CF) = -1.0 °C

Cooler 1:	2.4 °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 samples which should be at ambient temperature and tissue samples which may be frozen.

Some client programs require thermal preservation criteria of 2-4°C. 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			
• Identification of the Sampler	X			
• Preservation Type		X		
• Requested Tests Method(s)	X			
• Necessary Signatures	X			

SAMPLE INTEGRITY / USABILITY	YES	NO	NA	COMMENTS
The sample container matches the COC	X			
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				

ANOMALY / NCR SUMMARY

125mL jar labelled "TAP WATER" was received in cooler and was discarded at time of LogIn.