

CEC FIELD DATA SHEET

CEC 041-937: Bates Fork Aquatic Life Use & Antidegradation Special Protection Attainment Determination

COLLECTION DATE(S): 08.03.05 COLLECTOR(S): Fentorini & Schwabenbauer

WEATHER CONDITIONS: Sunny, Hot (~95°F), & Humid

SW-01:

low
1 gpm,
live fish

SW-01	Bates Fork 1 st -Order Stream Segment	SW-04	1 st -Order Unnamed Tributary to Sugarcamp Run
Water Temperature (°C)	19.6°C	Water Temperature (°C)	20.5°C
Dissolved Oxygen (mg/L)	1.7 mg/L	Dissolved Oxygen (mg/L)	2.5 mg/L
pH (Standard Units)	6.89	pH (Standard Units)	7.30
Conductivity (µS/cm)	394 µS/cm	Conductivity (µS/cm)	371 µS/cm
Collection Time/Date	0745	Collection Time/Date	1430

SW-04:
Flow
< 1 gpm

SW-02:

No Flow,
isolated
pools,
creek
chubs,
live frogs

SW-02	Bates Fork 2 nd -Order Stream Segment	SW-05	Indian Camp Run 2 nd -Order Stream Segment
Water Temperature (°C)	19.9°C	Water Temperature (°C)	22.2°C
Dissolved Oxygen (mg/L)	0.9 mg/L	Dissolved Oxygen (mg/L)	6.5 mg/L
pH (Standard Units)	6.59	pH (Standard Units)	7.75
Conductivity (µS/cm)	274 µS/cm	Conductivity (µS/cm)	271 µS/cm
Collection Time/Date	0825	Collection Time	1345

SW-03:

No Flow,
isolated
pools,
live
creek
chubs

SW-03	Bates Fork 3 rd -Order Stream Segment	SW-06	Sugarcamp Run 3 rd -Order Stream Segment
Water Temperature (°C)	21.4°C	Water Temperature (°C)	25.5°C
Dissolved Oxygen (mg/L)	0.9 mg/L	Dissolved Oxygen (mg/L)	8.3 mg/L
pH (Standard Units)	6.72	pH (Standard Units)	7.86
Conductivity (µS/cm)	314 µS/cm	Conductivity (µS/cm)	436 µS/cm
Collection Time/Date	0915	Collection Time/Date	1410

SW-07:

Method
Blank 0930
(Filtering Apparatus)

SW-07	Brashears Run 1 st -Order Stream Segment
Water Temperature (°C)	20.9°C
Dissolved Oxygen (mg/L)	2.6 mg/L
pH (Standard Units)	7.38
Conductivity (µS/cm)	450 µS/cm
Collection Time/Date	1450

No Flow,
Isolated
pools,
live
creek
chubs

CEC FIELD DATA SHEET

CEC 042-375: Grinnage Run & Fletcher Run Aquatic Life Use & Antidegradation Special Protection Attainment Determinations

COLLECTION DATE: 08.03.05 COLLECTOR(S): Fentorini & Schwabenbauer

WEATHER CONDITIONS: Sunny, Hot ($\approx 95^{\circ}\text{F}$), & Humid

SW-08	Grinnage Run 1 st -Order <u>Upstream</u> Segment	SW-10	Fletcher Run 1 st -Order <u>Upstream</u> Segment
Water Temperature (°C)	21.6°C	Water Temperature (°C)	25.0°C
Dissolved Oxygen (mg/L)	5.0 mg/L	Dissolved Oxygen (mg/L)	9.0 mg/L
pH (Standard Units)	7.94	pH (Standard Units)	8.02
Conductivity (µS/cm)	303 µS/cm	Conductivity (µS/cm)	3,690 µS/cm
Collection Time	1220	Collection Time	1115
SW-09	Grinnage Run 1 st -Order <u>Downstream</u> Segment	SW-11	Fletcher Run 1 st -Order <u>Downstream</u> Segment
Water Temperature (°C)	25.8°C	Water Temperature (°C)	22.1°C
Dissolved Oxygen (mg/L)	5.6 mg/L	Dissolved Oxygen (mg/L)	10.5 mg/L
pH (Standard Units)	8.24	pH (Standard Units)	7.52
Conductivity (µS/cm)	526 µS/cm	Conductivity (µS/cm)	2,385 µS/cm
Collection Time	1155	Collection Time	1050

Chain of Custody Record
Client Code: 1361

Chain of Custody Number: 229447
Date: 08.03.05
Page: 1 of 1

Project Manager: Ventorini
Telephone Number (Area Code)/Fax Number: (412) 429-2324 / (412) 429-2114
Address: 333 Baldwin Road
City: Pittsburgh
State: PA
Zip Code: 15205-9702

Site Contact: Ventorini
Carrier/Vehicle Number: Drop-off samples
Containers & Preservatives: HCl, HNO3, H2SO4, Unpres., Soil, Sed., Aqueous, Matrix

Project Name and Location (State): Bates Fork & Grinnage Run (PA)
Contract/Purchase Order/Quote No.: 62370 & 61533

Sample I.D. No. and Description	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Special Instructions/ Conditions of Receipt
Bates Fork SW-01	08.03.05	0745	✓	✓	✓	✓	1112						Quote # 61533
Bates Fork SW-02	08.03.05	0825	✓	✓	✓	1112							Quote # 61533
Bates Fork SW-03	08.03.05	0915	✓	✓	✓	1112							Quote # 61533
Grinnage Run SW-04	08.03.05	1430	✓	✓	✓	222							Quote # 62370
Bates Fork SW-05	08.03.05	1345	✓	✓	✓	1112							Quote # 61533
Bates Fork SW-06	08.03.05	1410	✓	✓	✓	1112							Quote # 61533
Grinnage Run SW-07	08.03.05	1450	✓	✓	✓	222							Quote # 62370
Grinnage Run SW-08	08.03.05	1220	✓	✓	✓	222							Quote # 62370
Grinnage Run SW-09	08.03.05	1155	✓	✓	✓	222							Quote # 62370
Grinnage Run SW-10	08.03.05	1115	✓	✓	✓	222							Quote # 62370
Grinnage Run SW-11	08.03.05	1050	✓	✓	✓	222							Quote # 62370
Bates Fork - Method Blank	08.03.05	0930	✓	✓	✓	1							Quote # 61533

Analysis (Attach list if more than 1 page is needed): Total Metals, Dissolved Metals, Nitrate, Chloride, Ammonia, Total Alkalinity, Total Phosphorus, Fecal Coliforms

Analysis (Attach list if more than 1 page is needed): Total Metals, Dissolved Metals, Nitrate, Chloride, Ammonia, Total Alkalinity, Total Phosphorus, Fecal Coliforms

Analysis (Attach list if more than 1 page is needed): Total Metals, Dissolved Metals, Nitrate, Chloride, Ammonia, Total Alkalinity, Total Phosphorus, Fecal Coliforms

Analysis (Attach list if more than 1 page is needed): Total Metals, Dissolved Metals, Nitrate, Chloride, Ammonia, Total Alkalinity, Total Phosphorus, Fecal Coliforms

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Analysis (Attach list if more than 1 page is needed): Total Metals, Dissolved Metals, Nitrate, Chloride, Ammonia, Total Alkalinity, Total Phosphorus, Fecal Coliforms

Sample Disposal: Return To Client Unknown Poison B Skin Irritant Flammable Non-Hazard

Disposal By Lab: Archive For: _____ Months

Turn Around Time Required: 24 Hours 48 Hours 7 Days 14 Days 21 Days Other

OC Requirements (Specify)	Received By	Date	Time
1. Relinquished By	[Signature]	08.03.05	1710
2. Relinquished By			
3. Relinquished By			

Comments: [Blank]

SEVERN
TRENT

STL®

STL Pittsburgh
301 Alpha Drive
Pittsburgh, PA 15238

Tel: 412 963 7058 Fax: 412 963 2468
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. CEC GRINNAGE

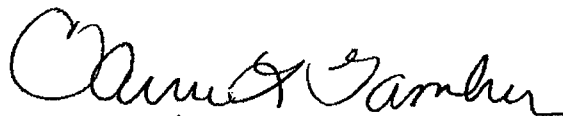
CEC Grinnage Run

Lot #: CSH030371

Bob Ventorini

Civil & Environmental Consulta

SEVERN TRENT LABORATORIES, INC.



Carrie L. Gamber
Project Manager

August 31, 2005

NELAC REPORTING:

The format and content of the attached report meets NELAC standards and guidelines except as noted in the narrative. The table below presents a summary of the certifications held by STL Pittsburgh. Our primary accreditation authority for the Non-potable water and Solid & Hazardous waste programs is Pennsylvania DEP. A more detailed parameter list is available upon request. Please ask your project manager for this information when required.

Certifying State Program	Certificate #	Program Types	STL Pittsburgh
NFESC	NA	NAVY	X
USACE	NA	Corps of Engineers	X
US Dept of Agriculture	(#S-46425)	Foreign Soil Import Permit	X
Arkansas	(#03-022-1)	WW	X
		HW	X
California - nelac	04224CA	WW	X
		HW	X
Connecticut	(#PH-0688)	WW	X
		HW	X
Florida - nelac	(#E87660)	WW	X
		HW	X
Illinois - nelac	(#200005)	WW	X
		HW	X
Kansas - nelac	(#E-10350)	WW	X
		HW	X
Louisiana - nelac	(#93200)	WW	X
		HW	X
New Hampshire - nelac	(#203002)	WW	X
		-	-
New Jersey - nelac	(PA-005)	WW	X
		HW	X
New York - nelac	(#11182)	WW	X
		HW	X
North Carolina	(#434)	WW	X
		HW	X
North Dakota	R-075	WW	X
		HW	X
Ohio Vap	(#CL0083)	WW	X
		HW	X
Pennsylvania - nelac	(#02-00416)	WW	X
		HW	X
South Carolina	(#09014001)	WW	X
		HW	X
Utah - nelac	(STLP)	WW	X
		HW	X
West Virginia	(#142)	WW	X
		HW	X
Wisconsin	998027800	WW	X
		HW	X

The codes utilized for program types are described below:

- HW Hazardous Waste certification
- WW Non-potable Water and/or Wastewater certification
- X Laboratory has some form of certification under the specific program. Many states certify laboratories for specific parameters or tests within a category. The information in the table indicates the lab is certified in a general category of testing. Please contact the laboratory if parameter specific certification information is required.

CASE NARRATIVE
Civil & Environmental Consultants
Grinnage Run

Lot #: C5H030371

Sample Receiving:

STL Pittsburgh received samples on August 3, 2005. The coolers were received within the proper temperature range.

If project specific QC was not required for samples contained in this report, when batch QC was completed on these samples, anomalous results will be discussed below.

Metals:

The method blanks had analytes detected at concentrations between the MDL and the reporting limit. The results were flagged with a "B" qualifier. Any sample associated with a method blank that had the same analyte detected had the result flagged with a "J" qualifier.

General Chemistry:

STL North Canton, Ohio analyzed the total phosphorus analysis. All data is included in the package.

Sampled GRINNAGE RUN SW-10 and GRINNAGE RUN SW-11 were analyzed at a dilution for chloride.

Sample GRINNAGE RUN SW-10 was analyzed at a dilution for total dissolved solids.

The method blanks had analytes detected at concentrations between the MDL and the reporting limit. The results were flagged with a "B" qualifier. Any sample associated with a method blank that had the same analyte detected had the result flagged with a "J" qualifier.

The matrix spike and matrix spike duplicate recovered outside of the control limits for ammonia.

The nitrate analyses were performed several hours outside the 48 hour holding time.

Microseeps in Pittsburgh, PA performed the fecal coliform analysis. Their report is included in the summary package.

METHODS SUMMARY

C5H030371

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
pH (Electrometric)	MCAWW 150.1	MCAWW 150.1
Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
ICP-MS (6020)	SW846 6020	SW846 3005A
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Total phosphorus	MCAWW 365.2	MCAWW 365.2
Trace Inductively Coupled Plasma (ICP) Metals	MCAWW 200.7	MCAWW 200.7

References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

C5H030371

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
HGV9D	001	GRINNAGE RUN SW-04	08/03/05	14:30
HGV9F	002	GRINNAGE RUN SW-07	08/03/05	14:50
HGV9G	003	GRINNAGE RUN SW-08	08/03/05	12:20
HGV9J	004	GRINNAGE RUN SW-09	08/03/05	11:55
HGV9K	005	GRINNAGE RUN SW-10	08/03/05	11:15
HGV9L	006	GRINNAGE RUN SW-11	08/03/05	10:50

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

**Chain
Custody Record**

Client: *CEC, Inc.*
Client Code: *1361*

STL-4124 (0901)	Project Manager <i>Featonini</i>	Date <i>08.03.05</i>	Chain of Custody Number <i>229447</i>
Address <i>333 Baldwin Road</i>	Telephone Number (Area Code)/Fax Number <i>(412) 429-2324</i>	Lab Number <i>(412) 429-2114</i>	Page <i>1</i> of <i>1</i>
City <i>Pittsburgh</i>	State <i>PA</i>	Zip Code <i>15205-9702</i>	Special Instructions/ Conditions of Receipt
Project Name and Location (State) <i>Bates Fork & Grinnage Run (PA)</i>	Lab Contact <i>Featonini</i>	Carrier/Waybill Number <i>Drop-Off Samples</i>	
Contract/Purchase Order/Quot. No. <i>Quote # 62370 & 61533</i>	Matrix	Containers & Preservatives	
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Matrix	Containers & Preservatives	
<i>Bates Fork SW-01</i>	<i>✓</i>	<i>1112</i>	<i>Quote # 61533</i>
<i>Bates Fork SW-02</i>	<i>✓</i>	<i>1112</i>	<i>Quote # 61533</i>
<i>Bates Fork SW-03</i>	<i>✓</i>	<i>1112</i>	<i>Quote # 61533</i>
<i>Grinnage Run SW-04</i>	<i>✓</i>	<i>2222</i>	<i>Quote # 62370</i>
<i>Bates Fork SW-05</i>	<i>✓</i>	<i>1112</i>	<i>Quote # 61533</i>
<i>Bates Fork SW-06</i>	<i>✓</i>	<i>1112</i>	<i>Quote # 61533</i>
<i>Grinnage Run SW-07</i>	<i>✓</i>	<i>2222</i>	<i>Quote # 62370</i>
<i>Grinnage Run SW-08</i>	<i>✓</i>	<i>2222</i>	<i>Quote # 62370</i>
<i>Grinnage Run SW-09</i>	<i>✓</i>	<i>2222</i>	<i>Quote # 62370</i>
<i>Grinnage Run SW-10</i>	<i>✓</i>	<i>2222</i>	<i>Quote # 62370</i>
<i>Bates Fork - Method Blank</i>	<i>✓</i>	<i>1</i>	<i>Quote # 61533</i>

(A fee may be assessed if samples are retained longer than 1 month)

Disposal By Lab Archive For _____ Months Return To Client Unknown Poison B Flammable Non-Hazard Skin Irritant Sample Disposal

QC Requirements (Specify)

1. Relinquished By <i>Robert Featonini</i>	Date <i>08.03.05</i>	Time <i>17:10</i>	1. Received By <i>JK</i>	Date <i>8-3-05</i>	Time <i>5:50</i>
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Slays with the Sample; PINK - Field Copy

Cooler Receipt Form
STL Pittsburgh

Client: CEC Project: _____ Quote: 41333/42370
 Cooler Rec'd & Opened for Temp. Check on: 08-03-05
 Coolers Opened and Unpacked on: 08-03-05 By: J. R. H.
 (Signature)
 STL Pittsburgh Lot Number: CSH030371

- | | Yes | No |
|---|-------|-------|
| 1. Were custody seals on the outside of the cooler? _____
If YES, how many and where? Quantity ___ Location _____
Were signatures and date correct? _____ | _____ | ✓ |
| 2. Were custody papers included inside the cooler? _____ | ✓ | _____ |
| 3. Were custody papers properly filled out (ink, signed, match labels)? _____ | ✓ | _____ |
| 4. Did you sign the custody papers in the appropriate place? _____ | ✓ | _____ |
| 5. Was shippers packing slip attached to this form? _____ | NA | _____ |
| 6. Were packing materials used? _____
If YES, what type? _____ | NA | ✓ |
| 7. Were the samples chilled? (Record temperatures on reverse side.) _____ | ✓ | _____ |
| 8. Were the samples appropriately preserved? _____ | ✓ | _____ |
| 9. Were all bottles sealed in separate plastic bags? _____ | _____ | ✓ |
| 10. Did all bottles arrive in good condition (unbroken)? _____ | ✓ | _____ |
| 11. Were all bottle labels complete (sample ID, preservatives, etc.)? _____ | ✓ | _____ |
| 12. Did all bottle labels and/or tags agree with custody papers? _____ | ✓ | _____ |
| 13. Were correct bottles used for tests indicated? _____ | ✓ | _____ |
| 14. Were all VOA vials checked for the presence of air bubbles? _____ | NA | _____ |
| 15. Was a sufficient amount of sample sent in each bottle? _____ | ✓ | _____ |
| 16. Samples received by: FEDEX UPS <u>CLIENT DROP-OFF</u> OTHER DHL | | |

Explain any discrepancies: _____

Level 2 Review _____
 contacted on _____ by _____ to resolve discrepancies.

Cooler Receipt Form

STL Pittsburgh

P: Preserved
UP: Unpreserved

Sample ID	TMET PH<	DMET PH<	HG PH<	NUT(1) PH<	CN PH≥12	OG TPHC PH<	PHEN PH<	SULF PH≥12	TQC PH<	TOX PH<	VOA PUP	hardness PH<	Cl ₂ RES		
1	LL	LL		LL											
2	↓	↓		↓											
3															
5															
6	↓	↓		↓											
1B															
4	LL	LL		LL											
7	↓	↓		↓											
8															
9	↓	↓		↓											
10															
11	↓	↓		↓											

(1) "NUT" could include sample bottles for ammonia, chemical oxygen demand, nitrate/nitrite, TKN, or total phosphorus

Comments: _____

Cooler Number	Temperature*	Thermometer
1	2.9	3
2	3.0	3
3	2.7	3

Sample	Lot Number**

*Acceptable Temperature Range: 4°C ± 2°C

**Please use an asterisk if bottle lot number was covered by the label

C5H030371

C215

INTER-COMPANY LOG

COMMENTS:

Object Manager: Carie L. Gamber
 Project: CEC GRINNAGE CEC Grinnage Run
 Report Type: C1 CLP - CD only
 Client: 1361 - Civil & Environmental Consultants Inc

Date Received: 2005-08-03
 Analytical Due Date: 2005-08-22
 Report Due Date: 2005-08-23

TB
8/5/05

WORK LOCATION: 01 STL North Canton

Amo 8/8/05

SMP#: 1 CLIENT ID: GRINNAGE RUN SW-04 DATE SAMPLED: 20050803 MATRIX: I WATER
SAMPLE COMMENTS:

1x500
METHOD: CQ MCAWW 365.2 Phosphorus, All Forms (365.2, Colorimetric)
EXTRACTION: 21 DIGESTION, NON-METAL/INORGANICS QC TYPE: 01 STANDARD TEST SET
WORKORDER HGV9D1AV METAL: XX

SMP#: 2 CLIENT ID: GRINNAGE RUN SW-07 DATE SAMPLED: 20050803 MATRIX: I WATER
SAMPLE COMMENTS:

METHOD: CQ MCAWW 365.2 Phosphorus, All Forms (365.2, Colorimetric)
EXTRACTION: 21 DIGESTION, NON-METAL/INORGANICS QC TYPE: 01 STANDARD TEST SET
WORKORDER HGV9F1AV METAL: XX

SMP#: 3 CLIENT ID: GRINNAGE RUN SW-08 DATE SAMPLED: 20050803 MATRIX: I WATER
SAMPLE COMMENTS:

METHOD: CQ MCAWW 365.2 Phosphorus, All Forms (365.2, Colorimetric)
EXTRACTION: 21 DIGESTION, NON-METAL/INORGANICS QC TYPE: 01 STANDARD TEST SET
WORKORDER HGV9G1AV METAL: XX

SMP#: 4 CLIENT ID: GRINNAGE RUN SW-09 DATE SAMPLED: 20050803 MATRIX: I WATER
SAMPLE COMMENTS:

METHOD: CQ MCAWW 365.2 Phosphorus, All Forms (365.2, Colorimetric)
EXTRACTION: 21 DIGESTION, NON-METAL/INORGANICS QC TYPE: 01 STANDARD TEST SET
WORKORDER HGV9J1AV METAL: XX

SMP#: 5 CLIENT ID: GRINNAGE RUN SW-10 DATE SAMPLED: 20050803 MATRIX: I WATER
SAMPLE COMMENTS:

METHOD: CQ MCAWW 365.2 Phosphorus, All Forms (365.2, Colorimetric)
EXTRACTION: 21 DIGESTION, NON-METAL/INORGANICS QC TYPE: 01 STANDARD TEST SET
WORKORDER HGV9K1AV METAL: XX

SMP#: 6 CLIENT ID: GRINNAGE RUN SW-11 DATE SAMPLED: 20050803 MATRIX: I WATER
SAMPLE COMMENTS:

METHOD: CQ MCAWW 365.2 Phosphorus, All Forms (365.2, Colorimetric)
EXTRACTION: 21 DIGESTION, NON-METAL/INORGANICS QC TYPE: 01 STANDARD TEST SET
WORKORDER HGV9L1AV METAL: XX

C5H030371

INTER-COMPANY LOG

COMMENTS:

Project Manager: Carrie L. Gamber
Project: CEC GRINNAGE CEC Grinnage Run
Report Type: C1 CLP - CD only
Client: 1361 - Civil & Environmental Consultants Inc

Date Received: 2005-08-03
Analytical Due Date: 2005-08-22
Report Due Date: 2005-08-23

The sample(s) listed on this form are being sent to your location for the specified analysis. If you have any questions, please contact the Project Manager listed above. PLEASE RETURN THE ORIGINAL SIGNED FORM WITH THE REPORT AT THE COMPLETION OF ANALYSIS.

Thank You

STL- Pittsburgh
Sample Receiving

RELINQUISHED BY: Theresa Gray DATE: 8-4-05
RECEIVED FOR LAB BY: Keith R. Miller DATE: 8-5-05 7:30

STL Cooler Receipt Form/Narrative

Lot Number: CSH030371

North Canton Facility

Client: STL Pittsburgh
Cooler Received on: 8-5-05

Project: _____
Opened on: 8-5-05

Quote#: _____
by: Heath R. Miller
(Signature)

Fedx Client Drop Off UPS DHL FAS Other: U.S. Cargo

STL Cooler No# _____ Foam Box Client Cooler Other _____

1. Were custody seals on the outside of the cooler? Yes No Intact? Yes No NA

If YES, Quantity 2

Were the custody seals signed and dated?

Yes No NA

Yes No NA

2. Shipper's packing slip attached to this form?

Relinquished by client? Yes No

3. Did custody papers accompany the samples? Yes No

Yes No

4. Did you sign the custody papers in the appropriate place?

5. Packing material used: Bubble Wrap Foam None

Other: _____

6. Cooler temperature upon receipt 1.4 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial Coolant & Sample Against Bottles IR ICE/H₂O Slurry

COOLANT: Wet Ice Blue Ice Dry Ice Water None

7. Did all bottles arrive in good condition (Unbroken)?

Yes No

8. Could all bottle labels and/or tags be reconciled with the COC?

Yes No

9. Were samples at the correct pH? (record below/on back)

Yes No NA

10. Were correct bottles used for the tests indicated?

Yes No

11. Were air bubbles >6 mm in any VOA vials?

Yes No NA

12. Sufficient quantity received to perform indicated analyses?

Yes No

Contacted PM _____ Date: _____ by: _____ via Voice Mail Verbal Other

Concerning: _____

1. CHAIN OF CUSTODY

The following discrepancies occurred:

2. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). Nitric Acid Lot # 051105-HNO₃; Sulfuric Acid Lot # 102804-H₂SO₄; Sodium Hydroxide Lot # -041305 -NaOH; Hydrochloric Acid Lot # 100304-HCl; Sodium Hydroxide and Zinc Acetate Lot # 071604-CH₃COO₂ZN/NaOH

Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

<u>ClientID</u>	<u>pH</u>	<u>Date</u>	<u>Initials</u>

<u>Cooler</u>	<u>Temp</u>	<u>Method</u>	<u>Coolant</u>

Discrepancies Cont.

US* Cargo

Package Delivery... *74g 74gls 74gls*

Supplier: WWW.USCS.COM
Questions: 1-888-USCARGO

Bill of Lading No. **445116**

1 **FROM:**

Print Name (Person)

Your Account Code

Print Name (Person)

Print Name (Person)

Print Name (Person)

Phone Number (Important)

Company Name

Street Address

City

State

Zip

City

State

Zip

Street Address (If P.O. Box deliver)

Overnight by: Select Product (select one)

8:00 A.M.

12 Noon

10:30 A.M.

5:00 P.M.

2nd Day

Same Day

Service Options

Other

Saturday Service PU

Additional Declared Value for this parcel \$

Miscellaneous Options

Bill stopper

Bill Recipient

Bill Third Party

C.O.D.

(Inst. Code Req.)
(Inst. Code Req.)
AMOUNT

X

By signing, Shipper/Agent/Carrier certifies that the contents of the enclosed bill of lading are true and correct.

Date 6

X Amgondura

2/15/05
750

Routing Order

Route #

Route #

Date

Time

Delivery Center

ED #

Route #

Date

Time

Reference # or Comments

Inst. Code

TIS

6184669

Custody Seal

TIS

6184669

TIS

6184669

Custody Seal

TIS

6184669

DATE

8-4-05

SIGNATURE

WV

DATE

8-4-05

SIGNATURE

WV

DATA SUMMARY PACKAGE

METALS SUMMARY

Civil & Environmental Consultants Inc

Client Sample ID: GRINNAGE RUN SW-04

TOTAL Metals

Lot-Sample #...: C5H030371-001

Date Sampled...: 08/03/05

Date Received...: 08/03/05

Matrix.....: WATER

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
		LIMIT	UNITS				
Prep Batch #...: 5217163							
Aluminum	30.9 B	200	ug/L		MCAWW 200.7	08/05-08/11/05	HGV9D1AM
		Dilution Factor: 1			Analysis Time...: 18:10	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP			MS Run #.....: 5217120	MDL.....: 11.4	
Calcium	67400	5000	ug/L		MCAWW 200.7	08/05-08/11/05	HGV9D1AN
		Dilution Factor: 1			Analysis Time...: 18:10	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP			MS Run #.....: 5217120	MDL.....: 14.6	
Iron	26.0 B	100	ug/L		MCAWW 200.7	08/05-08/11/05	HGV9D1AP
		Dilution Factor: 1			Analysis Time...: 18:10	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP			MS Run #.....: 5217120	MDL.....: 16.0	
Magnesium	12500	5000	ug/L		MCAWW 200.7	08/05-08/11/05	HGV9D1AQ
		Dilution Factor: 1			Analysis Time...: 18:10	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP			MS Run #.....: 5217120	MDL.....: 10	

NOTE(S):

Estimated result. Result is less than RL.

Civil & Environmental Consultants Inc

Client Sample ID: GRINNAGE RUN SW-04

DISSOLVED Metals

Lot-Sample #...: CSH030371-001

Matrix.....: WATER

Date Sampled...: 08/03/05

Date Received...: 08/03/05

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5217166						
Aluminum	ND	30.0	ug/L	SW846 6020	08/05-08/18/05	HGV9D1AL
		Dilution Factor: 1		Analysis Time...: 16:08		Analyst ID.....: 400149
		Instrument ID...: ICPMS		MS Run #.....: 5217123		MDL.....: 4.5
Arsenic	1.0	1.0	ug/L	SW846 6020	08/05-08/18/05	HGV9D1AD
		Dilution Factor: 1		Analysis Time...: 16:08		Analyst ID.....: 400149
		Instrument ID...: ICPMS		MS Run #.....: 5217123		MDL.....: 0.12
Cadmium	ND	1.0	ug/L	SW846 6020	08/05-08/18/05	HGV9D1AE
		Dilution Factor: 1		Analysis Time...: 16:08		Analyst ID.....: 400149
		Instrument ID...: ICPMS		MS Run #.....: 5217123		MDL.....: 0.074
Copper	1.2 B	2.0	ug/L	SW846 6020	08/05-08/18/05	HGV9D1AF
		Dilution Factor: 1		Analysis Time...: 16:08		Analyst ID.....: 400149
		Instrument ID...: ICPMS		MS Run #.....: 5217123		MDL.....: 0.11
Chromium	ND	1.0	ug/L	SW846 6020	08/05-08/18/05	HGV9D1AH
		Dilution Factor: 1		Analysis Time...: 16:08		Analyst ID.....: 400149
		Instrument ID...: ICPMS		MS Run #.....: 5217123		MDL.....: 0.20
Lead	0.048 B	1.0	ug/L	SW846 6020	08/05-08/18/05	HGV9D1AG
		Dilution Factor: 1		Analysis Time...: 16:08		Analyst ID.....: 400149
		Instrument ID...: ICPMS		MS Run #.....: 5217123		MDL.....: 0.026
Selenium	ND	5.0	ug/L	SW846 6020	08/05-08/18/05	HGV9D1AK
		Dilution Factor: 1		Analysis Time...: 16:08		Analyst ID.....: 400149
		Instrument ID...: ICPMS		MS Run #.....: 5217123		MDL.....: 0.19
Zinc	10.6 J	5.0	ug/L	SW846 6020	08/05-08/18/05	HGV9D1AJ
		Dilution Factor: 1		Analysis Time...: 16:08		Analyst ID.....: 400149
		Instrument ID...: ICPMS		MS Run #.....: 5217123		MDL.....: 0.75

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Civil & Environmental Consultants Inc

Client Sample ID: GRINNAGE RUN SW-07

TOTAL Metals

Lot-Sample #...: C5H030371-002

Matrix.....: WATER

Date Sampled...: 08/03/05

Date Received...: 08/03/05

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	WORK
		LIMIT	UNITS		ANALYSIS DATE	ORDER #
Prep Batch #...: 5217163						
Aluminum	78.7 B	200	ug/L	MCAWW 200.7	08/05-08/11/05	HGV9F1AM
		Dilution Factor: 1		Analysis Time...: 18:42	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 5217120	MDL.....: 11.4	
Calcium	77600	5000	ug/L	MCAWW 200.7	08/05-08/11/05	HGV9F1AN
		Dilution Factor: 1		Analysis Time...: 18:42	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 5217120	MDL.....: 14.6	
Iron	77.4 B	100	ug/L	MCAWW 200.7	08/05-08/11/05	HGV9F1AP
		Dilution Factor: 1		Analysis Time...: 18:42	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 5217120	MDL.....: 16.0	
Magnesium	11000	5000	ug/L	MCAWW 200.7	08/05-08/11/05	HGV9F1AQ
		Dilution Factor: 1		Analysis Time...: 18:42	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 5217120	MDL.....: 10	

YTE(S):

Estimated result. Result is less than RL.

Civil & Environmental Consultants Inc

Client Sample ID: GRINNAGE RUN SW-07

DISSOLVED Metals

Lot-Sample #...: C5H030371-002

Date Sampled...: 08/03/05

Date Received...: 08/03/05

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5217166						
Aluminum	11.0 B,J	30.0	ug/L	SW846 6020	08/05-08/18/05	HGV9F1AJ
		Dilution Factor: 1		Analysis Time...: 16:13	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 4.5	
Arsenic	0.92 B	1.0	ug/L	SW846 6020	08/05-08/18/05	HGV9F1AD
		Dilution Factor: 1		Analysis Time...: 16:13	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.12	
Cadmium	ND	1.0	ug/L	SW846 6020	08/05-08/18/05	HGV9F1AE
		Dilution Factor: 1		Analysis Time...: 16:13	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.074	
Copper	1.1 B	2.0	ug/L	SW846 6020	08/05-08/18/05	HGV9F1AF
		Dilution Factor: 1		Analysis Time...: 16:13	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.11	
Nickel	0.26 B	1.0	ug/L	SW846 6020	08/05-08/18/05	HGV9F1AH
		Dilution Factor: 1		Analysis Time...: 16:13	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.20	
Lead	ND	1.0	ug/L	SW846 6020	08/05-08/18/05	HGV9F1AG
		Dilution Factor: 1		Analysis Time...: 16:13	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.026	
Selenium	ND	5.0	ug/L	SW846 6020	08/05-08/18/05	HGV9F1AK
		Dilution Factor: 1		Analysis Time...: 16:13	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.19	
Zinc	5.3 J	5.0	ug/L	SW846 6020	08/05-08/18/05	HGV9F1AJ
		Dilution Factor: 1		Analysis Time...: 16:13	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.75	

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Civil & Environmental Consultants Inc

Client Sample ID: GRINNAGE RUN SW-08

TOTAL Metals

Lot-Sample #....: C5H030371-003

Date Sampled....: 08/03/05

Date Received...: 08/03/05

Matrix.....: WATER

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK
		LIMIT	UNITS			ANALYSIS DATE	ORDER #
Prep Batch #....: 5217163							
Aluminum	236	200	ug/L	MCAWW 200.7		08/05-08/11/05	HGV9G1AM
		Dilution Factor: 1		Analysis Time..: 18:48		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 5217120		MDL.....: 11.4	
Calcium	51500	5000	ug/L	MCAWW 200.7		08/05-08/11/05	HGV9G1AM
		Dilution Factor: 1		Analysis Time..: 18:48		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 5217120		MDL.....: 14.6	
Iron	424	100	ug/L	MCAWW 200.7		08/05-08/11/05	HGV9G1AP
		Dilution Factor: 1		Analysis Time..: 18:48		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 5217120		MDL.....: 16.0	
Magnesium	8420	5000	ug/L	MCAWW 200.7		08/05-08/11/05	HGV9G1AQ
		Dilution Factor: 1		Analysis Time..: 18:48		Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 5217120		MDL.....: 10	

Civil & Environmental Consultants Inc

Client Sample ID: GRINNAGE RUN SW-08

DISSOLVED Metals

Lot-Sample #...: C5H030371-003

Matrix.....: WATER

Date Sampled...: 08/03/05

Date Received...: 08/03/05

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5217166						
Aluminum	9.8 B,J	30.0	ug/L	SW846 6020	08/05-08/18/05	HGV9G1AL
		Dilution Factor: 1		Analysis Time...: 16:17	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 4.5	
Arsenic	1.2	1.0	ug/L	SW846 6020	08/05-08/18/05	HGV9G1AD
		Dilution Factor: 1		Analysis Time...: 16:17	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.12	
Cadmium	ND	1.0	ug/L	SW846 6020	08/05-08/18/05	HGV9G1AE
		Dilution Factor: 1		Analysis Time...: 16:17	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.074	
Copper	0.97 B	2.0	ug/L	SW846 6020	08/05-08/18/05	HGV9G1AF
		Dilution Factor: 1		Analysis Time...: 16:17	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.11	
Nickel	1.3	1.0	ug/L	SW846 6020	08/05-08/18/05	HGV9G1AH
		Dilution Factor: 1		Analysis Time...: 16:17	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.20	
Lead	ND	1.0	ug/L	SW846 6020	08/05-08/18/05	HGV9G1AG
		Dilution Factor: 1		Analysis Time...: 16:17	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.026	
Selenium	ND	5.0	ug/L	SW846 6020	08/05-08/18/05	HGV9G1AK
		Dilution Factor: 1		Analysis Time...: 16:17	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.19	
Zinc	4.0 B,J	5.0	ug/L	SW846 6020	08/05-08/18/05	HGV9G1AJ
		Dilution Factor: 1		Analysis Time...: 16:17	Analyst ID.....: 400149	
		Instrument ID...: ICPMS		MS Run #.....: 5217123	MDL.....: 0.75	

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Civil & Environmental Consultants Inc

Client Sample ID: GRINNAGE RUN SW-09

TOTAL Metals

Lot-Sample #....: C5H030371-004

Matrix.....: WATER

Date Sampled...: 08/03/05

Date Received...: 08/03/05

PARAMETER	RESULT	REPORTING			PREPARATION- WORK	
		LIMIT	UNITS	METHOD	ANALYSIS DATE	ORDER #
Prep Batch #....: 5217163						
Aluminum	602	200	ug/L	MCAWW 200.7	08/05-08/11/05	HGV9J1AM
		Dilution Factor: 1		Analysis Time...: 18:53	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 5217120	MDL.....: 11.4	
Calcium	45800	5000	ug/L	MCAWW 200.7	08/05-08/11/05	HGV9J1AN
		Dilution Factor: 1		Analysis Time...: 18:53	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 5217120	MDL.....: 14.6	
Iron	569	100	ug/L	MCAWW 200.7	08/05-08/11/05	HGV9J1AP
		Dilution Factor: 1		Analysis Time...: 18:53	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 5217120	MDL.....: 16.0	
Magnesium	7750	5000	ug/L	MCAWW 200.7	08/05-08/11/05	HGV9J1AQ
		Dilution Factor: 1		Analysis Time...: 18:53	Analyst ID.....: 022952	
		Instrument ID...: TRACEICP		MS Run #.....: 5217120	MDL.....: 10	

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: C5H030371

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: C5H050000-163 Prep Batch #...: 5217163						
Aluminum	ND	200	ug/L	MCAWW 200.7	08/05-08/11/05	HG1601AA
		Dilution Factor: 1				
		Analysis Time...: 17:59		Analyst ID.....: 022952	Instrument ID...: TRA	
Calcium	ND	5000	ug/L	MCAWW 200.7	08/05-08/11/05	HG1601AC
		Dilution Factor: 1				
		Analysis Time...: 17:59		Analyst ID.....: 022952	Instrument ID...: TRA	
Iron	ND	100	ug/L	MCAWW 200.7	08/05-08/11/05	HG1601AD
		Dilution Factor: 1				
		Analysis Time...: 17:59		Analyst ID.....: 022952	Instrument ID...: TRA	
Magnesium	ND	5000	ug/L	MCAWW 200.7	08/05-08/11/05	HG1601AE
		Dilution Factor: 1				
		Analysis Time...: 17:59		Analyst ID.....: 022952	Instrument ID...: TRA	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #....: C5H030371

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: C5H050000-166 Prep Batch #....: 5217166						
Aluminum	17.8 B	30.0	ug/L	SW846 6020	08/05-08/23/05	HG17K1AH
		Dilution Factor: 1				
		Analysis Time...: 15:12 Analyst ID.....: 400149 Instrument ID...: ICP				
Arsenic	ND	1.0	ug/L	SW846 6020	08/05-08/18/05	HG17K1AA
		Dilution Factor: 1				
		Analysis Time...: 15:12 Analyst ID.....: 400149 Instrument ID...: ICP				
Cadmium	ND	1.0	ug/L	SW846 6020	08/05-08/18/05	HG17K1AC
		Dilution Factor: 1				
		Analysis Time...: 15:12 Analyst ID.....: 400149 Instrument ID...: ICP				
Copper	ND	2.0	ug/L	SW846 6020	08/05-08/18/05	HG17K1AD
		Dilution Factor: 1				
		Analysis Time...: 15:12 Analyst ID.....: 400149 Instrument ID...: ICP				
Lead	ND	1.0	ug/L	SW846 6020	08/05-08/18/05	HG17K1AF
		Dilution Factor: 1				
		Analysis Time...: 15:12 Analyst ID.....: 400149 Instrument ID...: ICP				
Nickel	ND	1.0	ug/L	SW846 6020	08/05-08/18/05	HG17K1AE
		Dilution Factor: 1				
		Analysis Time...: 15:12 Analyst ID.....: 400149 Instrument ID...: ICP				
Selenium	ND	5.0	ug/L	SW846 6020	08/05-08/18/05	HG17K1AR
		Dilution Factor: 1				
		Analysis Time...: 15:12 Analyst ID.....: 400149 Instrument ID...: ICP				
Zinc	3.4 B	5.0	ug/L	SW846 6020	08/05-08/18/05	HG17K1AG
		Dilution Factor: 1				
		Analysis Time...: 15:12 Analyst ID.....: 400149 Instrument ID...: ICP				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: C5H030371

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#: C5H050000-163 Prep Batch #...: 5217163					
Aluminum	99	(85 - 115)	MCAWW 200.7	08/05-08/11/05	HG1601AF
			Dilution Factor: 1	Analysis Time...: 18:04	Analyst ID.....: 022952
			Instrument ID...: TRACEICP		
Calcium	101	(85 - 115)	MCAWW 200.7	08/05-08/11/05	HG1601AG
			Dilution Factor: 1	Analysis Time...: 18:04	Analyst ID.....: 022952
			Instrument ID...: TRACEICP		
Iron	87	(85 - 115)	MCAWW 200.7	08/05-08/11/05	HG1601AH
			Dilution Factor: 1	Analysis Time...: 18:04	Analyst ID.....: 022952
			Instrument ID...: TRACEICP		
Magnesium	100	(85 - 115)	MCAWW 200.7	08/05-08/11/05	HG1601AJ
			Dilution Factor: 1	Analysis Time...: 18:04	Analyst ID.....: 022952
			Instrument ID...: TRACEICP		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #....: C5H030371

Matrix.....: WATER

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECVRY</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#: C5H050000-163 Prep Batch #....: 5217163							
Aluminum	2000	1980	ug/L	99	MCAWW 200.7	08/05-08/11/05	HG1601AF
				Dilution Factor: 1	Analysis Time..: 18:04	Analyst ID.....: 022952	
				Instrument ID...: TRACEICP			
Calcium	50000	50400	ug/L	101	MCAWW 200.7	08/05-08/11/05	HG1601AG
				Dilution Factor: 1	Analysis Time..: 18:04	Analyst ID.....: 022952	
				Instrument ID...: TRACEICP			
Iron	1000	865	ug/L	87	MCAWW 200.7	08/05-08/11/05	HG1601AH
				Dilution Factor: 1	Analysis Time..: 18:04	Analyst ID.....: 022952	
				Instrument ID...: TRACEICP			
Magnesium	50000	49800	ug/L	100	MCAWW 200.7	08/05-08/11/05	HG1601AJ
				Dilution Factor: 1	Analysis Time..: 18:04	Analyst ID.....: 022952	
				Instrument ID...: TRACEICP			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: C5H030371

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#: C5H050000-166 Prep Batch #... : 5217166					
Arsenic	92	(80 - 120)	SW846 6020	08/05-08/18/05	HG17K1AJ
			Dilution Factor: 1	Analysis Time...: 15:16	Analyst ID.....: 400149
			Instrument ID...: ICPMS		
Cadmium	101	(80 - 120)	SW846 6020	08/05-08/18/05	HG17K1AK
			Dilution Factor: 1	Analysis Time...: 15:16	Analyst ID.....: 400149
			Instrument ID...: ICPMS		
Copper	97	(80 - 120)	SW846 6020	08/05-08/18/05	HG17K1AL
			Dilution Factor: 1	Analysis Time...: 15:16	Analyst ID.....: 400149
			Instrument ID...: ICPMS		
Nickel	96	(80 - 120)	SW846 6020	08/05-08/18/05	HG17K1AM
			Dilution Factor: 1	Analysis Time...: 15:16	Analyst ID.....: 400149
			Instrument ID...: ICPMS		
Lead	104	(80 - 120)	SW846 6020	08/05-08/18/05	HG17K1AN
			Dilution Factor: 1	Analysis Time...: 15:16	Analyst ID.....: 400149
			Instrument ID...: ICPMS		
Zinc	92	(80 - 120)	SW846 6020	08/05-08/18/05	HG17K1AP
			Dilution Factor: 1	Analysis Time...: 15:16	Analyst ID.....: 400149
			Instrument ID...: ICPMS		
Aluminum	95	(80 - 120)	SW846 6020	08/05-08/18/05	HG17K1AQ
			Dilution Factor: 1	Analysis Time...: 15:16	Analyst ID.....: 400149
			Instrument ID...: ICPMS		
Selenium	91	(80 - 120)	SW846 6020	08/05-08/18/05	HG17K1AT
			Dilution Factor: 1	Analysis Time...: 15:16	Analyst ID.....: 400149
			Instrument ID...: ICPMS		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: C5H030371

Matrix.....: WATER

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECVRY</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
ICS Lot-Sample#: C5H050000-166 Prep Batch #...: 5217166							
Arsenic	40.0	36.8	ug/L	92	SW846 6020	08/05-08/18/05	HG17K1AJ
				Dilution Factor: 1	Analysis Time..: 15:16	Analyst ID.....: 400149	
				Instrument ID...: ICPMS			
Cadmium	50.0	50.6	ug/L	101	SW846 6020	08/05-08/18/05	HG17K1AK
				Dilution Factor: 1	Analysis Time..: 15:16	Analyst ID.....: 400149	
				Instrument ID...: ICPMS			
Copper	250	242	ug/L	97	SW846 6020	08/05-08/18/05	HG17K1AL
				Dilution Factor: 1	Analysis Time..: 15:16	Analyst ID.....: 400149	
				Instrument ID...: ICPMS			
Nickel	500	480	ug/L	96	SW846 6020	08/05-08/18/05	HG17K1AM
				Dilution Factor: 1	Analysis Time..: 15:16	Analyst ID.....: 400149	
				Instrument ID...: ICPMS			
Lead	20.0	20.9	ug/L	104	SW846 6020	08/05-08/18/05	HG17K1AN
				Dilution Factor: 1	Analysis Time..: 15:16	Analyst ID.....: 400149	
				Instrument ID...: ICPMS			
Zinc	500	461	ug/L	92	SW846 6020	08/05-08/18/05	HG17K1AP
				Dilution Factor: 1	Analysis Time..: 15:16	Analyst ID.....: 400149	
				Instrument ID...: ICPMS			
Aluminum	2000	1910	ug/L	95	SW846 6020	08/05-08/18/05	HG17K1AQ
				Dilution Factor: 1	Analysis Time..: 15:16	Analyst ID.....: 400149	
				Instrument ID...: ICPMS			
Selenium	10.0	9.13	ug/L	91	SW846 6020	08/05-08/18/05	HG17K1AT
				Dilution Factor: 1	Analysis Time..: 15:16	Analyst ID.....: 400149	
				Instrument ID...: ICPMS			

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: C5H030371

Matrix.....: WATER

Date Sampled...: 08/03/05

Date Received...: 08/03/05

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
MS Lot-Sample #: C5H030371-001 Prep Batch #...: 5217163							
Aluminum	105	(70 - 130)			MCAWW 200.7	08/05-08/11/05	HGV9D1A1
	107	(70 - 130)	1.8	(0-20)	MCAWW 200.7	08/05-08/11/05	HGV9D1A2
	Dilution Factor: 1						
	Analysis Time...: 18:20 Instrument ID...: TRACEICP Analyst ID.....: 022952						
	MS Run #.....: 5217120						
Calcium	98	(70 - 130)			MCAWW 200.7	08/05-08/11/05	HGV9D1A3
	95	(70 - 130)	1.1	(0-20)	MCAWW 200.7	08/05-08/11/05	HGV9D1A4
	Dilution Factor: 1						
	Analysis Time...: 18:20 Instrument ID...: TRACEICP Analyst ID.....: 022952						
	MS Run #.....: 5217120						
Iron	92	(70 - 130)			MCAWW 200.7	08/05-08/11/05	HGV9D1A5
	96	(70 - 130)	3.6	(0-20)	MCAWW 200.7	08/05-08/11/05	HGV9D1A6
	Dilution Factor: 1						
	Analysis Time...: 18:20 Instrument ID...: TRACEICP Analyst ID.....: 022952						
	MS Run #.....: 5217120						
Magnesium	99	(70 - 130)			MCAWW 200.7	08/05-08/11/05	HGV9D1A7
	98	(70 - 130)	0.34	(0-20)	MCAWW 200.7	08/05-08/11/05	HGV9D1A8
	Dilution Factor: 1						
	Analysis Time...: 18:20 Instrument ID...: TRACEICP Analyst ID.....: 022952						
	MS Run #.....: 5217120						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: C5H030371
 Date Sampled...: 08/03/05

Date Received...: 08/03/05

Matrix.....: WATER

PARAMETER	AMOUNT	SAMPLE SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
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MS Lot-Sample #: C5H030371-001 Prep Batch #...: 5217163

Aluminum

30.9	2000	2120	ug/L	105			MCAWW 200.7	08/05-08/11/05	HGV9D1A1
30.9	2000	2160	ug/L	107	1.8		MCAWW 200.7	08/05-08/11/05	HGV9D1A2

Dilution Factor: 1

Analysis Time...: 18:20

Instrument ID...: TRACEICP Analyst ID.....: 022952

MS Run #.....: 5217120

Calcium

67400	50000	116000	ug/L	98			MCAWW 200.7	08/05-08/11/05	HGV9D1A3
67400	50000	115000	ug/L	95	1.1		MCAWW 200.7	08/05-08/11/05	HGV9D1A4

Dilution Factor: 1

Analysis Time...: 18:20

Instrument ID...: TRACEICP Analyst ID.....: 022952

MS Run #.....: 5217120

Iron

26.0	1000	950	ug/L	92			MCAWW 200.7	08/05-08/11/05	HGV9D1A5
26.0	1000	984	ug/L	96	3.6		MCAWW 200.7	08/05-08/11/05	HGV9D1A6

Dilution Factor: 1

Analysis Time...: 18:20

Instrument ID...: TRACEICP Analyst ID.....: 022952

MS Run #.....: 5217120

Magnesium

12500	50000	61900	ug/L	99			MCAWW 200.7	08/05-08/11/05	HGV9D1A7
12500	50000	61700	ug/L	98	0.34		MCAWW 200.7	08/05-08/11/05	HGV9D1A8

Dilution Factor: 1

Analysis Time...: 18:20

Instrument ID...: TRACEICP Analyst ID.....: 022952

MS Run #.....: 5217120

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: C5H030371

Matrix.....: WATER

Date Sampled...: 08/03/05

Date Received...: 08/03/05

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: C5H030368-001 Prep Batch #...: 5217166							
Aluminum	95	(75 - 125)			SW846 6020	08/05-08/18/05	HGV8V1A6
	95	(75 - 125)	0.15	(0-20)	SW846 6020	08/05-08/18/05	HGV8V1A7
			Dilution Factor: 1				
			Analysis Time...: 15:29		Instrument ID...: ICPMS	Analyst ID.....: 400149	
			MS Run #.....: 5217123				
Arsenic	83	(75 - 125)			SW846 6020	08/05-08/18/05	HGV8V1AR
	82	(75 - 125)	1.4	(0-20)	SW846 6020	08/05-08/18/05	HGV8V1AT
			Dilution Factor: 1				
			Analysis Time...: 15:29		Instrument ID...: ICPMS	Analyst ID.....: 400149	
			MS Run #.....: 5217123				
Cadmium	97	(75 - 125)			SW846 6020	08/05-08/18/05	HGV8V1AU
	96	(75 - 125)	0.85	(0-20)	SW846 6020	08/05-08/18/05	HGV8V1AV
			Dilution Factor: 1				
			Analysis Time...: 15:29		Instrument ID...: ICPMS	Analyst ID.....: 400149	
			MS Run #.....: 5217123				
Copper	95	(75 - 125)			SW846 6020	08/05-08/18/05	HGV8V1AW
	95	(75 - 125)	0.37	(0-20)	SW846 6020	08/05-08/18/05	HGV8V1AX
			Dilution Factor: 1				
			Analysis Time...: 15:29		Instrument ID...: ICPMS	Analyst ID.....: 400149	
			MS Run #.....: 5217123				
Lead	107	(75 - 125)			SW846 6020	08/05-08/18/05	HGV8V1A2
	106	(75 - 125)	0.84	(0-20)	SW846 6020	08/05-08/18/05	HGV8V1A3
			Dilution Factor: 1				
			Analysis Time...: 15:29		Instrument ID...: ICPMS	Analyst ID.....: 400149	
			MS Run #.....: 5217123				
Nickel	95	(75 - 125)			SW846 6020	08/05-08/18/05	HGV8V1A0
	94	(75 - 125)	1.3	(0-20)	SW846 6020	08/05-08/18/05	HGV8V1A1
			Dilution Factor: 1				
			Analysis Time...: 15:29		Instrument ID...: ICPMS	Analyst ID.....: 400149	
			MS Run #.....: 5217123				
Zinc	83	(75 - 125)			SW846 6020	08/05-08/18/05	HGV8V1A4
	82	(75 - 125)	0.68	(0-20)	SW846 6020	08/05-08/18/05	HGV8V1A5
			Dilution Factor: 1				
			Analysis Time...: 15:29		Instrument ID...: ICPMS	Analyst ID.....: 400149	
			MS Run #.....: 5217123				

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #....: C5H030371
 Date Sampled....: 08/03/05

Date Received...: 08/03/05

Matrix.....: WATER

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCENT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
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MS Lot-Sample #: C5H030368-001 Prep Batch #....: 5217166

Aluminum

6.6	2000	1910	ug/L	95			SW846 6020	08/05-08/18/05	HGV8V1A6
6.6	2000	1910	ug/L	95	0.15		SW846 6020	08/05-08/18/05	HGV8V1A7
Dilution Factor: 1									
Analysis Time...: 15:29 Instrument ID...: ICPMS Analyst ID.....: 400149									
MS Run #.....: 5217123									

Arsenic

1.6	40.0	35.0	ug/L	83			SW846 6020	08/05-08/18/05	HGV8V1A8
1.6	40.0	34.5	ug/L	82	1.4		SW846 6020	08/05-08/18/05	HGV8V1A9
Dilution Factor: 1									
Analysis Time...: 15:29 Instrument ID...: ICPMS Analyst ID.....: 400149									
MS Run #.....: 5217123									

Cadmium

ND	50.0	48.4	ug/L	97			SW846 6020	08/05-08/18/05	HGV8V1A0
ND	50.0	48.0	ug/L	96	0.85		SW846 6020	08/05-08/18/05	HGV8V1A1
Dilution Factor: 1									
Analysis Time...: 15:29 Instrument ID...: ICPMS Analyst ID.....: 400149									
MS Run #.....: 5217123									

Copper

0.91	250	238	ug/L	95			SW846 6020	08/05-08/18/05	HGV8V1A2
0.91	250	237	ug/L	95	0.37		SW846 6020	08/05-08/18/05	HGV8V1A3
Dilution Factor: 1									
Analysis Time...: 15:29 Instrument ID...: ICPMS Analyst ID.....: 400149									
MS Run #.....: 5217123									

Lead

ND	20.0	21.3	ug/L	107			SW846 6020	08/05-08/18/05	HGV8V1A4
ND	20.0	21.1	ug/L	106	0.84		SW846 6020	08/05-08/18/05	HGV8V1A5
Dilution Factor: 1									
Analysis Time...: 15:29 Instrument ID...: ICPMS Analyst ID.....: 400149									
MS Run #.....: 5217123									

Nickel

0.46	500	475	ug/L	95			SW846 6020	08/05-08/18/05	HGV8V1A0
0.46	500	469	ug/L	94	1.3		SW846 6020	08/05-08/18/05	HGV8V1A1
Dilution Factor: 1									
Analysis Time...: 15:29 Instrument ID...: ICPMS Analyst ID.....: 400149									
MS Run #.....: 5217123									

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: C5H030371

Matrix.....: WATER

Date Sampled...: 08/03/05

Date Received...: 08/03/05

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Zinc	11.1	500	426	ug/L	83		SW846 6020	08/05-08/18/05	HGV8V1A4
	11.1	500	423	ug/L	82	0.68	SW846 6020	08/05-08/18/05	HGV8V1A5

Dilution Factor: 1

Analysis Time...: 15:29

Instrument ID...: ICPMS

Analyst ID.....: 400149

MS Run #.....: 5217123

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

GENERAL CHEMISTRY SUMMARY

CEC Grinnage Run

Ammonia Nitrogen

Lab Name: STL PITTSBURGH

Method: MCAWW 350.1

Client Name: Civil & Environmental Consultants Inc

Lot Number: C5H030371

Matrix: WATER

Ammonia preparation

Client Sample ID	Sample Number	Workorder	Result	Units	Reporting Limit	Dilution Factor	Prep Date - Analysis Date/Time	QC Batch
GRINNAGE RUN SW-04	C5H030371 001	HGV9D1AC	0.22 J	mg/L	0.10	1	8/22/2005 - 8/22/2005 17:03	5234114
GRINNAGE RUN SW-07	C5H030371 002	HGV9F1AC	0.16 J	mg/L	0.10	1	8/22/2005 - 8/22/2005 17:08	5234114
GRINNAGE RUN SW-08	C5H030371 003	HGV9G1AC	0.12 J	mg/L	0.10	1	8/22/2005 - 8/22/2005 17:10	5234114
GRINNAGE RUN SW-09	C5H030371 004	HGV9J1AC	0.11 J	mg/L	0.10	1	8/22/2005 - 8/22/2005 17:12	5234114
GRINNAGE RUN SW-10	C5H030371 005	HGV9K1AC	0.11 J	mg/L	0.10	1	8/22/2005 - 8/22/2005 17:18	5234114
GRINNAGE RUN SW-11	C5H030371 006	HGV9L1AC	0.10 J	mg/L	0.10	1	8/22/2005 - 8/22/2005 17:20	5234114

Method blank contamination: The associated method blank contains the target analyte at a reportable level

CEC Grinnage Run

pH

Lab Name: STL PITTSBURGH
Client Name: Civil & Environmental Consultants Inc
Matrix: WATER

Method: MCAWW 150.1
Lot Number: C5H030371

pH								
Client Sample ID	Sample Number	Workorder	Result	Units	Reporting Limit	Dilution Factor	Prep Date - Analysis Date/Time	QC Batch
GRINNAGE RUN SW-04	C5H030371 001	HGV9D1AX	8.4	No Units	-	1	8/4/2005 - 8/4/2005 00:00	5216226
GRINNAGE RUN SW-07	C5H030371 002	HGV9F1AX	8.5	No Units	-	1	8/4/2005 - 8/4/2005 00:00	5216226
GRINNAGE RUN SW-08	C5H030371 003	HGV9G1AX	8.7	No Units	-	1	8/4/2005 - 8/4/2005 00:00	5216226
GRINNAGE RUN SW-09	C5H030371 004	HGV9J1AX	8.8	No Units	-	1	8/4/2005 - 8/4/2005 00:00	5216226
GRINNAGE RUN SW-10	C5H030371 005	HGV9K1AX	8.5	No Units	-	1	8/4/2005 - 8/4/2005 00:00	5216226
GRINNAGE RUN SW-11	C5H030371 006	HGV9L1AX	8.4	No Units	-	1	8/4/2005 - 8/4/2005 00:00	5216226

CEC Grinnage Run

Ammonia Nitrogen

Lab Name: STL PITTSBURGH

Method: MCAWW 350.1

Client Name: Civil & Environmental Consultants Inc

Report ID: C5H030371

Matrix: WATER

Date/Time Received: 8/3/2005 5:30:00PM

Client Sample ID	Sample Number	Workorder	Result	Units	Reporting Limit	Prep/ Analysis Date	QC Batch	RPD / Limit (%)
BLK - C5H220000114B	114 MB	HH08C1AA	0.076 B	mg/L	0.10	8/22/2005 - 8/22/2005	5234114	

R Estimated result Result is less than RL.

CEC Grinnage Run

pH

Lab Name: STL PITTSBURGH
Client Name: Civil & Environmental Consultants Inc
Matrix: WATER

Method: MCAWW 150.1
Report ID: C5H030371
Date/Time Received: 8/3/2005 5:30:00PM

Client Sample ID	Sample Number	Workorder	Result	Units	Reporting Limit	Prep/ Analysis Date	QC Batch	RPD / Limit (%)
GRINNAGE RUN SW-04 DU	001 DUP	HGV9D1A0	8.4	No Units	--	8/4/2005 - 8/4/2005	5216226	0.0 / 2.0

CEC Grinnage Run

Ammonia Nitrogen

Lab Name: STL PITTSBURGH

Method: MCAWW 350.1

Client Name: Civil & Environmental Consultants Inc

Lot Number: C5H220000

Matrix: WATER

Date/Time Received: 8/3/2005 5:30:00PM

Client Sample ID	QC Sample Type	Workorder	Recovery (%)	Control Limits (%)	Prep/ Analysis Date	QC Batch	RPD / Limit (%)
CHECK SAMPLE	LCS	HH08C1AC	94	90 - 110	8/22/2005 - 8/22/2005	5234114	
GRINNAGE RUN SW-04	MS	HGV9D1CC	87 N	90 - 110	8/22/2005 - 8/22/2005	5234114	2.1 / 20
GRINNAGE RUN SW-04	MSD	HGV9D1CD	89 N	90 - 110	8/22/2005 - 8/22/2005	5234114	2.1 / 20

N Spiked analyte recovery is outside stated control limits.

CEC Grinnage Run

pH

Lab Name: STL PITTSBURGH

Method: MCAWW 150.1

Client Name: Civil & Environmental Consultants Inc

Lot Number: C5H040000

Matrix: WATER

Date/Time Received: 8/3/2005 5:30:00PM

Client Sample ID	QC Sample Type	Workorder	Recovery (%)	Control Limits (%)	Prep/ Analysis Date	QC Batch	RPD / Limit (%)
CHECK SAMPLE	LCS	HG0QW1AA	100	99 - 101	8/4/2005 - 8/4/2005	5216226	