ATTACHMENT A

MDEQ Procedure for Mercury and Trace Metals Sample Collection

WATER CHEMISTRY MONITORING PROJECT
SAMPLE COLLECTION AND HANDLING PROCEDURES
FOR SELECTED PARAMETERS
REVISED January 2008

Proposed modifications to sampling equipment or procedures must receive prior approval from the appropriate laboratory and the MDEQ Project Manager.

PART I. MERCURY AND TRACE METALS

Modified clean techniques will be employed for collection of all metals samples using either the grab method or the peristaltic pump collection method, as outlined below. See the "Water Chemistry Monitoring Project Equipment and Supplies Checklist" for a list of materials needed:

A. Sample Collection Via Grab Method

1. Designate clean hands/dirty hands for collection procedure;
2. Suit up in Tyvek low particle coveralls and waders;

3. Clean hands wears shoulder-length polyethylene gloves and wrist-length latex gloves;
4. Dirty hands:
   a. wears wrist-length latex gloves;
   b. removes double-bagged sample bottle from storage tub;
   c. records STORET#, sampling location and date on outer bag of sample bottle using permanent marker;
   d. opens outer bag;
5. Clean hands:

   a. reaches into outer bag, removes inner bag, opens it, removes sample bottle, and replaces inner bag;
   b. removes bottle seal, empties HCl into waste acid container, and reseals bottle;
   c. wades into stream and while facing upstream: submerges sealed bottle approximately 2-3 feet below surface, removes seal, partially fills and seals bottle, brings bottle to surface, shakes bottle, removes seal and empties bottle to **rinse**, seals bottle, submerges sealed bottle approximately 2-3 feet below surface, removes seal, fills bottle completely leaving no air space, and reseals bottle by hand very tightly before bringing to surface;
   d. wipes bottle off w/ low particle Kim wipes;
   e. removes inner bag from outer bag, places bottle inside inner bag, seals bag leaving no trapped air, and replaces within outer bag;
6. Dirty hands seals outer bag leaving no trapped air, and stores in ice-filled cooler. Repeat as needed. End clean hands/dirty hands roles.

7. Fill out analysis request form(s) and/or chain-of-custody.
8. Ship samples to analytical laboratory via overnight courier on wet ice.

ATTACHMENT B

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Cover Page

Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

Sample Number	Client Sample ID	Date Sampled
27342-001	381	07/22/08
27342-002	393	07/22/08
27342-003	391	07/22/08
27342-004	384	07/22/08
27342-005	SC	07/22/08
27342-006	LE 1	07/22/08
27342-007	LE 2	07/22/08
27342-008	IP	07/22/08
27342-009	QU	07/22/08
27342-010	LA	07/22/08
27342-011	Blank	07/22/08

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Cover Page..continued

Client: Great Lakes Environmental Center **WWA Job #:** 27342

Comments (if any):

Key to Laboratory Flags:

B: The analyte was found in the associated blank as well as in the sample.
J+: The quantitation is an estimated value because the result exceeds the calibration range
J-: The quantitation is an estimated value because the result is less than the sample quantitation limit but greater than the detection limit.
M+: A matrix effect was present with a high bias
M-: A matrix effect was present with a low bias
Q: Batch QC data associated with the analysis does not meet the stated objectives
H: Indicates analytical holding time exceedance.
U: The analyte was analyzed for, but not detected.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without the written approval of this laboratory. The Chain of Custody is attached.

This report satisfies the requirements of your project but has not been prepared to comply with NELAP reporting requirements.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and White Water Associates Standard Operating Procedures. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this Final Report is authorized by White Water Associates management, as is verified by the following signature.

Approved By: _____

WI DNR Lab Certification Number: 999971280
LA NELAP Certification Number: 04101
MI DEQ Certification Number: 9306
IL EPA NELAC Certification Number: 200049

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-001 / 381							
Antimony (t)	0.002	J-	mg/L	8/26/2008	7041	0.001	0.004
Arsenic (t)	0.001	J-	mg/L	8/6/2008	7060A	0.001	0.004
Beryllium (t)	ND		mg/L	8/6/2008	6010B	0.0001	0.0004
Cadmium (t)	0.0001	J-	mg/L	8/11/2008	7131A	0.0001	0.0004
Calcium (t)	162		mg/L	8/21/2008	6010B	0.02	0.06
Chromium (t)	0.0020	J-	mg/L	8/25/2008	6010B	0.0004	0.0020
Copper (t)	0.0119		mg/L	8/25/2008	6010B	0.0004	0.0020
Iron (t)	0.04		mg/L	7/30/2008	6010B	0.04	0.20
Lead (t)	ND	M-	mg/L	8/7/2008	7421	0.0006	0.0020
Magnesium (t)	52.6		mg/L	8/21/2008	6010B	0.02	0.06
Nickel (t)	0.006	J-	mg/L	8/25/2008	6010B	0.002	0.006
Potassium (t)	2.85		mg/L	8/21/2008	6010B	0.03	0.10
Selenium (t)	ND		mg/L	8/5/2008	7740	0.001	0.004
Silver (t)	ND		mg/L	8/6/2008	6010B	0.0004	0.0020
Sodium (t)	38.6		mg/L	8/21/2008	6010B	0.05	0.20
Thallium (t)	ND		mg/L	9/8/2008	7841	0.001	0.004
Zinc (t)	0.031		mg/L	8/25/2008	6010B	0.003	0.010

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-002 / 393							
Antimony (t)	ND		mg/L	8/26/2008	7041	0.001	0.004
Arsenic (t)	0.002	J-	mg/L	8/6/2008	7060A	0.001	0.004
Beryllium (t)	0.0001	J-	mg/L	8/6/2008	6010B	0.0001	0.0004
Cadmium (t)	ND		mg/L	8/11/2008	7131A	0.0001	0.0004
Calcium (t)	587	M-	mg/L	8/21/2008	6010B	0.1	0.3
Chromium (t)	0.0061		mg/L	8/25/2008	6010B	0.0004	0.0020
Copper (t)	0.0032	M+	mg/L	8/25/2008	6010B	0.0004	0.0020
Iron (t)	0.04		mg/L	7/30/2008	6010B	0.04	0.20
Lead (t)	ND	M-	mg/L	8/7/2008	7421	0.0006	0.0020
Magnesium (t)	353	M-	mg/L	8/21/2008	6010B	0.1	0.3
Nickel (t)	0.007		mg/L	8/25/2008	6010B	0.002	0.006
Potassium (t)	9.02		mg/L	8/21/2008	6010B	0.2	0.5
Selenium (t)	0.004	J-	mg/L	8/5/2008	7740	0.001	0.004
Silver (t)	ND		mg/L	8/6/2008	6010B	0.0004	0.0020
Sodium (t)	96.4		mg/L	8/21/2008	6010B	0.2	1
Thallium (t)	ND		mg/L	9/8/2008	7841	0.001	0.004
Zinc (t)	0.031		mg/L	8/25/2008	6010B	0.003	0.010

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ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-003 / 391							
Antimony (t)	ND		mg/L	8/26/2008	7041	0.001	0.004
Arsenic (t)	0.001	J-	mg/L	8/6/2008	7060A	0.001	0.004
Beryllium (t)	0.0001	J-	mg/L	8/6/2008	6010B	0.0001	0.0004
Cadmium (t)	ND		mg/L	8/11/2008	7131A	0.0001	0.0004
Calcium (t)	89.9		mg/L	8/21/2008	6010B	0.02	0.06
Chromium (t)	0.0015	J-	mg/L	8/25/2008	6010B	0.0004	0.0020
Copper (t)	0.0010	J-	mg/L	8/25/2008	6010B	0.0004	0.0020
Iron (t)	0.04		mg/L	7/30/2008	6010B	0.04	0.20
Lead (t)	ND	M-	mg/L	8/7/2008	7421	0.0006	0.0020
Magnesium (t)	27.3		mg/L	8/21/2008	6010B	0.02	0.06
Nickel (t)	ND		mg/L	8/25/2008	6010B	0.002	0.006
Potassium (t)	3.47		mg/L	8/21/2008	6010B	0.03	0.10
Selenium (t)	ND		mg/L	8/5/2008	7740	0.001	0.004
Silver (t)	ND		mg/L	8/6/2008	6010B	0.0004	0.0020
Sodium (t)	23.6		mg/L	8/21/2008	6010B	0.05	0.20
Thallium (t)	ND		mg/L	9/8/2008	7841	0.001	0.004
Zinc (t)	0.008	J-	mg/L	8/25/2008	6010B	0.003	0.010

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ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
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WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-004 / 384							
Antimony (t)	ND		mg/L	8/26/2008	7041	0.001	0.004
Arsenic (t)	0.002	J-	mg/L	8/6/2008	7060A	0.001	0.004
Beryllium (t)	0.0002	J-	mg/L	8/6/2008	6010B	0.0001	0.0004
Cadmium (t)	ND		mg/L	8/11/2008	7131A	0.0001	0.0004
Calcium (t)	572		mg/L	8/21/2008	6010B	0.1	0.3
Chromium (t)	0.0059		mg/L	8/25/2008	6010B	0.0004	0.0020
Copper (t)	ND		mg/L	8/25/2008	6010B	0.0004	0.0020
Iron (t)	3.4		mg/L	7/30/2008	6010B	0.1	4
Lead (t)	ND	M-	mg/L	8/7/2008	7421	0.0006	0.0020
Magnesium (t)	162		mg/L	8/21/2008	6010B	0.1	0.3
Nickel (t)	ND		mg/L	8/25/2008	6010B	0.002	0.006
Potassium (t)	4.52		mg/L	8/21/2008	6010B	0.2	0.5
Selenium (t)	0.005		mg/L	8/5/2008	7740	0.001	0.004
Silver (t)	ND		mg/L	8/6/2008	6010B	0.0004	0.0020
Sodium (t)	38.8		mg/L	8/21/2008	6010B	0.2	1
Thallium (t)	ND		mg/L	9/8/2008	7841	0.001	0.004
Zinc (t)	0.029		mg/L	8/25/2008	6010B	0.003	0.010

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ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-005 / SC / BKGR SC-W							
Antimony (t)	ND		mg/L	8/26/2008	7041	0.001	0.004
Arsenic (t)	0.002	J-	mg/L	8/6/2008	7060A	0.001	0.004
Beryllium (t)	0.0001	J-	mg/L	8/6/2008	6010B	0.0001	0.0004
Cadmium (t)	ND		mg/L	8/11/2008	7131A	0.0001	0.0004
Calcium (t)	45.6		mg/L	8/21/2008	6010B	0.02	0.06
Chromium (t)	0.0028		mg/L	8/25/2008	6010B	0.0004	0.0020
Copper (t)	0.0034		mg/L	8/25/2008	6010B	0.0004	0.0020
Lead (t)	ND	M-	mg/L	8/7/2008	7421	0.0006	0.0020
Magnesium (t)	11.8		mg/L	8/21/2008	6010B	0.02	0.06
Nickel (t)	0.002	J-	mg/L	8/25/2008	6010B	0.002	0.006
Potassium (t)	3.38		mg/L	8/21/2008	6010B	0.03	0.10
Selenium (t)	ND		mg/L	8/5/2008	7740	0.001	0.004
Silver (t)	ND		mg/L	8/6/2008	6010B	0.0004	0.0020
Sodium (t)	17.3		mg/L	8/21/2008	6010B	0.05	0.20
Thallium (t)	ND		mg/L	9/8/2008	7841	0.001	0.004
Zinc (t)	0.013		mg/L	8/25/2008	6010B	0.003	0.010

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Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-006 / LE 1 [illegible] LEI-W							
Antimony (t)	0.001	J-	mg/L	8/26/2008	7041	0.001	0.004
Arsenic (t)	0.001	J-	mg/L	8/6/2008	7060A	0.001	0.004
Beryllium (t)	ND		mg/L	8/6/2008	6010B	0.0001	0.0004
Cadmium (t)	ND		mg/L	8/11/2008	7131A	0.0001	0.0004
Calcium (t)	33.9		mg/L	8/21/2008	6010B	0.02	0.06
Chromium (t)	0.0016	J-	mg/L	8/25/2008	6010B	0.0004	0.0020
Copper (t)	0.0023		mg/L	8/25/2008	6010B	0.0004	0.0020
Lead (t)	ND	M-	mg/L	8/7/2008	7421	0.0006	0.0020
Magnesium (t)	10.1		mg/L	8/21/2008	6010B	0.02	0.06
Nickel (t)	ND		mg/L	8/25/2008	6010B	0.002	0.006
Potassium (t)	2.34		mg/L	8/21/2008	6010B	0.03	0.10
Selenium (t)	ND		mg/L	8/5/2008	7740	0.001	0.004
Silver (t)	0.0005	J-	mg/L	8/6/2008	6010B	0.0004	0.0020
Sodium (t)	11.4		mg/L	8/21/2008	6010B	0.05	0.20
Thallium (t)	ND		mg/L	9/8/2008	7841	0.001	0.004
Zinc (t)	0.005	J-	mg/L	8/25/2008	6010B	0.003	0.010

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

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WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-007 / LE 2 [illegible] LE2-W							
Antimony (t)	ND		mg/L	8/26/2008	7041	0.001	0.004
Arsenic (t)	0.002	J-	mg/L	8/6/2008	7060A	0.001	0.004
Beryllium (t)	ND		mg/L	8/6/2008	6010B	0.0001	0.0004
Cadmium (t)	ND		mg/L	8/11/2008	7131A	0.0001	0.0004
Calcium (t)	35.0		mg/L	8/21/2008	6010B	0.02	0.06
Chromium (t)	0.0012	J-	mg/L	8/25/2008	6010B	0.0004	0.0020
Copper (t)	0.0019	J-	mg/L	8/25/2008	6010B	0.0004	0.0020
Lead (t)	0.0006	M-	mg/L	8/7/2008	7421	0.0006	0.0020
Magnesium (t)	10.0		mg/L	8/21/2008	6010B	0.02	0.06
Nickel (t)	ND		mg/L	8/25/2008	6010B	0.002	0.006
Potassium (t)	2.19		mg/L	8/21/2008	6010B	0.03	0.10
Selenium (t)	0.001	J-	mg/L	8/5/2008	7740	0.001	0.004
Silver (t)	ND		mg/L	8/6/2008	6010B	0.0004	0.0020
Sodium (t)	11.0		mg/L	8/21/2008	6010B	0.05	0.20
Thallium (t)	ND		mg/L	9/8/2008	7841	0.001	0.004
Zinc (t)	0.006	J-	mg/L	8/25/2008	6010B	0.003	0.010

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ECOLOGICAL CONSULTING AND
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WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-008 / IP IZPIW IP-W							
Antimony (t)	ND		mg/L	8/26/2008	7041	0.001	0.004
Arsenic (t)	0.003	J-	mg/L	8/6/2008	7060A	0.001	0.004
Beryllium (t)	ND		mg/L	8/6/2008	6010B	0.0001	0.0004
Cadmium (t)	ND		mg/L	8/11/2008	7131A	0.0001	0.0004
Calcium (t)	39.6		mg/L	8/21/2008	6010B	0.02	0.06
Chromium (t)	0.0019	J-	mg/L	8/25/2008	6010B	0.0004	0.0020
Copper (t)	0.0008	J-	mg/L	8/25/2008	6010B	0.0004	0.0020
Lead (t)	ND	M-	mg/L	8/7/2008	7421	0.0006	0.0020
Magnesium (t)	9.66		mg/L	8/21/2008	6010B	0.02	0.06
Nickel (t)	ND		mg/L	8/25/2008	6010B	0.002	0.006
Potassium (t)	1.04		mg/L	8/21/2008	6010B	0.03	0.10
Selenium (t)	ND		mg/L	8/5/2008	7740	0.001	0.004
Silver (t)	ND		mg/L	8/6/2008	6010B	0.0004	0.0020
Sodium (t)	24.2		mg/L	8/21/2008	6010B	0.05	0.20
Thallium (t)	ND		mg/L	9/8/2008	7841	0.001	0.004
Zinc (t)	0.004	J-	mg/L	8/25/2008	6010B	0.003	0.010

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Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-009 / QU /QU-W							
Antimony (t)	ND		mg/L	8/26/2008	7041	0.001	0.004
Arsenic (t)	0.001	J-	mg/L	8/6/2008	7060A	0.001	0.004
Beryllium (t)	0.0002	J-	mg/L	8/6/2008	6010B	0.0001	0.0004
Cadmium (t)	ND		mg/L	8/11/2008	7131A	0.0001	0.0004
Calcium (t)	124		mg/L	8/21/2008	6010B	0.02	0.06
Chromium (t)	0.0020		mg/L	8/25/2008	6010B	0.0004	0.0020
Copper (t)	0.0009	J-	mg/L	8/25/2008	6010B	0.0004	0.0020
Lead (t)	ND	M-	mg/L	8/7/2008	7421	0.0009	0.0020
Magnesium (t)	42.5		mg/L	8/21/2008	6010B	0.02	0.06
Nickel (t)	ND		mg/L	8/25/2008	6010B	0.002	0.006
Potassium (t)	3.10		mg/L	8/21/2008	6010B	0.03	0.10
Selenium (t)	0.001	J-	mg/L	8/5/2008	7740	0.001	0.004
Silver (t)	ND		mg/L	8/6/2008	6010B	0.0004	0.0020
Sodium (t)	98.7		mg/L	8/21/2008	6010B	0.05	0.20
Thallium (t)	ND		mg/L	9/8/2008	7841	0.001	0.004
Zinc (t)	0.009	J-	mg/L	8/25/2008	6010B	0.003	0.010

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

429 River Lane • P.O. Box 27 • Amasa, Michigan 49903 • Phone (906) 822-7373 • FAX (906) 822-7977

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-010 / LA / LA-W							
Antimony (t)	0.001	J-	mg/L	8/26/2008	7041	0.001	0.004
Arsenic (t)	0.003	J-	mg/L	8/6/2008	7060A	0.001	0.004
Beryllium (t)	0.0001	J-	mg/L	8/6/2008	6010B	0.0001	0.0004
Cadmium (t)	ND		mg/L	8/11/2008	7131A	0.0001	0.0004
Calcium (t)	70.7		mg/L	8/21/2008	6010B	0.02	0.06
Chromium (t)	0.0028		mg/L	8/25/2008	6010B	0.0004	0.0020
Copper (t)	0.0020	J-	mg/L	8/25/2008	6010B	0.0004	0.0020
Lead (t)	0.0009	M-	mg/L	8/7/2008	7421	0.0006	0.0020
Magnesium (t)	21.4		mg/L	8/21/2008	6010B	0.02	0.06
Nickel (t)	0.003	J-	mg/L	8/25/2008	6010B	0.002	0.006
Potassium (t)	3.05		mg/L	8/21/2008	6010B	0.03	0.10
Selenium (t)	0.001	J-	mg/L	8/5/2008	7740	0.001	0.004
Silver (t)	ND		mg/L	8/6/2008	6010B	0.0004	0.0020
Sodium (t)	59.5		mg/L	8/21/2008	6010B	0.05	0.20
Thallium (t)	ND		mg/L	9/8/2008	7841	0.001	0.004
Zinc (t)	0.012		mg/L	8/25/2008	6010B	0.003	0.010

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

General Chemistry, Demands & Physical Data

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-001 / 381							
Chemical Oxygen Demand	11	J-	mg/L	8/1/2008	410.4	4	20
Silica	2.7	M+	mg/L	7/24/2008	7000	0.08	0.68
Sulfate	369		mg/L	8/20/2008	6010B	0.30	1.5
Turbidity	0.143		NTU's	8/28/2008	180.1	0.4	1
27342-002 / 393							
Chemical Oxygen Demand	13	J-	mg/L	8/1/2008	410.4	4	20
Silica	11	M+	mg/L	7/24/2008	7000	0.32	2.7
Sulfate	2570		mg/L	8/20/2008	6010B	3.0	15
Turbidity	0.099		NTU's	8/28/2008	180.1	0.4	1
27342-003 / 391							
Chemical Oxygen Demand	ND		mg/L	8/1/2008	410.4	4	20
Silica	2.8	M+	mg/L	7/24/2008	7000	0.08	0.68
Sulfate	206		mg/L	8/20/2008	6010B	0.12	0.6
Turbidity	0.256		NTU's	8/28/2008	180.1	0.4	1
27342-004 / 384							
Chemical Oxygen Demand	6	J-	mg/L	8/1/2008	410.4	4	20
Silica	6.3	M+	mg/L	7/24/2008	7000	0.16	1.4
Sulfate	1840		mg/L	8/20/2008	6010B	1.5	7.5
Turbidity	0.571		NTU's	8/28/2008	180.1	0.4	1

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

General Chemistry, Demands & Physical Data

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-005 / SC | SC-AW							
Chemical Oxygen Demand	21		mg/L	8/1/2008	410.4	4	20
Sulfate	31.7		mg/L	8/12/2008	6010B	0.06	0.24
Turbidity	0.908		NTU's	8/28/2008	180.1	0.4	1
27342-006 / LE 1 | LE1-W							
Chemical Oxygen Demand	22		mg/L	8/1/2008	410.4	4	20
Sulfate	30.3		mg/L	8/12/2008	6010B	0.06	0.24
Turbidity	0.781		NTU's	8/28/2008	180.1	0.4	1
27342-007 / LE 2 | LE2-W							
Chemical Oxygen Demand	15	J-	mg/L	8/1/2008	410.4	4	20
Sulfate	28.3		mg/L	8/12/2008	6010B	0.06	0.24
Turbidity	0.210		NTU's	8/28/2008	180.1	0.4	1
27342-008 / IP | IP-W							
Chemical Oxygen Demand	37		mg/L	8/1/2008	410.4	4	20
Sulfate	12.4		mg/L	8/12/2008	6010B	0.06	0.24
Turbidity	0.279		NTU's	8/28/2008	180.1	0.4	1
27342-009 / QU | QU-W							
Chemical Oxygen Demand	191	J-	mg/L	8/1/2008	410.4	4	20
Sulfate	424		mg/L	8/20/2008	6010B	0.30	1.5
Turbidity	0.278		NTU's	8/28/2008	180.1	0.4	1

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27342

Project: Monitoring **Sample Matrix:** Water
Date Received: 7/23/2008 **Date Reported:** 9/10/2008

General Chemistry, Demands & Physical Data

Sample / Client Sample ID	Result	Flags	Units	Date	Method	MDL	MQL
27342-010 / LA /LA-W							
Chemical Oxygen Demand	38		mg/L	8/1/2008	410.4	4	20
Sulfate	152		mg/L	8/20/2008	6010B	0.12	0.6
Turbidity	0.258		NTU's	8/28/2008	180.1	0.4	1

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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Attach to the COC and include with the final report.

WHITE WATER ASSOCIATES, INC.

Login Checklist

Project Number: 27342 Date Logged in: 7/23/08 Login Person Initials: CA

# of Coolers: 2 Courier: Fed Ex

Client: GIEC Project Name: _____

If no to any, notify the project manager and project manager documents client response below.

		YES	NO
1.	Were custody seals/original packing tape intact?	✓	
2.	Are the samples in good condition, i.e. not broken or leaking?	✓	
3.	Are samples within holding times?	✓	
4.	Were the samples received on ice (ice in direct contact with the samples)?	✓	
5.	Is the temperature of the samples between 2-6°C? Temp. 6.4 *NOTE: Samples not between 2-6 °C that are received at the laboratory on the day of sample collections do not require client notification.*		✓
6.	Do the samples match the COC?	✓	
7.	Were the proper containers used?	✓	
8.	Were the samples collected in White Water lab containers? *No corrective action required.*	✓	
9.	Is there adequate sample volume for requested analyses and QC?	✓	
10.	Do water VOC samples contain headspace less than the size of a pea?		NA
11.	Are samples preserved to the proper pH? *If no, identify sample bottle and preservative,adjust to the proper pH, and note below.*	✓	
12.	Is the chain of custody signed?	✓	
13.	Is sub-sampling required? *(Note bottles created and preserved below.)*		✓
14.	For Dissolved Analysis, were samples filtered in the lab?		✓
15.	Were encores received? (VOC analysis)		✓
16.	Were soil VOCs preserved with methanol in the lab?		✓
17.	Is client contact necessary? Provide documentation below.		✓

COMMENTS/CORRECTIVE ACTION

_____

_____

_____

CLIENT RESPONSE (Provide date/time of contact, client response and project manager initials)

_____

_____

_____

_____

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

J.O.# 27342

SAMPLER'S SIGNATURE: Jason A. Saxton

CLIENT NAME: Jamie Saxton, GLEC

ADDRESS: 739 Hastings St. Traverse City, MI 49686

PHONE #: 231-941-2230

SAMPLE LOCATION	SAMPLE I.D.#	TIME	DATE	SAMPLE TYPE: GRAB	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: MATRIX	NO. OF CONTAINERS	ANALYSIS TYPE REQUESTED: COD	sulfide/turbidity	metals	Fe/silica	mercury			REMARKS:
381	1	18:35	7/22/08	X			5	X	X	X	X				Metals:
393	2	15:00	7/22/08	X			5	X	X	X	X				Na, K, Ca, Mg
391	3	16:29	7/22/08	X			5	X	X	X	X				Sb, As, Be, Cd
384	4	17:25	7/22/08	X			5	X	X	X	X				Cr, Cu, Pb, Hg
SC	5	9:15	7/22/08	X			4	X	X	X					Ni, Se, Ag, Tl
LE1	6	10:20	7/22/08	X			4	X	X	X					Zn,
LE2	7	9:45	7/22/08	X			4	X	X	X					
IP	8	13:00	7/22/08	X			4	X	X	X					
QV	9	12:10	7/22/08	X			4	X	X	X					
LA	10	14:00	7/22/08	X			4	X	X	X					
Blank	11	—	7/22/08				1					X			
								A	B	C	D	E			

RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY
Jason A. Saxton	7/22/08	7:30 pm					

RELINQUISHED BY	DATE	TIME	RECEIVED BY LABORATORY	DATE	TIME	REMARKS:
			Chaffey	7-23-8	16:00	

Customer retain pink; send white and yellow with samples. Original (white) will be returned with report.

White Water Associates, Inc.
429 River Lane, P.O. Box 27
Amasa, Michigan 49903
Phone (906) 822-7373, Fax -7977

North Shore
Analytical, Inc.

MDH Lab # 027-137-389
WDNR Lab # 399017190

4511 W. 1st St., Suite #1
Duluth, MN 55807
Phone: (218) 729-4658
Fax: (218) 729-4659

Analytical Report

Date Reported: 7/31/2008

Client:

White Water Associates, Inc.
Attn: Dr. Bette Premo
429 River Lane
PO Box 27
Amasa, MI 49903

Phone: (906) 822-7373
Fax: (906) 822-7977

Sample Information:

Chain of Custody: 9717
Sampled By:

Method: EPA 1631

Sample ID	Laboratory ID #	Mercury (ng/L)	Sample Date	Analysis Date	MDL (ng/L)
27342-1E – 381	33890	< 0.5	7/22/2008	7/31/2008	0.1
27342-2E – 393	33891	< 0.5	7/22/2008	7/31/2008	0.1
27342-3E – 391	33892	< 0.5	7/22/2008	7/31/2008	0.1
27342-4E 384	33893	< 0.5	7/22/2008	7/31/2008	0.1
27342-5E SL-W	33894	2.4	7/22/2008	7/31/2008	0.1
27342-6E LE1-W	33895	1.0	7/22/2008	7/31/2008	0.1
27342-7E LE2-W	33896	0.8	7/22/2008	7/31/2008	0.1
27342-8E IP-W	33897	0.9	7/22/2008	7/31/2008	0.1
27342-9E QV-W	33898	< 0.5	7/22/2008	7/31/2008	0.1
27342-10E LA-W	33899	1.0	7/22/2008	7/31/2008	0.1
27342-11E	33900	< 0.5	7/22/2008	7/31/2008	0.1

Low-level mercury results are reagent blank corrected.

Reviewed By: _____

If you have any questions regarding this report, please call (218) 729-4658.

Sincerely,

Linda Christensen
Chemical Engineer

The results provided above pertain only to the samples indicated. All results provided by NSA should be considered in their entirety, and are strictly for the use of its Customers. NSA is in no way responsible for subsequent use of said results, including, but not limited to, separation, detachment, reproduction, or any other use of any portion thereof, by Customers or third parties.

STF-COC-001
Revision Number: 5
Revision Date: 05/01/06

20

Record #: 9717

North Shore Analytical, Inc.
4511 W. 1st St., Suite #1
Duluth, MN 55807
Phone (218) 729-4658
Fax (218) 729-4659

Chain of Custody

Client Name: WWA		Report to: B Premo	Sampled by:
Address: 429 River Lane		Phone: 906 822 7889	Project:
City: Amasa	State: MI	Zip: 49903	Fax:

NSA Lab #	Bottle #	Client Sample Identification	Date Collected	Time Collected	Matrix	Sample Type: Grab	Sample Type: Composite	Container/Preservation	Analysis Requested
33890	226.54	27342-1 E	7-22-08		WW	X		G/	LL Hg
33891	570-51	2							
33892	215.54	3							
33893	573.51	4							
33894	134.51	5							
33895	135.51	6							
33896	133.51	7							
33897	130.51	8							
33898	132.51	9							
33899	131.51	10							
33900	520.51	11							

Transfer #	Relinquished By	Date	Time	Accepted By	Date	Time	Condition
1	[signature]	7-24-8	15:00	Kristin Gross	7/28/08	12:00	OK
2							
3							
4							

ADDITIONAL COMMENTS:

Low-level mercury bottles supplied by North Shore Analytical? (Y) N

KEY:

Matrix:
SW = Surface Water
WW = Wastewater
P = Precipitation
GW = Ground Water
DW = Drinking Water

Containers:
P = Plastic
G = Glass
B = Plastic Bag
T = Teflon/Fluoropolymer

Preservation:
NA = None Added
H = Hydrochloric Acid
B = Bromine Monochloride

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Cover Page..continued

Client: Great Lakes Environmental Center **WWA Job #:** 27959

Comments (if any):

Key to Laboratory Flags:

B: The analyte was found in the associated blank as well as in the sample.
J+: The quantitation is an estimated value because the result exceeds the calibration range
J-: The quantitation is an estimated value because the result is less than the sample quantitation limit but greater than the detection limit.
M+: A matrix effect was present with a high bias
M-: A matrix effect was present with a low bias
Q: Batch QC data associated with the analysis does not meet the stated objectives
H: Indicates analytical holding time exceedance.
U: The analyte was analyzed for, but not detected.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without the written approval of this laboratory. The Chain of Custody is attached.

This report satisfies the requirements of your project but has not been prepared to comply with NELAP reporting requirements.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and White Water Associates Standard Operating Procedures. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this Final Report is authorized by White Water Associates management, as is verified by the following signature.

Approved By: _____

WLDNR Lab Certification Number: 999971280
MI DEQ Certification Number: 9306
IL EPA NELAC Certification Number: 200049

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27959

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

Trace Metals - Dissolved

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27959-001 / MW-381						
Antimony (d)	ND	mg/L	11/18/2008	7041	0.001	0.004
Arsenic (d)	0.001 M+	mg/L	11/3/2008	7060A	0.001	0.004
Beryllium (d)	ND	mg/L	10/29/2008	6010B	0.0001	0.0004
Cadmium (d)	ND	mg/L	11/5/2008	7131A	0.0001	0.0004
Calcium (d)	170 M+	mg/L	11/4/2008	6010B	0.02	0.06
Chromium (d)	0.0509	mg/L	10/29/2008	6010B	0.0004	0.0020
Copper (d)	ND	mg/L	10/29/2008	6010B	0.0006	0.0020
Iron (d)	0.244	mg/L	11/4/2008	6010B	0.02	0.06
Lead (d)	0.0011 M-	mg/L	11/8/2008	7421	0.0006	0.0020
Magnesium (d)	58.2 M+	mg/L	11/4/2008	6010B	0.03	0.10
Mercury (d)	ND	ng/L	11/4/2008	1631	0.1	0.5
Nickel (d)	0.023	mg/L	10/29/2008	6010B	0.003	0.010
Potassium (d)	2.63	mg/L	11/4/2008	6010B	0.05	0.15
Selenium (d)	0.002 M-	mg/L	11/4/2008	7740	0.001	0.004
Silver (d)	ND	mg/L	10/29/2008	6010B	0.0004	0.0020
Sodium (d)	41.8	mg/L	11/4/2008	6010B	0.05	0.20
Thallium (d)	ND M-	mg/L	11/17/2008	7841	0.001	0.004
Zinc (d)	ND	mg/L	10/29/2008	6010B	0.003	0.010

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
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WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27959

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

Trace Metals - Dissolved

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27959-002 / MW-393						
Antimony (d)	0.001 J-	mg/L	11/18/2008	7041	0.001	0.004
Arsenic (d)	0.002 J-	mg/L	11/3/2008	7060A	0.001	0.004
Beryllium (d)	ND M+	mg/L	10/29/2008	6010B	0.0001	0.0004
Cadmium (d)	ND	mg/L	11/5/2008	7131A	0.0001	0.0004
Calcium (d)	84.2	mg/L	11/4/2008	6010B	0.02	0.06
Chromium (d)	0.0182	mg/L	10/29/2008	6010B	0.0004	0.0020
Copper (d)	ND	mg/L	10/29/2008	6010B	0.0006	0.0020
Iron (d)	0.422	mg/L	11/4/2008	6010B	0.02	0.06
Lead (d)	ND	mg/L	11/8/2008	7421	0.0006	0.0020
Magnesium (d)	27.6	mg/L	11/4/2008	6010B	0.03	0.10
Mercury (d)	ND	ng/L	11/4/2008	1631	0.1	0.5
Nickel (d)	0.009 J-	mg/L	10/29/2008	6010B	0.003	0.010
Potassium (d)	3.35	mg/L	11/4/2008	6010B	0.05	0.15
Selenium (d)	0.001 J-	mg/L	11/4/2008	7740	0.001	0.004
Silver (d)	ND	mg/L	10/29/2008	6010B	0.0004	0.0020
Sodium (d)	22.4	mg/L	11/4/2008	6010B	0.05	0.20
Thallium (d)	ND	mg/L	11/17/2008	7841	0.001	0.004
Zinc (d)	ND	mg/L	10/29/2008	6010B	0.003	0.010

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27959

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

Trace Metals - Dissolved

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27959-003 / MW-391						
Antimony (d)	ND	mg/L	11/18/2008	7041	0.001	0.004
Arsenic (d)	0.001 J-	mg/L	11/3/2008	7060A	0.001	0.004
Beryllium (d)	ND	mg/L	10/29/2008	6010B	0.0001	0.0004
Cadmium (d)	ND	mg/L	11/5/2008	7131A	0.0001	0.0004
Calcium (d)	290	mg/L	11/14/2008	6010B	0.2	1.0
Chromium (d)	0.0146	mg/L	10/29/2008	6010B	0.0004	0.0020
Copper (d)	ND	mg/L	10/29/2008	6010B	0.0006	0.0020
Iron (d)	1.40	mg/L	11/4/2008	6010B	0.02	0.06
Lead (d)	0.0020	mg/L	11/8/2008	7421	0.0006	0.0020
Magnesium (d)	117	mg/L	11/4/2008	6010B	0.03	0.10
Mercury (d)	ND	ng/L	11/4/2008	1631	0.1	0.5
Nickel (d)	0.006 J-	mg/L	10/29/2008	6010B	0.003	0.010
Potassium (d)	15.8	mg/L	11/4/2008	6010B	0.05	0.15
Selenium (d)	0.004	mg/L	11/4/2008	7740	0.001	0.004
Silver (d)	ND	mg/L	10/29/2008	6010B	0.0004	0.0020
Sodium (d)	31.3	mg/L	11/4/2008	6010B	0.05	0.20
Thallium (d)	ND	mg/L	11/17/2008	7841	0.001	0.004
Zinc (d)	ND	mg/L	10/29/2008	6010B	0.003	0.010

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27959

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

Trace Metals - Dissolved

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27959-004 / MW-384						
Antimony (d)	ND	mg/L	11/18/2008	7041	0.001	0.004
Arsenic (d)	0.008	mg/L	11/3/2008	7060A	0.001	0.004
Beryllium (d)	ND	mg/L	10/29/2008	6010B	0.0001	0.0004
Cadmium (d)	ND	mg/L	11/5/2008	7131A	0.0001	0.0004
Calcium (d)	551	mg/L	11/11/2008	6010B	0.1	0.3
Chromium (d)	0.0050	mg/L	10/29/2008	6010B	0.0004	0.0020
Copper (d)	ND	mg/L	10/29/2008	6010B	0.0006	0.0020
Iron (d)	11.8	mg/L	11/4/2008	6010B	0.02	0.06
Lead (d)	0.0027	mg/L	11/8/2008	7421	0.0006	0.0020
Magnesium (d)	18512.4	mg/L	11/4/2008	6010B	0.03	0.10
Mercury (d)	ND	ng/L	11/4/2008	1631	0.1	0.5
Nickel (d)	0.005 J-	mg/L	10/29/2008	6010B	0.003	0.010
Potassium (d)	4.84	mg/L	11/4/2008	6010B	0.05	0.15
Selenium (d)	0.005	mg/L	11/4/2008	7740	0.001	0.004
Silver (d)	ND	mg/L	10/29/2008	6010B	0.0004	0.0020
Sodium (d)	29.9	mg/L	11/4/2008	6010B	0.05	0.20
Thallium (d)	ND	mg/L	11/17/2008	7841	0.001	0.004
Zinc (d)	ND	mg/L	10/29/2008	6010B	0.003	0.010

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27959

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27959-005 / IUP-W						
Antimony (t)	ND	mg/L	11/18/2008	6010B	0.001	0.004
Arsenic (t)	0.003 J-	mg/L	11/9/2008	6010B	0.001	0.004
Beryllium (t)	ND	mg/L	10/29/2008	6010B	0.0002	0.0006
Cadmium (t)	ND	mg/L	11/5/2008	7131A	0.0002	0.0006
Calcium (t)	45.5	mg/L	11/4/2008	6010B	0.02	0.06
Chromium (t)	0.002 J-	mg/L	11/4/2008	6010B	0.001	0.003
Copper (t)	0.0021	mg/L	10/29/2008	6010B	0.0004	0.0020
Iron (t)	1.02	mg/L	11/4/2008	6010B	0.02	0.06
Lead (t)	0.0019 J-	mg/L	11/8/2008	6010B	0.0006	0.0020
Magnesium (t)	12.4	mg/L	11/4/2008	6010B	0.03	0.10
Mercury (t)	ND	ng/L	11/4/2008	1631	0.1	0.5
Nickel (t)	ND	mg/L	11/4/2008	6010B	0.003	0.010
Potassium (t)	5.5	mg/L	11/14/2008	6010B	0.6	3.0
Selenium (t)	ND	mg/L	11/4/2008	6010B	0.001	0.004
Silver (t)	ND	mg/L	10/29/2008	6010B	0.0004	0.0020
Sodium (t)	13.3	mg/L	11/14/2008	6010B	0.5	2.0
Thallium (t)	ND M-	mg/L	11/7/2008	6010B	0.001	0.004
Zinc (t)	0.015	mg/L	10/29/2008	6010B	0.003	0.010

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27959

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

General Chemistry, Demands & Physical Data

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27959-001 / MW-381						
Chemical Oxygen Demand	25	mg/L	10/31/2008	410.4	4	20
SiO2	6.2	mg/L	11/17/2008	7000	0.02	0.21
Sulfate	366	mg/L	11/18/2008	6010B	0.3	1.0
Turbidity	0.2	NTU's	11/26/2008	180.1	0.4	1.0
27959-002 / MW-393						
Chemical Oxygen Demand	11 J-	mg/L	10/31/2008	410.4	4	20
SiO2	5.8	mg/L	11/17/2008	7000	0.02	0.21
Sulfate	183	mg/L	12/4/2008	6010B	0.12	0.48
Turbidity	0.1	NTU's	11/26/2008	180.1	0.4	1.0
27959-003 / MW-391						
Chemical Oxygen Demand	24	mg/L	10/31/2008	410.4	4	20
SiO2	14.5	mg/L	11/17/2008	7000	0.02	0.21
Sulfate	938	mg/L	12/4/2008	6010B	0.6	2.4
Turbidity	0.2	NTU's	11/26/2008	180.1	0.4	1.0
27959-004 / MW-384						
Chemical Oxygen Demand	6 J-	mg/L	10/31/2008	410.4	4	20
SiO2	22.5	mg/L	11/17/2008	7000	0.02	0.21
Sulfate	1760	mg/L	12/4/2008	6010B	1.2	4.8
Turbidity	0.2	NTU's	11/26/2008	180.1	0.4	1.0

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ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
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WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27959

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

General Chemistry, Demands & Physical Data

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27959-005 / IUP-W						
Chemical Oxygen Demand	40	mg/L	10/31/2008	410.4	4	20
SiO2	3.8	mg/L	11/17/2008	7000	0.02	0.21
Sulfate	31.6	mg/L	11/18/2008	6010B	0.06	0.21
Turbidity	1.0	NTU's	11/26/2008	180.1	0.4	1.0

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

J.O.# 27959

CLIENT NAME: Great Lakes Environmental Cntr
ADDRESS: 739 Hastings St
PHONE #: (231) 941-2230

SAMPLER'S SIGNATURE: [signature]

ANALYSIS TYPE REQUESTED: Per Previous agreement via e-mail w/Bette Prime

	SAMPLE LOCATION	SAMPLE I.D.#	TIME	DATE	GRAB	COMPOSITE	Bladder Pump	MATRIX	NO. OF CONTAINERS								REMARKS:
1	MW 381		10:37	10/22/08		x			~~4~~ 5 of								⊗ one sample in different Bottle. Bottle is appropriate for sample type. (location IUP-W)
2	MW 393		12:45	|		x			4								
3	MW 391		13:44	|		x			4								
4	MW 384		15:00	|		x			4								
5	IUP-W		1620	|	X				4⊗								

A = Silica unpres
B = Turbity, SO4 unpres
C = Cod H2SO4 pres
D = Metals HNO3 pres
See attached parameter list
GW 10-23-08

RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY
[signature]	10/22/08	1630					

RELINQUISHED BY	DATE	TIME	RECEIVED BY LABORATORY	DATE	TIME	REMARKS:
			Geri Haag	10-23-08	15:30	~~[illegible]~~ GH 10-23-08 3.2°C

Customer retain pink; send white and yellow with samples. Original (white) will be returned with report.

White Water Associates, Inc.
429 River Lane, P.O. Box 27
Amasa, Michigan 49903
Phone (906) 822-7373, Fax -7977

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27960

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

General Chemistry, Demands & Physical Data

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27960-001 / SC-W						
Chemical Oxygen Demand	26	mg/L	10/31/2008	410.4	4	20
SiO2	2.4	mg/L	11/17/2008	6010	0.02	0.21
Sulfate	52.5 M-	mg/L	12/18/2008	6010B	0.06	0.3
Turbidity	2.9	NTU's	11/26/2008	180.1	0.4	1.0
27960-002 / LA-W						
Chemical Oxygen Demand	18 J-	mg/L	11/16/2008	410.4	4	20
SiO2	4.5	mg/L	11/17/2008	6010	0.02	0.21
Sulfate	198	mg/L	12/18/2008	6010B	0.06	0.30
Turbidity	0.7	NTU's	11/26/2008	180.1	0.4	1.0
27960-003 / LE1-W						
Chemical Oxygen Demand	ND	mg/L	11/16/2008	410.4	4	20
SiO2	1.8	mg/L	11/17/2008	6010	0.02	0.21
Sulfate	28.3	mg/L	12/18/2008	6010B	3	10
Turbidity	0.5	NTU's	11/26/2008	180.1	0.4	1.0
27960-004 / LE2-W						
Chemical Oxygen Demand	ND	mg/L	11/16/2008	410.4	4	20
SiO2	1.6	mg/L	11/17/2008	6010		0.21
Sulfate	27.4	mg/L	12/18/2008	6010B	3	10
Turbidity	0.2	NTU's	11/26/2008	180.1	0.4	1.0

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ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27960

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

General Chemistry, Demands & Physical Data

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27960-005 / QU-W						
Chemical Oxygen Demand	ND	mg/L	11/16/2008	410.4	4	20
SiO2	1.6	mg/L	11/17/2008	6010	0.02	0.21
Sulfate	432	mg/L	12/18/2008	6010B	3	10
Turbidity	0.2	NTU's	11/26/2008	180.1	0.4	1.0

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ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Cover Page

Client: Great Lakes Environmental Center **WWA Job #:** 27960

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

Sample Number	Client Sample ID	Date Sampled
27960-001	SC-W	10/21/08
27960-002	LA-W	10/21/08
27960-003	LE1-W	10/21/08
27960-004	LE2-W	10/21/08
27960-005	QU-W	10/21/08

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
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WHITE WATER ASSOCIATES, INC.

Cover Page..continued

Client: Great Lakes Environmental Center **WWA Job #:** 27960

Comments (if any):

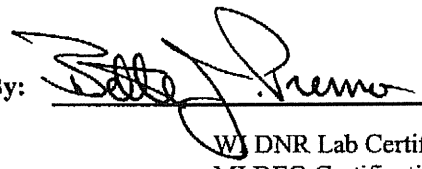
Key to Laboratory Flags:

B: The analyte was found in the associated blank as well as in the sample.
J+: The quantitation is an estimated value because the result exceeds the calibration range
J-: The quantitation is an estimated value because the result is less than the sample quantitation limit but greater than the detection limit.
M+: A matrix effect was present with a high bias
M-: A matrix effect was present with a low bias
Q: Batch QC data associated with the analysis does not meet the stated objectives
H: Indicates analytical holding time exceedance.
U: The analyte was analyzed for, but not detected.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without the written approval of this laboratory. The Chain of Custody is attached.

This report satisfies the requirements of your project but has not been prepared to comply with NELAP reporting requirements.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and White Water Associates Standard Operating Procedures. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this Final Report is authorized by White Water Associates management, as is verified by the following signature.

Approved By: 

WI DNR Lab Certification Number: 999971280
MI DEQ Certification Number: 9306
IL EPA NELAC Certification Number: 200049

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
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WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27960

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27960-001 / SC-W						
Antimony (t)	0.001 J-	mg/L	11/18/2008	7041	0.001	0.004
Arsenic (t)	0.002 M+	mg/L	11/9/2008	7060A	0.001	0.004
Beryllium (t)	ND	mg/L	11/6/2008	6010B	0.0002	0.0006
Cadmium (t)	0.0012	mg/L	11/5/2008	7131A	0.0001	0.0004
Calcium (t)	51.2	mg/L	11/11/2008	6010B	0.02	0.06
Chromium (t)	0.002 J-	mg/L	11/4/2008	6010B	0.001	0.003
Copper (t)	0.0019 J-	mg/L	11/4/2008	6010B	0.0004	0.0020
Iron (t)	0.48	mg/L	11/11/2008	6010B	0.02	0.06
Lead (t)	0.0011 J-	mg/L	11/8/2008	7421	0.0006	0.0020
Magnesium (t)	12.3	mg/L	11/11/2008	6010B	0.03	0.10
Mercury (t)	3.2	ng/L	11/4/2008	1631	0.1	0.5
Nickel (t)	ND	mg/L	11/4/2008	6010B	0.003	0.010
Potassium (t)	8.38	mg/L	11/14/2008	6010B	0.05	0.15
Selenium (t)	0.002 M-	mg/L	11/4/2008	7740	0.001	0.004
Silver (t)	ND	mg/L	11/4/2008	6010B	0.0004	0.0020
Sodium (t)	37.6	mg/L	11/14/2008	6010B	0.05	0.20
Thallium (t)	ND	mg/L	11/17/2008	7841	0.001	0.004
Zinc (t)	0.016	mg/L	11/3/2008	6010B	0.003	0.010

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
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ECOLOGICAL CONSULTING AND
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WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27960

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27960-002 / LA-W						
Antimony (t)	0.001 J-	mg/L	11/18/2008	7041	0.001	0.004
Arsenic (t)	0.002 J-	mg/L	11/9/2008	7060A	0.001	0.004
Beryllium (t)	ND	mg/L	11/6/2008	6010B	0.0002	0.0006
Cadmium (t)	ND	mg/L	11/5/2008	7131A	0.0001	0.0004
Calcium (t)	97.2	mg/L	11/11/2008	6010B	0.02	0.06
Chromium (t)	0.002 J-	mg/L	11/4/2008	6010B	0.001	0.003
Copper (t)	0.0011 J-	mg/L	11/4/2008	6010B	0.0004	0.0020
Iron (t)	0.27	mg/L	11/11/2008	6010B	0.02	0.06
Lead (t)	ND	mg/L	11/8/2008	7421	0.0006	0.0020
Magnesium (t)	26.5	mg/L	11/11/2008	6010B	0.02	0.10
Mercury (t)	0.8	ng/L	11/4/2008	1631	0.1	0.5
Nickel (t)	ND	mg/L	11/4/2008	6010B	0.003	0.010
Potassium (t)	3.50	mg/L	11/14/2008	6010B	0.05	0.15
Selenium (t)	0.002 J-	mg/L	11/4/2008	7740	0.001	0.004
Silver (t)	ND	mg/L	11/4/2008	6010B	0.0004	0.0020
Sodium (t)	95.0	mg/L	11/14/2008	6010B	0.05	0.20
Thallium (t)	ND	mg/L	11/17/2008	7841	0.001	0.004
Zinc (t)	0.014	mg/L	11/3/2008	6010B	0.003	0.010

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
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Client: Great Lakes Environmental Center **WWA Job #:** 27960

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27960-003 / LE1-W						
Antimony (t)	ND	mg/L	11/18/2008	7041	0.001	0.004
Arsenic (t)	0.002 J-	mg/L	11/9/2008	7060A	0.001	0.004
Beryllium (t)	ND	mg/L	11/6/2008	6010B	0.0002	0.0006
Cadmium (t)	ND	mg/L	11/5/2008	7131A	0.0001	0.0004
Calcium (t)	33.5	mg/L	11/11/2008	6010B	0.02	0.06
Chromium (t)	0.001 J-	mg/L	11/4/2008	6010B	0.001	0.003
Copper (t)	0.0014 J-	mg/L	11/4/2008	6010B	0.0004	0.0020
Iron (t)	0.20	mg/L	11/11/2008	6010B	0.02	0.06
Lead (t)	ND	mg/L	11/8/2008	7421	0.0006	0.0020
Magnesium (t)	9.09	mg/L	11/11/2008	6010B	0.02	0.10
Mercury (t)	2.6	ng/L	11/4/2008	1631	0.1	0.5
Nickel (t)	ND	mg/L	11/4/2008	6010B	0.003	0.010
Potassium (t)	1.49	mg/L	11/14/2008	6010B	0.05	0.15
Selenium (t)	ND	mg/L	11/4/2008	7740	0.001	0.004
Silver (t)	ND	mg/L	11/4/2008	6010B	0.0004	0.0020
Sodium (t)	9.75	mg/L	11/14/2008	6010B	0.05	0.20
Thallium (t)	ND	mg/L	11/17/2008	7841	0.001	0.004
Zinc (t)	0.009 J-	mg/L	11/3/2008	6010B	0.003	0.010

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ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27960

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27960-004 / LE2-W						
Antimony (t)	ND	mg/L	11/18/2008	7041	0.001	0.004
Arsenic (t)	0.002 J-	mg/L	11/9/2008	7060A	0.001	0.004
Beryllium (t)	ND	mg/L	11/6/2008	6010B	0.0002	0.0006
Cadmium (t)	ND	mg/L	11/5/2008	7131A	0.0001	0.0004
Calcium (t)	34.8	mg/L	11/11/2008	6010B	0.02	0.06
Chromium (t)	0.002 J-	mg/L	11/4/2008	6010B	0.001	0.003
Copper (t)	0.0021	mg/L	11/4/2008	6010B	0.0004	0.0020
Iron (t)	0.46	mg/L	11/11/2008	6010B	0.02	0.06
Lead (t)	ND	mg/L	11/8/2008	7421	0.0006	0.0020
Magnesium (t)	9.42	mg/L	11/11/2008	6010B	0.02	0.10
Mercury (t)	5.2	ng/L	11/4/2008	1631	0.1	0.5
Nickel (t)	ND	mg/L	11/4/2008	6010B	0.003	0.010
Potassium (t)	1.63	mg/L	11/14/2008	6010B	0.05	0.15
Selenium (t)	ND	mg/L	11/4/2008	7740	0.001	0.004
Silver (t)	ND	mg/L	11/4/2008	6010B	0.0004	0.0020
Sodium (t)	10.0	mg/L	11/14/2008	6010B	0.05	0.20
Thallium (t)	ND	mg/L	11/17/2008	7841	0.001	0.004
Zinc (t)	0.008 J-	mg/L	11/3/2008	6010B	0.003	0.010

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 27960

Project: Monitoring **Sample Matrix:** Water
Date Received: 10/23/2008 **Date Reported:** 12/19/2008

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
27960-005 / QU-W						
Antimony (t)	ND	mg/L	11/18/2008	7041	0.001	0.004
Arsenic (t)	0.002 J-	mg/L	11/9/2008	7060A	0.001	0.004
Beryllium (t)	ND	mg/L	11/6/2008	6010B	0.0002	0.0006
Cadmium (t)	ND	mg/L	11/5/2008	7131A	0.0001	0.0004
Calcium (t)	139	mg/L	11/11/2008	6010B	0.02	0.06
Chromium (t)	0.003 J-	mg/L	11/4/2008	6010B	0.001	0.003
Copper (t)	0.0005 J-	mg/L	11/4/2008	6010B	0.0004	0.0020
Iron (t)	0.04 J-	mg/L	11/11/2008	6010B	0.02	0.06
Lead (t)	ND M-	mg/L	11/8/2008	7421	0.0006	0.0020
Magnesium (t)	44.0	mg/L	11/11/2008	6010B	0.02	0.10
Mercury (t)	ND	ng/L	11/4/2008	1631	0.1	0.5
Nickel (t)	ND	mg/L	11/4/2008	6010B	0.003	0.010
Potassium (t)	2.95	mg/L	11/14/2008	6010B	0.05	0.15
Selenium (t)	0.002 J-	mg/L	11/4/2008	7740	0.001	0.004
Silver (t)	ND	mg/L	11/4/2008	6010B	0.0004	0.0020
Sodium (t)	104	mg/L	11/14/2008	6010B	0.05	0.20
Thallium (t)	ND M-	mg/L	11/17/2008	7841	0.001	0.004
Zinc (t)	0.014	mg/L	11/3/2008	6010B	0.003	0.010

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

White Water Associates, Inc.
429 River Lane, P.O. Box 27
Amasa, Michigan 49903
Phone (906) 822-7373, Fax -7977

J.O.#	CLIENT NAME	ADDRESS	PHONE #
27960	Great Lakes Env Cntr @ DTE ENSR	739 Hastings St Traverse City MI 49686	(231) 941-2230
SAMPLER'S SIGNATURE: SR			

	SAMPLE LOCATION	SAMPLE I.D.#	TIME	DATE	SAMPLE TYPE: GRAB	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: MATRIX	NO. OF CONTAINERS	ANALYSIS TYPE REQUESTED	REMARKS:
1	SC-W		11:25	10/21/08	X			4		per previous agreement via email w/Bette Primo
2	LA-W		16:35		X			4		
3	LE1-W		13:00		X			4		
4	LE2-W		13:40		X			4		
5	QU-W		15:25		X			4		

A= Turbity, SO4 UNPRES

B= Cod H2SO4 prcs

C= Metals HNO3 prcs

See attached parameter list

GCH 10/23/08

RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY
Sara Rolf	10/21/08	9:00 pm					

RELINQUISHED BY	DATE	TIME	RECEIVED BY LABORATORY	DATE	TIME	REMARKS:
			Geri Haag	10-23-08	15:30	1.8°C

Customer retain pink; send white and yellow with samples. Original (white) will be returned with report.

Attach to the COC and include with the final report.

WHITE WATER ASSOCIATES, INC.

Login Checklist

Project Number: 27960 Date Logged in: 10/23/08 Login Person Initials: GLH

# of Coolers: 1 Courier: fed-EX

Client: Great lakes Environmental Project Name: _____

If no to any, notify the project manager and project manager documents client response below.

		YES	NO
1.	Were custody seals/original packing tape intact?	Y	
2.	Are the samples in good condition, i.e. not broken or leaking?	X	
3.	Are samples within holding times?	X	
4.	Were the samples received on ice (ice in direct contact with the samples)?	Y	
5.	Is the temperature of the samples between 2-6°C? Temp. 1.8°C *NOTE: Samples not between 2-6 °C that are received at the laboratory on the day of sample collections do not require client notification.*		
6.	Do the samples match the COC?	Y	
7.	Were the proper containers used?	X	
8.	Were the samples collected in White Water lab containers? *No corrective action required.*	X	
9.	Is there adequate sample volume for requested analyses and QC?	X	
10.	Do water VOC samples contain headspace less than the size of a pea?	N/a	
11.	Are samples preserved to the proper pH? *If no, identify sample bottle and preservative,adjust to the proper pH, and note below.*	X	
12.	Is the chain of custody signed?	Y	
13.	Is sub-sampling required? *(Note bottles created and preserved below.)*	X (*)	
14.	For Dissolved Analysis, were samples filtered in the lab?		X
15.	Were encores received? (VOC analysis)	—	—
16.	Were soil VOCs preserved with methanol in the lab?	—	—
17.	Is client contact necessary? Provide documentation below.	—	—

COMMENTS/CORRECTIVE ACTION

*LL Hg

CLIENT RESPONSE (Provide date/time of contact, client response and project manager initials)

0 - 125 ml plastic bottles with H2SO4 pres. for COD

0 - 250 ml plastic with no preservative for Sulfate and Turbidity

0 - 500 ml plastic with HNO3 pres. for all the metals

- 125 ml plastic with no preservative for iron and silica

rinted for Bette Premo <bette.premo@white-water-associates.com> 10/23/2008

turbidity (10)
COD (10)
sulfate (10)
sodium (10)
potassium (10)
calcium (10)
magnesium (10)
antimony (10)
arsenic (10)
beryllium (10)
cadmium (10)
chromium (10)
copper (10)
lead (10)
mercury (Method 1631) (10)
nickel (10)
selenium (10)
silver (10)
thallium (10)
zinc (10)
silica (4)
iron (4)

Jamie Saxton
Great Lakes Environmental Center
739 Hastings Street
Traverse City, MI 49686
Voice: 231-941-2230
Fax: 231-941-2240

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Cover Page

Client: Great Lakes Environmental Center **WWA Job #:** 27959

Project:	Monitoring	**Sample Matrix:**	Water
Date Received:	10/23/2008	**Date Reported:**	12/19/2008

Sample Number	Client Sample ID	Date Sampled
27959-001	MW-381	10/22/08
27959-002	MW-393	10/22/08
27959-003	MW-391	10/22/08
27959-004	MW-384	10/22/08
27959-005	IUP-W	10/22/08

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Attach to the COC and include with the final report.

WHITE WATER ASSOCIATES, INC.

Login Checklist

Project Number: 27959 Date Logged in: 10/23/08 Login Person Initials: GLH

# of Coolers: 1 Courier: fed ex

Client: Great Lakes Environmental Project Name: _____

If no to any, notify the project manager and project manager documents client response below.

		YES	NO
1.	Were custody seals/original packing tape intact?	X	
2.	Are the samples in good condition, i.e. not broken or leaking?	Y	
3.	Are samples within holding times?	X	
4.	Were the samples received on ice (ice in direct contact with the samples)?	Y	
5.	Is the temperature of the samples between 2-6°C? Temp. 3.2°C *NOTE: Samples not between 2-6 °C that are received at the laboratory on the day of sample collections do not require client notification.*		
6.	Do the samples match the COC?	X	
7.	Were the proper containers used?	X	
8.	Were the samples collected in White Water lab containers? *No corrective action required.*	X	
9.	Is there adequate sample volume for requested analyses and QC?	X	
10.	Do water VOC samples contain headspace less than the size of a pea?		
11.	Are samples preserved to the proper pH? *If no, identify sample bottle and preservative,adjust to the proper pH, and note below.*	X	
12.	Is the chain of custody signed?	X	
13.	Is sub-sampling required? *(Note bottles created and preserved below.)*	X*	
14.	For Dissolved Analysis, were samples filtered in the lab?		X
15.	Were encores received? (VOC analysis)		
16.	Were soil VOCs preserved with methanol in the lab?		
17.	Is client contact necessary? Provide documentation below.		

COMMENTS/CORRECTIVE ACTION

* LL Hg

CLIENT RESPONSE (Provide date/time of contact, client response and project manager initials)

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Cover Page

Client: Great Lakes Environmental Center **WWA Job #:** 28607

Project: **Sample Matrix:** Water
Date Received: 2/19/2009 **Date Reported:** 4/8/2009

Sample Number	Client Sample ID	Date Sampled
28607-001	IUP-W	02/18/09
28607-002	LE2-W	02/18/09

Comments (if any):

Key to Laboratory Flags:

B: The analyte was found in the associated blank as well as in the sample.
J+: The quantitation is an estimated value because the result exceeds the calibration range
J-: The quantitation is an estimated value because the result is less than the sample quantitation limit but greater than the detection limit.
M+: A matrix effect was present with a high bias
M-: A matrix effect was present with a low bias
Q: Batch QC data associated with the analysis does not meet the stated objectives
H: Indicates analytical holding time exceedance.
U: The analyte was analyzed for, but not detected.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without the written approval of this laboratory. The Chain of Custody is attached.

This report satisfies the requirements of your project but has not been prepared to comply with NELAP reporting requirements.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and White Water Associates Standard Operating Procedures. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this Final Report is authorized by White Water Associates management, as is verified by the following signature.

Approved By: _____

WI DNR Lab Certification Number: 999971280
MI DEQ Certification Number: 9306
IL EPA NELAC Certification Number: 200049

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28607

Project: Monitoring **Sample Matrix:** Water
Date Received: 2/19/2009 **Date Reported:** 4/8/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28607-001 / IUP-W						
Antimony (t)	0.002 J-	mg/L	3/2/2009	7041	0.001	0.004
Arsenic (t)	0.002 J-	mg/L	2/27/2009	7060A	0.001	0.004
Beryllium (t)	ND	mg/L	3/2/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	3/3/2009	7131A	0.00008	0.0004
Calcium (t)	87.5	mg/L	3/4/2009	6010B	0.02	0.06
Chromium (t)	0.0018 J-	mg/L	3/2/2009	6010B	0.0006	0.0030
Copper (t)	ND M+	mg/L	2/25/2009	7211	0.0006	0.0020
Iron (t)	1.08	mg/L	3/4/2009	6010B	0.01	0.04
Lead (t)	0.0014 J-	mg/L	3/3/2009	7041	0.0004	0.0020
Magnesium (t)	20.9	mg/L	3/4/2009	6010B	0.02	0.06
Nickel (t)	0.002 J-	mg/L	3/2/2009	6010B	0.001	0.003
Potassium (t)	4.2	mg/L	3/6/2009	6010B	0.1	0.3
Selenium (t)	0.002 M-J	mg/L	2/24/2009	7740	0.001	0.004
Silver (t)	0.0008 J-	mg/L	3/2/2009	6010B	0.0005	0.0020
Sodium (t)	60.3	mg/L	3/6/2009	6010B	0.2	0.8
Thallium (t)	ND	mg/L	3/4/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	3/2/2009	6010B	0.02	0.06

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28607

Project: Monitoring **Sample Matrix:** Water
Date Received: 2/19/2009 **Date Reported:** 4/8/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28607-002 / LE2-W						
Antimony (t)	0.003 J-	mg/L	3/2/2009	7041	0.001	0.004
Arsenic (t)	0.001 J-	mg/L	2/27/2009	7060A	0.001	0.004
Beryllium (t)	ND	mg/L	3/2/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	3/3/2009	7131A	0.00008	0.0004
Calcium (t)	35.2	mg/L	3/4/2009	6010B	0.02	0.06
Chromium (t)	0.0009 J-	mg/L	3/2/2009	6010B	0.0006	0.0030
Copper (t)	0.0024	mg/L	2/25/2009	7211	0.0006	0.0020
Iron (t)	0.68	mg/L	3/4/2009	6010B	0.01	0.04
Lead (t)	0.0011 J-	mg/L	3/3/2009	7041	0.0004	0.0020
Magnesium (t)	8.98	mg/L	3/4/2009	6010B	0.02	0.06
Nickel (t)	0.001 J-	mg/L	3/2/2009	6010B	0.001	0.003
Potassium (t)	2.3	mg/L	3/6/2009	6010B	0.1	0.3
Selenium (t)	ND	mg/L	2/24/2009	7740	0.001	0.004
Silver (t)	ND	mg/L	3/2/2009	6010B	0.0005	0.0020
Sodium (t)	23.4	mg/L	3/6/2009	6010B	0.2	0.8
Thallium (t)	ND M-	mg/L	3/4/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	3/2/2009	6010B	0.02	0.06

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28607

Project: Monitoring **Sample Matrix:** Water
Date Received: 2/19/2009 **Date Reported:** 4/8/2009

General Chemistry Parameters

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28607-001 / IUP-W						
Chemical Oxygen Demand	15 J-	mg/L	3/4/2009	410.4	6	20
SiO2	5.1	mg/L	4/7/2009	7000	0.4	1.7
Sulfate	133	mg/L	3/10/2009	6010B	0.4	1.4
Turbidity	14.7	NTU's	3/6/2009	180.1	1	1
28607-002 / LE2-W						
Chemical Oxygen Demand	ND	mg/L	3/4/2009	410.4	6	20
SiO2	1.7	mg/L	4/7/2009	7000	0.4	1.7
Sulfate	32.9 M+	mg/L	3/10/2009	6010B	0.09	0.27
Turbidity	9.80	NTU's	3/6/2009	180.1	1	1

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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North Shore
Analytical, Inc.

MDH Lab # 027-137-389
WDNR Lab # 399017190

4511 W. 1st St., Suite #1
Duluth, MN 55807
Phone: (218) 729-4658
Fax: (218) 729-4659

Analytical Report

Date Reported: 2/26/2009

Client:

White Water Associates, Inc.
Attn: Dr. Bette Premo
429 River Lane
PO Box 27
Amasa, MI 49903

Phone: (906) 822-7889
Fax: (906) 822-7977

Sample Information:

Chain of Custody: 10473
Sampled By:

Method: EPA 1631

Sample ID	Laboratory ID #	Mercury (ng/L)	Sample Date	Analysis Date	MDL (ng/L)
28607-1D IUP-W	37126	2.3	2/18/2009	2/26/2009	0.1
28607-2D LE2-W	37127	1.4	2/18/2009	2/26/2009	0.1

Low-level mercury results are reagent blank corrected.

Reviewed By: _____

If you have any questions regarding this report, please call (218) 729-4658.

Sincerely,

Linda Christensen
Chemical Engineer

The results provided above pertain only to the samples indicated. All results provided by NSA should be considered in their entirety, and are strictly for the use of its Customers. NSA is in no way responsible for subsequent use of said results, including, but not limited to, separation, detachment, reproduction, or any other use of any portion thereof, by Customers or third parties.

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

J.O.# 28607

SAMPLER'S SIGNATURE

CLIENT NAME Great Lakes Environmental Ctr.
ADDRESS 739 Hastings St
PHONE # Traverse City MI 49686
(231) 941-2230

ANALYSIS TYPE REQUESTED

SAMPLE LOCATION	SAMPLE I.D.#	TIME	DATE	SAMPLE TYPE: GRAB	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: MATRIX	NO. OF CONTAINERS	COD	SO4	Turbidity	metals	Li	Silica	Alk	REMARKS:
IUP-W	LLHg= 184.56	9:15	2/18/2009	X			4	X	X	X	X	X	X	X	no COC specifically for LLHg like last ship It is included in one shipment today.
XE2-W	LLHg= #2357	10:15	2/18/2009	X			4	X	X	X	X	X	X	X	
								C			A		B	D	

RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY
	2/18/09	12:00					

RELINQUISHED BY	DATE	TIME	RECEIVED BY LABORATORY	DATE	TIME	REMARKS:
				2-19-9	11:30	

White Water Associates, Inc.
429 River Lane, P.O. Box 27
Amasa, Michigan 49903
Phone (906) 822-7373, Fax -7977

Customer retain pink; send white and yellow with samples. Original (white) will be returned with report

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Cover Page

Client: Great Lakes Environmental Center **WWA Job #:** 28601

Project:
Date Received: 2/18/2009 **Sample Matrix:** Water
Date Reported: 4/8/2009

Sample Number	Client Sample ID	Date Sampled
28601-001	MW-381	02/17/09
28601-002	MW-391	02/17/09
28601-003	MW-393	02/17/09
28601-004	MW-384	02/17/09
28601-005	SCW	02/17/09

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Cover Page..continued

Client: Great Lakes Environmental Center **WWA Job #:** 28601

Comments (if any):

Key to Laboratory Flags:

B: The analyte was found in the associated blank as well as in the sample.
J+: The quantitation is an estimated value because the result exceeds the calibration range
J-: The quantitation is an estimated value because the result is less than the sample quantitation limit but greater than the detection limit.
M+: A matrix effect was present with a high bias
M-: A matrix effect was present with a low bias
Q: Batch QC data associated with the analysis does not meet the stated objectives
H: Indicates analytical holding time exceedance.
U: The analyte was analyzed for, but not detected.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without the written approval of this laboratory. The Chain of Custody is attached.

This report satisfies the requirements of your project but has not been prepared to comply with NELAP reporting requirements.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and White Water Associates Standard Operating Procedures. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this Final Report is authorized by White Water Associates management, as is verified by the following signature.

Approved By: _____

WI DNR Lab Certification Number: 999971280
MI DEQ Certification Number: 9306
IL EPA NELAC Certification Number: 200049

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

J.O.# 28601

SAMPLER'S SIGNATURE

CLIENT NAME: GREAT Lakes Env. Center (GLEC)

ADDRESS: 739 HASTINGS ST, TRAVERSE CITY MI 49686

PHONE #: (231) 941-2230

SAMPLE LOCATION	SAMPLE I.D.#	TIME	DATE	SAMPLE TYPE: GRAB	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: MATRIX	NO. OF CONTAINERS	ANALYSIS TYPE REQUESTED: CCD	SO4	Turbidity	Metals	Fe	Silica	REMARKS:
NW 381	1	1315	2/17/09	X			4	X	X	X	X	X	X	K, Ca, Mg,
391	2	1215		X			4							Sb, As, Be
393	3	1055		X			4							Cd, Cr, Cu, Pb
384	4	1145		X			4							Hg (low level)
SCW	5	1025		X			3							Ni, Se, Ag, Tl
								B			A		C	Zn
								H_2SO_4			HNO_3		none	
									D - none					

RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY
	2/17/2009	1630					

RELINQUISHED BY	DATE	TIME	RECEIVED BY LABORATORY	DATE	TIME	REMARKS:
				2-18-9	14:50	

Customer retain pink; send white and yellow with samples. Original (white) will be returned with report.

White Water Associates, Inc.
429 River Lane, P.O. Box 27
Amasa, Michigan 49903
Phone (906) 822-7373, Fax -7977

Attach to the COC and include with the final report.

WHITE WATER ASSOCIATES, INC.

Login Checklist

Project Number: 28601 Date Logged in: 2/18/9 Login Person Initials: EH

# of Coolers: 2 Courier: Fedex

Client: GLEG Project Name: _____

If no to any, notify the project manager and project manager documents client response below.

		YES	NO
1.	Were custody seals/original packing tape intact?	✓	
2.	Are the samples in good condition, i.e. not broken or leaking?	✓	
3.	Are samples within holding times?	✓	
4.	Were the samples received on ice (ice in direct contact with the samples)?	✓	
5.	Is the temperature of the samples between 2-6°C? Temp. -1.4/2.4 *NOTE: Samples not between 2-6 °C that are received at the laboratory on the day of sample collections do not require client notification.*	✓	
6.	Do the samples match the COC?	✓	
7.	Were the proper containers used?	✓	
8.	Were the samples collected in White Water lab containers? *No corrective action required.*	✓	
9.	Is there adequate sample volume for requested analyses and QC?	✓	
10.	Do water VOC samples contain headspace less than the size of a pea?	na	
11.	Are samples preserved to the proper pH? *If no, identify sample bottle and preservative, adjust to the proper pH, and note below.*	✓	
12.	Is the chain of custody signed?	✓	
13.	Is sub-sampling required? *(Note bottles created and preserved below.)*		✓
14.	For Dissolved Analysis, were samples filtered in the lab?		
15.	Were encores received? (VOC analysis)		
16.	Were soil VOCs preserved with methanol in the lab?		
17.	Is client contact necessary? Provide documentation below.		✓

COMMENTS/CORRECTIVE ACTION

_____

_____

_____

CLIENT RESPONSE (Provide date/time of contact, client response and project manager initials)

_____

_____

_____

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28601

Project: **Sample Matrix:** Water
Date Received: 2/18/2009 **Date Reported:** 4/8/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28601-001 / MW-381						
Antimony (t)	0.001 J-	mg/L	3/2/2009	7041	0.001	0.004
Arsenic (t)	0.003 J-	mg/L	2/27/2009	7060A	0.001	0.004
Beryllium (t)	ND	mg/L	3/2/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	3/3/2009	7131A	0.00008	0.0004
Calcium (t)	150	mg/L	3/4/2009	6010B	0.02	0.06
Chromium (t)	0.0012 J-	mg/L	3/2/2009	6010B	0.0006	0.0030
Copper (t)	ND M+	mg/L	2/25/2009	7211	0.0006	0.0020
Iron (t)	0.19	mg/L	3/4/2009	6010B	0.01	0.04
Lead (t)	0.0015 J-	mg/L	3/3/2009	7421	0.0004	0.002
Magnesium (t)	48.3	mg/L	3/4/2009	6010B	0.02	0.06
Nickel (t)	ND	mg/L	3/2/2009	6010B	0.001	0.003
Potassium (t)	2.0	mg/L	3/6/2009	6010B	0.1	0.3
Selenium (t)	0.003 M-J	mg/L	2/24/2009	7740	0.001	0.004
Silver (t)	0.0014 J-	mg/L	3/2/2009	6010B	0.0005	0.0020
Sodium (t)	42.2	mg/L	3/6/2009	6010B	0.2	0.8
Thallium (t)	ND M-	mg/L	3/4/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	3/2/2009	6010B	0.02	0.06

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

429 River Lane • P.O. Box 27 • Amasa, Michigan 49903 • Phone (906) 822-7373 • FAX (906) 822-7977

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28601

Project: **Sample Matrix:** Water
Date Received: 2/18/2009 **Date Reported:** 4/8/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28601-002 / MW-391						
Antimony (t)	0.002 J-	mg/L	3/2/2009	7041	0.001	0.004
Arsenic (t)	0.002 J-	mg/L	2/27/2009	7060A	0.001	0.004
Beryllium (t)	ND	mg/L	3/2/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	3/3/2009	7131A	0.00008	0.0004
Calcium (t)	75.0 M-	mg/L	3/4/2009	6010B	0.02	0.06
Chromium (t)	ND	mg/L	3/2/2009	6010B	0.0006	0.0030
Copper (t)	0.0011 J-	mg/L	2/25/2009	7211	0.0006	0.0020
Iron (t)	0.18	mg/L	3/4/2009	6010B	0.01	0.04
Lead (t)	0.0016 J-	mg/L	3/3/2009	7421	0.0004	0.002
Magnesium (t)	21.3	mg/L	3/4/2009	6010B	0.02	0.06
Nickel (t)	ND	mg/L	3/2/2009	6010B	0.001	0.003
Potassium (t)	3.0	mg/L	3/6/2009	6010B	0.1	0.3
Selenium (t)	ND	mg/L	2/24/2009	7740	0.001	0.004
Silver (t)	0.0006 J-	mg/L	3/2/2009	6010B	0.0005	0.0020
Sodium (t)	22.0	mg/L	3/6/2009	6010B	0.2	0.8
Thallium (t)	ND	mg/L	3/4/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	3/2/2009	6010B	0.02	0.06

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28601

Project:
Date Received: 2/18/2009

Sample Matrix: Water
Date Reported: 4/8/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28601-003 / MW-393						
Antimony (t)	0.001 J-	mg/L	3/2/2009	7041	0.001	0.004
Arsenic (t)	0.003 J-	mg/L	2/25/2009	7060A	0.001	0.004
Beryllium (t)	ND	mg/L	3/2/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	3/3/2009	7131A	0.00008	0.0004
Calcium (t)	299	mg/L	3/11/2009	6010B	0.1	0.3
Chromium (t)	0.0029 J-	mg/L	3/2/2009	6010B	0.0006	0.0030
Copper (t)	ND	mg/L	2/25/2009	7211	0.0006	0.0020
Iron (t)	1.45	mg/L	3/4/2009	6010B	0.01	0.04
Lead (t)	0.0013 J-	mg/L	3/3/2009	7421	0.0004	0.002
Magnesium (t)	103	mg/L	3/4/2009	6010B	0.02	0.06
Nickel (t)	ND	mg/L	3/2/2009	6010B	0.001	0.003
Potassium (t)	14.9	mg/L	3/6/2009	6010B	0.1	0.3
Selenium (t)	0.007	mg/L	2/24/2009	7740	0.001	0.004
Silver (t)	0.0024	mg/L	3/2/2009	6010B	0.0005	0.0020
Sodium (t)	32.1	mg/L	3/6/2009	6010B	0.2	0.8
Thallium (t)	ND	mg/L	3/4/2009	7841	0.001	0.003
Zinc (t)	ND	mg/L	3/2/2009	6010B	0.02	0.06

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28601

Project: **Sample Matrix:** Water
Date Received: 2/18/2009 **Date Reported:** 4/8/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28601-004 / MW-384						
Antimony (t)	0.001	mg/L	3/2/2009	7041	0.001	0.004
Arsenic (t)	0.004	mg/L	2/27/2009	7060A	0.001	0.004
Beryllium (t)	ND	mg/L	3/2/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	3/3/2009	7131A	0.00008	0.0004
Calcium (t)	547	mg/L	3/11/2009	6010B	0.1	0.3
Chromium (t)	0.0059	mg/L	3/2/2009	6010B	0.0006	0.0030
Copper (t)	ND	mg/L	2/25/2009	7211	0.0006	0.0020
Iron (t)	5.02	mg/L	3/4/2009	6010B	0.01	0.04
Lead (t)	0.0009 J-	mg/L	3/3/2009	7421	0.0004	0.002
Magnesium (t)	166	mg/L	3/4/2009	6010B	0.02	0.06
Nickel (t)	0.002 J-	mg/L	3/2/2009	6010B	0.001	0.003
Potassium (t)	2.3	mg/L	3/6/2009	6010B	0.1	0.3
Selenium (t)	0.006	mg/L	2/24/2009	7740	0.001	0.004
Silver (t)	0.0045	mg/L	3/2/2009	6010B	0.0005	0.0020
Sodium (t)	34.0	mg/L	3/6/2009	6010B	0.2	0.8
Thallium (t)	ND	mg/L	3/4/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	3/2/2009	6010B	0.02	0.06

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28601

Project: **Sample Matrix:** Water
Date Received: 2/18/2009 **Date Reported:** 4/8/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28601-005 / SCW						
Antimony (t)	0.002 J-	mg/L	3/2/2009	7041	0.001	0.004
Arsenic (t)	0.002 J-	mg/L	2/27/2009	7060A	0.001	0.004
Beryllium (t)	ND	mg/L	3/2/2009	6010B	0.0001	0.0004
Cadmium (t)	0.00011 J-	mg/L	3/3/2009	7131A	0.00008	0.0004
Calcium (t)	41.5	mg/L	3/4/2009	6010B	0.02	0.06
Chromium (t)	0.0036	mg/L	3/2/2009	6010B	0.0006	0.0030
Copper (t)	0.0047	mg/L	2/25/2009	7211	0.0006	0.0020
Lead (t)	0.0026	mg/L	3/3/2009	7421	0.0004	0.0020
Magnesium (t)	9.81	mg/L	3/4/2009	6010B	0.02	0.06
Nickel (t)	0.003	mg/L	3/2/2009	6010B	0.001	0.003
Potassium (t)	4.4	mg/L	3/6/2009	6010B	0.1	0.3
Selenium (t)	ND	mg/L	2/24/2009	7740	0.001	0.004
Silver (t)	ND	mg/L	3/2/2009	6010B	0.0005	0.0020
Sodium (t)	23.9	mg/L	3/6/2009	6010B	0.2	0.8
Thallium (t)	ND	mg/L	3/4/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	3/2/2009	6010B	0.02	0.06

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ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28601

Project: **Sample Matrix:** Water
Date Received: 2/18/2009 **Date Reported:** 4/8/2009

General Chemistry Parameters

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28601-001 / MW-381						
Chemical Oxygen Demand	8 J-	mg/L	3/4/2009	410.4	6	20
SiO2	6.8	mg/L	4/7/2009	7000	0.4	1.7
Sulfate	400	mg/L	3/10/2009	6010B	0.4	1.4
Turbidity	0.798	NTU's	3/6/2009	180.1	1	1
28601-002 / MW-391						
Chemical Oxygen Demand	ND	mg/L	3/4/2009	410.4	6	20
SiO2	4.0	mg/L	4/7/2009	7000	0.4	1.7
Sulfate	156	mg/L	3/10/2009	6010B	0.4	1.4
Turbidity	0.624	NTU's	3/6/2009	180.1	1	1
28601-003 / MW-393						
Chemical Oxygen Demand	7 J-	mg/L	3/4/2009	410.4	6	20
SiO2	16.4	mg/L	4/7/2009	7000	0.8	3.4
Sulfate	930	mg/L	3/10/2009	6010B	1.8	5.4
Turbidity	13.4	NTU's	3/6/2009	180.1	1	1
28601-004 / MW-384						
Chemical Oxygen Demand	5 J-	mg/L	3/4/2009	410.4	6	20
SiO2	21.5	mg/L	4/7/2009	7000	1.6	6.8
Sulfate	1840	mg/L	3/10/2009	6010B	1.8	5.4
Turbidity	43.4	NTU's	3/6/2009	180.1	2	2

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28601

Project:
Date Received: 2/18/2009

Sample Matrix: Water
Date Reported: 4/8/2009

General Chemistry Parameters

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28601-005 / SCW						
Chemical Oxygen Demand	20 J-	mg/L	3/4/2009	410.4	6	20
Sulfate	41.8	mg/L	3/10/2009	6010B	0.09	0.27
Turbidity	60.4	NTU's	3/6/2009	180.1	2	2

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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North Shore
Analytical, Inc.

MDH Lab # 027-137-389
WDNR Lab # 399017190

4511 W. 1st St., Suite #1
Duluth, MN 55807
Phone: (218) 729-4658
Fax: (218) 729-4659

Analytical Report

Date Reported: 2/26/2009

Client:

White Water Associates, Inc.
Attn: Dr. Bette Premo
429 River Lane
PO Box 27
Amasa, MI 49903

Phone: (906) 822-7889
Fax: (906) 822-7977

Sample Information:

Chain of Custody: 10473
Sampled By:

Method: EPA 1631

Sample ID	Laboratory ID #	Mercury (ng/L)	Sample Date	Analysis Date	MDL (ng/L)
28601-3 MW 393	37122	< 0.5	2/17/2009	2/26/2009	0.1
28601-2 MW 391	37123	< 0.5	2/17/2009	2/26/2009	0.1
28601-4 MW 384	37124	< 0.5	2/17/2009	2/26/2009	0.1
28601-1 MW 381	37125	< 0.5	2/17/2009	2/26/2009	0.1

Low-level mercury results are reagent blank corrected.

Reviewed By: _____

If you have any questions regarding this report, please call (218) 729-4658.

Sincerely,

Linda Christensen
Chemical Engineer

The results provided above pertain only to the samples indicated. All results provided by NSA should be considered in their entirety, and are strictly for the use of its Customers. NSA is in no way responsible for subsequent use of said results, including, but not limited to, separation, detachment, reproduction, or any other use of any portion thereof, by Customers or third parties.

North Shore
Analytical, Inc.

MDH Lab # 027-137-389
WDNR Lab # 399017190

4511 W. 1st St., Suite #1
Duluth, MN 55807
Phone: (218) 729-4658
Fax: (218) 729-4659

Analytical Report

Date Reported: 2/26/2009

Client:

White Water Associates, Inc.
Attn: Dr. Bette Premo
429 River Lane
PO Box 27
Amasa, MI 49903

Phone: (906) 822-7889
Fax: (906) 822-7977

Sample Information:

Chain of Custody: 10473
Sampled By:

Method: EPA 1631

Sample ID	Laboratory ID #	Mercury (ng/L)	Sample Date	Analysis Date	MDL (ng/L)
(458-58)(Blank)	37128	< 0.5	2/17/2009	2/26/2009	0.1
SC-W (173-56)	37129	4.4	2/17/2009	2/26/2009	0.1

Low-level mercury results are reagent blank corrected.

Reviewed By: _____

If you have any questions regarding this report, please call (218) 729-4658.

Sincerely,

Linda Christensen
Chemical Engineer

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North Shore Analytical, Inc.
4511 W. 1st St., Suite #1
Duluth, MN 55807
Phone (218) 729-4658
Fax (218) 729-4659

Record # :

STF-COC-001
Revision Number: 5
Revision Date: 05/01/06

Chain of Custody

Client Name	Great Lakes Environmental Center	Report to: Jamie Saxton	Sampled by: Sara Reitz
Address	739 Hastings St	Phone: 231-941-2230	Project: DTE ENSR
City	Traverse City	State: MI	Zip: 49686
		Fax: 231-941-2240	

NSA Lab #	Bottle #	Client Sample Identification	Date Collected	Time Collected	Matrix	Sample Type: Grab	Sample Type: Composite	Container/ Preservation	Analysis Requested
	422.57	MW 393	2/17/2009	1055	GW	X		G NA	Hg
	96.57	MW 391		1215	GW			G NA	
	183.56	MW 384		1445	GW			G NA	
	418.57	MW 381		1315	GW			G NA	
	173.56	SC-W	↓	1025	GW	✓		G NA	✓
	~~172.56~~	~~LA-W~~ VOID			~~SW~~	—		~~G NA~~	—
	~~417.57~~	~~SC LC-W~~ VOID			~~SW~~	—		~~G NA~~	—
	~~423.57~~	~~LC-W~~ VOID			~~SW~~	—		~~G NA~~	—
	~~184.57~~	~~LA-W~~ VOID			~~SW~~	—		~~G NA~~	—
	~~421.57~~	~~LA-W~~ VOID			~~SW~~	✓		~~G NA~~	✓

Transfer #	Relinquished By	Date	Time	Accepted By	Date	Time	Condition
1	Sara Reitz	2/17/09	1630	Graffesty	2-18-9	1450	
2							
3							
4							

ADDITIONAL COMMENTS:

Low-level mercury bottles supplied by North Shore Analytical? Y N

KEY:	Matrix:		Containers:	Preservation:
LAB USE only	SW = Surface Water	GW = Ground Water	P = Plastic T = Teflon/Fluoropolymer	NA = None Added
	WW = Wastewater	DW = Drinking Water	G = Glass	H = Hydrochloric Acid
	P = Precipitation		B = Plastic Bag	B = Bromine Monochloride

North Shore Analytical, Inc.
4511 W. 1st St., Suite #1
Duluth, MN 55807
Phone (218) 729-4658
Fax (218) 729-4659

Record # : 10473

S1F-COC-001
Revision Number: 5
Revision Date: 05/01/06

20

Chain of Custody

Client Name: WWA						Report to: B Premo			Sampled by:		
Address: 429 River Lane						Phone: 906 822 7889			Project:		
City: Amasa			State: MI	Zip: 49903		Fax:					
NSA Lab #	Bottle #	Client Sample Identification	Date Collected	Time Collected	Matrix	Sample Type: Grab	Sample Type: Composite	Container/ Preservation	Analysis Requested		
37122	422.57	28601-3 MW 393	2-17-9		GW	X		-	LL-Hg		
37123	96.57	-2 391	"	"	"	"	"	"	"		
37124	183.56	-4 384	"	"	"	"	"	"	"		
37125	418.57	-1 381	"	"	"	"	"	"	"		
37126	184.56	28607-1D IUP-W	2-18		"	"	"	"	"		
37127	423.57	-2D LE2-W	"		"	"	"	"	"		
37128	458-58		2/17/09								
37129	173-56	SC-W	↓								

TG

Transfer #	Relinquished By	Date	Time	Accepted By	Date	Time	Condition
1	[signature]	2-19-9	15:00	Kristin Grosz	2/20/09	15:00	OK
2							
3							
4							

ADDITIONAL COMMENTS:

Low-level mercury bottles supplied by North Shore Analytical? (Y) N

KEY:	Matrix:		Containers:	Preservation:
	SW = Surface Water	GW = Ground Water	P = Plastic T = Teflon/Fluoropolymer	NA = None Added
	WW = Wastewater	DW = Drinking Water	G = Glass	H = Hydrochloric Acid
	P = Precipitation		B = Plastic Bag	B = Bromine Monochloride

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Cover Page

Client: Great Lakes Environmental Center **WWA Job #:** 28901

Project: Monitoring **Sample Matrix:** Water
Date Received: 4/15/2009 **Date Reported:** 6/2/2009

Sample Number	Client Sample ID	Date Sampled
28901-001	QUW	04/14/09
28901-002	LE2W	04/14/09
28901-003	IUPW	04/14/09
28901-004	LAW	04/14/09
28901-005	MW 393	04/14/09
28901-006	MW 391	04/14/09

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Cover Page..continued

Client: Great Lakes Environmental Center **WWA Job #:** 28901

Comments (if any):

Key to Laboratory Flags:

B: The analyte was found in the associated blank as well as in the sample.
J+: The quantitation is an estimated value because the result exceeds the calibration range
J-: The quantitation is an estimated value because the result is less than the sample quantitation limit but greater than the detection limit.
M+: A matrix effect was present with a high bias
M-: A matrix effect was present with a low bias
Q: Batch QC data associated with the analysis does not meet the stated objectives
H: Indicates analytical holding time exceedance.
U: The analyte was analyzed for, but not detected.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without the written approval of this laboratory. The Chain of Custody is attached.

This report satisfies the requirements of your project but has not been prepared to comply with NELAP reporting requirements.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and White Water Associates Standard Operating Procedures. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this Final Report is authorized by White Water Associates management, as is verified by the following signature.

Approved By: _____

WI DNR Lab Certification Number: 999971280
MI DEQ Certification Number: 9306
IL EPA NELAC Certification Number: 200049

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28901

Project: Monitoring **Sample Matrix:** Water
Date Received: 4/15/2009 **Date Reported:** 6/2/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28901-001 / QUW						
Antimony (t)	ND M-	mg/L	4/23/2009	7041	0.001	0.004
Arsenic (t)	ND M+	mg/L	4/28/2009	7060	0.001	0.004
Beryllium (t)	ND	mg/L	4/29/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	5/6/2009	7131	0.00008	0.00040
Calcium (t)	127	mg/L	4/28/2009	6010B	0.04	0.14
Chromium (t)	0.0032	mg/L	4/29/2009	6010B	0.0006	0.0020
Copper (t)	ND	mg/L	5/1/2009	7211	0.0006	0.0020
Lead (t)	0.0006 J-	mg/L	4/30/2009	7421	0.0006	0.0020
Magnesium (t)	45.3	mg/L	4/28/2009	6010B	0.02	0.06
Nickel (t)	ND	mg/L	4/29/2009	6010B	0.003	0.010
Potassium (t)	2.46	mg/L	4/28/2009	6010B	0.05	0.20
Selenium (t)	0.001 M-J	mg/L	4/29/2009	7740	0.001	0.004
Silver (t)	0.0010 J-	mg/L	4/29/2009	6010B	0.0005	0.0015
Sodium (t)	100	mg/L	4/28/2009	6010B	0.2	0.6
Thallium (t)	ND	mg/L	5/7/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	4/29/2009	6010B	0.01	0.03

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

429 River Lane • P.O. Box 27 • Amasa, Michigan 49903 • Phone (906) 822-7373 • FAX (906) 822-7977

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28901

Project: Monitoring **Sample Matrix:** Water
Date Received: 4/15/2009 **Date Reported:** 6/2/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28901-002 / LE2W						
Antimony (t)	0.002 J-	mg/L	4/23/2009	7041	0.001	0.004
Arsenic (t)	0.002 J-	mg/L	4/28/2009	7060	0.001	0.004
Beryllium (t)	ND	mg/L	4/29/2009	6010B	0.0001	0.0004
Cadmium (t)	0.00009 M+J	mg/L	5/6/2009	7131	0.00008	0.00040
Calcium (t)	56.6	mg/L	4/28/2009	6010B	0.04	0.14
Chromium (t)	0.0052	mg/L	4/29/2009	6010B	0.0006	0.0020
Copper (t)	0.0036	mg/L	5/1/2009	7211	0.0006	0.0020
Lead (t)	0.0029	mg/L	4/30/2009	7421	0.0006	0.0020
Magnesium (t)	14.4	mg/L	4/28/2009	6010B	0.02	0.06
Nickel (t)	0.004 J-	mg/L	4/29/2009	6010B	0.003	0.010
Potassium (t)	3.02	mg/L	4/28/2009	6010B	0.05	0.20
Selenium (t)	0.002 J-	mg/L	4/29/2009	7740	0.001	0.004
Silver (t)	0.0007 J-	mg/L	4/29/2009	6010B	0.0005	0.0015
Sodium (t)	25.4	mg/L	4/28/2009	6010B	0.2	0.6
Thallium (t)	ND	mg/L	5/7/2009	7841	0.001	0.004
Zinc (t)	0.02 J-	mg/L	4/29/2009	6010B	0.01	0.03

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28901

Project: Monitoring **Sample Matrix:** Water
Date Received: 4/15/2009 **Date Reported:** 6/2/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28901-003 / IUPW						
Antimony (t)	0.001 J-	mg/L	4/23/2009	7041	0.001	0.004
Arsenic (t)	ND	mg/L	4/28/2009	7060	0.001	0.004
Beryllium (t)	ND	mg/L	4/29/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	5/6/2009	7131	0.00008	0.0004
Calcium (t)	51.8	mg/L	4/28/2009	6010B	0.04	0.14
Chromium (t)	0.0025	mg/L	4/29/2009	6010B	0.0006	0.0020
Copper (t)	ND	mg/L	5/1/2009	7211	0.0006	0.0020
Lead (t)	0.0007 J-	mg/L	4/30/2009	7421	0.0006	0.0020
Magnesium (t)	13.8	mg/L	4/28/2009	6010B	0.02	0.06
Nickel (t)	ND	mg/L	4/29/2009	6010B	0.003	0.010
Potassium (t)	2.71	mg/L	4/28/2009	6010B	0.05	0.20
Selenium (t)	ND	mg/L	4/29/2009	7740	0.001	0.004
Silver (t)	0.0008 J-	mg/L	4/29/2009	6010B	0.0003	0.0010
Sodium (t)	27.8	mg/L	4/28/2009	6010B	0.2	0.6
Thallium (t)	ND M-	mg/L	5/7/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	4/29/2009	6010B	0.01	0.03

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28901

Project: Monitoring **Sample Matrix:** Water
Date Received: 4/15/2009 **Date Reported:** 6/2/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28901-004 / LAW						
Antimony (t)	ND	mg/L	4/23/2009	7041	0.001	0.004
Arsenic (t)	ND	mg/L	4/28/2009	7060	0.001	0.004
Beryllium (t)	ND	mg/L	4/29/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	5/6/2009	7131	0.00008	0.0004
Calcium (t)	62.4	mg/L	4/28/2009	6010B	0.04	0.14
Chromium (t)	0.0027	mg/L	4/29/2009	6010B	0.0006	0.0020
Copper (t)	0.0011 J-	mg/L	5/1/2009	7211	0.0006	0.0020
Lead (t)	0.0010 J-	mg/L	4/30/2009	7421	0.0006	0.0020
Magnesium (t)	17.9	mg/L	4/28/2009	6010B	0.02	0.06
Nickel (t)	ND	mg/L	4/29/2009	6010B	0.003	0.010
Potassium (t)	3.26	mg/L	4/28/2009	6010B	0.05	0.20
Selenium (t)	ND	mg/L	4/29/2009	7740	0.001	0.004
Silver (t)	0.0008 J-	mg/L	4/29/2009	6010B	0.0003	0.0010
Sodium (t)	34.8	mg/L	4/28/2009	6010B	0.2	0.6
Thallium (t)	ND	mg/L	5/7/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	4/29/2009	6010B	0.01	0.03

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28901

Project: Monitoring **Sample Matrix:** Water
Date Received: 4/15/2009 **Date Reported:** 6/2/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28901-005 / MW 393						
Antimony (t)	ND	mg/L	4/23/2009	7041	0.001	0.004
Arsenic (t)	ND	mg/L	4/28/2009	7060	0.001	0.004
Beryllium (t)	ND	mg/L	4/29/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	5/6/2009	7131	0.00008	0.0004
Calcium (t)	304	mg/L	4/30/2009	6010B	0.1	0.3
Chromium (t)	0.0044	mg/L	4/29/2009	6010B	0.0006	0.0020
Copper (t)	ND	mg/L	5/1/2009	7211	0.0006	0.0020
Iron (t)	1.32	mg/L	4/28/2009	6010B	0.04	0.14
Lead (t)	ND	mg/L	4/30/2009	7421	0.0006	0.0020
Magnesium (t)	112	mg/L	4/28/2009	6010B	0.02	0.06
Nickel (t)	ND	mg/L	4/29/2009	6010B	0.003	0.010
Potassium (t)	14.5	mg/L	4/28/2009	6010B	0.05	0.20
Selenium (t)	0.003 J-	mg/L	4/29/2009	7740	0.001	0.004
Silver (t)	0.0025	mg/L	4/29/2009	6010B	0.0003	0.0010
Sodium (t)	31.9	mg/L	4/28/2009	6010B	0.2	0.6
Thallium (t)	ND	mg/L	5/7/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	4/29/2009	6010B	0.01	0.03

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28901

Project: Monitoring **Sample Matrix:** Water
Date Received: 4/15/2009 **Date Reported:** 6/2/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28901-006 / MW 391						
Antimony (t)	ND	mg/L	4/23/2009	7041	0.001	0.004
Arsenic (t)	ND	mg/L	4/28/2009	7060	0.001	0.004
Beryllium (t)	ND	mg/L	4/29/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	5/6/2009	7131	0.00008	0.0004
Calcium (t)	79.1	mg/L	4/28/2009	6010B	0.04	0.14
Chromium (t)	0.0015 J-	mg/L	4/29/2009	6010B	0.0006	0.0020
Copper (t)	ND	mg/L	5/1/2009	7211	0.0006	0.0020
Iron (t)	0.10 J-	mg/L	4/28/2009	6010B	0.04	0.14
Lead (t)	ND	mg/L	4/30/2009	7421	0.0006	0.0020
Magnesium (t)	24.7	mg/L	4/28/2009	6010B	0.02	0.06
Nickel (t)	ND	mg/L	4/29/2009	6010B	0.003	0.010
Potassium (t)	2.56	mg/L	4/28/2009	6010B	0.05	0.20
Selenium (t)	ND	mg/L	4/29/2009	7740	0.001	0.004
Silver (t)	0.0012	mg/L	4/29/2009	6010B	0.0003	0.0010
Sodium (t)	22.1	mg/L	4/28/2009	6010B	0.2	0.6
Thallium (t)	ND	mg/L	5/7/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	4/29/2009	6010B	0.01	0.03

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28901

Project: Monitoring **Sample Matrix:** Water
Date Received: 4/15/2009 **Date Reported:** 6/2/2009

General Chemistry Parameters

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28901-001 / QUW						
Chemical Oxygen Demand	10 J-	mg/L	4/21/2009	410.4	6	20
SiO2	1.8 M-	mg/L	5/21/2009	7000	0.3	1.4
Sulfate	398	mg/L	4/23/2009	6010B	1.5	4.5
Turbidity	2.18	NTU's	4/15/2009	180.1	1	1
28901-002 / LE2W						
Chemical Oxygen Demand	28	mg/L	4/21/2009	410.4	6	20
SiO2	9.8	mg/L	5/21/2009	7000	0.7	2.7
Sulfate	49.2	mg/L	4/23/2009	6010B	0.3	0.9
Turbidity	53.7	NTU's	4/15/2009	180.1	1	1
28901-003 / IUPW						
Chemical Oxygen Demand	20	mg/L	4/21/2009	410.4	6	20
SiO2	5.9	mg/L	5/21/2009	7000	0.3	1.4
Sulfate	35	mg/L	4/23/2009	375.2	4	12
Turbidity	16.5	NTU's	4/15/2009	180.1	1	1
28901-004 / LAW						
Chemical Oxygen Demand	21	mg/L	4/21/2009	410.4	6	20
SiO2	7.1	mg/L	5/21/2009	7000	0.7	2.7
Sulfate	72.2	mg/L	4/23/2009	6010B	0.6	1.8
Turbidity	25.7	NTU's	4/15/2009	180.1	1	1

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28901

Project: Monitoring **Sample Matrix:** Water
Date Received: 4/15/2009 **Date Reported:** 6/2/2009

General Chemistry Parameters

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28901-005 / MW 393						
Chemical Oxygen Demand	16 J-	mg/L	4/21/2009	410.4	6	20
SiO2	13	mg/L	5/21/2009	7000	0.7	2.7
Sulfate	853	mg/L	4/23/2009	6010B	3	9
Turbidity	7.89	NTU's	4/15/2009	180.1	1	1
28901-006 / MW 391						
Chemical Oxygen Demand	ND	mg/L	4/21/2009	410.4	10	20
SiO2	3.5	mg/L	5/21/2009	7000	0.3	1.4
Sulfate	179	mg/L	4/23/2009	6010B	0.6	1.8
Turbidity	1.84	NTU's	4/15/2009	180.1	1	1

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

J.O.# 28901

SAMPLER'S SIGNATURE

CLIENT NAME: JAMIE SAXTON, GREAT LAKES ENVIRONMENTAL CNTR
ADDRESS 739 Hastings St
PHONE # Traverse City, MI 49686
231 941 2230

SAMPLE LOCATION	SAMPLE I.D.#	TIME	DATE	SAMPLE TYPE: GRAB	COMPOSITE	MATRIX	NO. OF CONTAINERS	LL Hg	COD H2SO4	Metals* HNO3	TP 125 plastic	Turbidity, Si, SO4 23# plastic			REMARKS: see Betty Primo
QUW	1	10:00	4/14/09	X			X1	X	X	X	X	X			Betty Primo
LEZ W	2	12:00		X			X1	X	X	X	X	X			
IUPW	3	12:30		X			X1	X	X	X	X	X			
LAW	4	1340		X			X1	X	X	X	X	X			
MW 393	5	1545		X			X1	X	X	X	X	X			turbidity, Si, SO4
MW 391	6	1700		X			X1	X	X	X	X	X			
								A	B	C	D	E			Metals:*
															Fe,
														10+	K, Ca, Mg, Sb, Na
															As, Be, Cd, Cr,
															Cu, Pb, Ni
															Se, Ag, Tl, Zn

RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY
	4/14/09	1900					

RELINQUISHED BY	DATE	TIME	RECEIVED BY LABORATORY	DATE	TIME	REMARKS:
				4-15-9	11:45	

White Water Associates, Inc.
429 River Lane, P.O. Box 27
Amasa, Michigan 49903
Phone (906) 822-7373, Fax -7977

Customer retain pink; send white and yellow with samples. Original (white) will be returned with report.

Attach to the COC and include with the final report.

WHITE WATER ASSOCIATES, INC.

Login Checklist

Project Number: 28901 Date Logged in: 4/15/19 Login Person Initials: CM

# of Coolers: 1 Courier: UPS FedEx

Client: GLEC Project Name: _____

If no to any, notify the project manager and project manager documents client response below.

		YES	NO
1.	Were custody seals/original packing tape intact?	✓	
2.	Are the samples in good condition, i.e. not broken or leaking?	✓	
3.	Are samples within holding times?	✓	
4.	Were the samples received on ice (ice in direct contact with the samples)?	✓	
5.	Is the temperature of the samples between 2-6°C? Temp. 1.8 *NOTE: Samples not between 2-6 °C that are received at the laboratory on the day of sample collections do not require client notification.*	✓	
6.	Do the samples match the COC?	✓	✓
7.	Were the proper containers used?	✓	
8.	Were the samples collected in White Water lab containers? *No corrective action required.*	✓	
9.	Is there adequate sample volume for requested analyses and QC?	✓	
10.	Do water VOC samples contain headspace less than the size of a pea?	n/a	
11.	Are samples preserved to the proper pH? *If no, identify sample bottle and preservative, adjust to the proper pH, and note below.*	✓	
12.	Is the chain of custody signed?	✓	
13.	Is sub-sampling required? *(Note bottles created and preserved below.)*		✓
14.	For Dissolved Analysis, were samples filtered in the lab?		
15.	Were encores received? (VOC analysis)		
16.	Were soil VOCs preserved with methanol in the lab?		
17.	Is client contact necessary? Provide documentation below.	✓	

COMMENTS/CORRECTIVE ACTION

BP asked about parameters

CLIENT RESPONSE (Provide date/time of contact, client response and project manager initials)

North Shore Analytical, Inc.
4511 W. 1st St., Suite #1
Duluth, MN 55807
Phone (218) 729-4658
Fax (218) 729-4659

Record # :

STF-COC-001
Revision Number: 5
Revision Date: 05/01/06

Chain of Custody

Client Name	IUWA	Report to:	B Preuss	Sampled by:
Address	429 River Lane	Phone:	906 822 7889	Project:
City	Amasa	State: MI	Zip: 49903	Fax:

NSA Lab #	Bottle #	Client Sample Identification	Date Collected	Time Collected	Matrix	Sample Type: Grab	Sample Type: Composite	Container/ Preservation	Analysis Requested
	421.57	28901-1A							
	359.57	2							
	360.58	3							
	172.56	4							
	260.58	5							
	572.59	6							

Transfer #	Relinquished By	Date	Time	Accepted By	Date	Time	Condition
1	[signature]	4-15-9	15:00				
2							
3							
4							

ADDITIONAL COMMENTS:

Low-level mercury bottles supplied by North Shore Analytical? Y N

KEY:	Matrix:		Containers:	Preservation:
Lab use only	SW = Surface Water	GW = Ground Water	P = Plastic T = Teflon/Fluoropolymer	NA = None Added
	WW = Wastewater	DW = Drinking Water	G = Glass	H = Hydrochloric Acid
	P = Precipitation		B = Plastic Bag	B = Bromine Monochloride

North Shore Analytical, Inc.
4511 W. 1st St., Suite #1
Duluth, MN 55807
Phone (218) 729-4658
Fax (218) 729-4659

Record # : 10654

STF-COC-001 20
Revision Number: 5
Revision Date: 05/01/06

Chain of Custody

Client Name: WWA		Report to: B Premo	Sampled by:
Address: 429 River Lane		Phone: 906 822 7889	Project:
City: Amasa	State: MI Zip: 49903	Fax:	

NSA Lab #	Bottle #	Client Sample Identification	Date Collected	Time Collected	Matrix	Sample Type: Grab	Sample Type: Composite	Container/ Preservation	Analysis Requested
37914	421.57	28901-1A	4/13/09		WW	X		G/	QH -W
37915	359.58	2	↓		↓	X		G/	LEZ-W
37916	360.58	3	↓		↓	X		G/	ILP-W
37917	172.56	4	4/14/09		↓	X		G/	LA-W
37918	260.58	5	↓		↓	X		G/	MW 393
37919	572.59	6	↓		↓	X		G/	MW 391

Transfer #	Relinquished By	Date	Time	Accepted By	Date	Time	Condition
1	Chaffey	4-15-9	15:00	Kristin Gross	4/16/09	10:00	OK
2							
3							
4							

ADDITIONAL COMMENTS:

Low-level mercury bottles supplied by North Shore Analytical? (Y) N

KEY:

Matrix:
SW = Surface Water
GW = Ground Water
WW = Wastewater
DW = Drinking Water
P = Precipitation

Containers:
P = Plastic
T = Teflon/Fluoropolymer
G = Glass
B = Plastic Bag

Preservation:
NA = None Added
H = Hydrochloric Acid
B = Bromine Monochloride

North Shore
Analytical, Inc.

MDH Lab # 027-137-389
WDNR Lab # 399017190

4511 W. 1st St., Suite #1
Duluth, MN 55807
Phone: (218) 729-4658
Fax: (218) 729-4659

Analytical Report

Date Reported: 4/21/2009

Client:

White Water Associates, Inc.
Attn: Dr. Bette Premo
429 River Lane
PO Box 27
Amasa, MI 49903

Phone: (906) 822-7889
Fax: (906) 822-7977

Sample Information:

Chain of Custody: 10654
Sampled By:

Method: EPA 1631

Sample ID	Laboratory ID #	Mercury (ng/L)	Sample Date	Analysis Date	MDL (ng/L)
28901-1A	37914	< 0.5	4/13/2009	4/17/2009	0.1
28901-2A	37915	9.2	4/13/2009	4/20/2009	0.1
28901-3A	37916	1.8	4/13/2009	4/20/2009	0.1
28901-4A	37917	3.0	4/14/2009	4/20/2009	0.1
28901-5A	37918	< 0.5	4/14/2009	4/20/2009	0.1
28901-6A	37919	< 0.5	4/14/2009	4/20/2009	0.1

Low-level mercury results are reagent blank corrected.

Reviewed By: _____

If you have any questions regarding this report, please call (218) 729-4658.

Sincerely,

Linda Christensen
Chemical Engineer

The results provided above pertain only to the samples indicated. All results provided by NSA should be considered in their entirety, and are strictly for the use of its Customers. NSA is in no way responsible for subsequent use of said results, including, but not limited to, separation, detachment, reproduction, or any other use of any portion thereof, by Customers or third parties.

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Cover Page

Client: Great Lakes Environmental Center **WWA Job #:** 28908

Project: Monitoring DTE Monroe, MI **Sample Matrix:** Water
Date Received: 4/16/2009 **Date Reported:** 6/2/2009

Sample Number	Client Sample ID	Date Sampled
28908-001	MW 381D	04/15/09
28908-002	MW 384D	04/15/09
28908-003	SCW	04/15/09
28908-004	LEIW	04/15/09
28908-005	Blank LL Hg	04/15/09

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Cover Page..continued

Client: Great Lakes Environmental Center **WWA Job #:** 28908

Comments (if any):

Key to Laboratory Flags:

B: The analyte was found in the associated blank as well as in the sample.
J+: The quantitation is an estimated value because the result exceeds the calibration range
J-: The quantitation is an estimated value because the result is less than the sample quantitation limit but greater than the detection limit.
M+: A matrix effect was present with a high bias
M-: A matrix effect was present with a low bias
Q: Batch QC data associated with the analysis does not meet the stated objectives
H: Indicates analytical holding time exceedance.
U: The analyte was analyzed for, but not detected.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without the written approval of this laboratory. The Chain of Custody is attached.

This report satisfies the requirements of your project but has not been prepared to comply with NELAP reporting requirements.

I certify that the data contained in this Final Report has been generated and reviewed in accordance with approved methods and White Water Associates Standard Operating Procedures. Exceptions, if any, are discussed in the accompanying sample narrative. Release of this Final Report is authorized by White Water Associates management, as is verified by the following signature.

Approved By: Robert Riemer

WI DNR Lab Certification Number: 999971280
MI DEQ Certification Number: 9306
IL EPA NELAC Certification Number: 200049

ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28908

Project: Monitoring DTE Monroe, MI **Sample Matrix:** Water
Date Received: 4/16/2009 **Date Reported:** 6/2/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28908-001 / MW 381D						
Antimony (t)	ND	mg/L	4/23/2009	7041	0.001	0.004
Arsenic (t)	ND	mg/L	4/28/2009	7060	0.001	0.004
Beryllium (t)	ND	mg/L	4/29/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	5/6/2009	7131	0.00008	0.0004
Calcium (t)	169	mg/L	4/28/2009	6010B	0.04	0.14
Chromium (t)	0.0027	mg/L	4/29/2009	6010B	0.0006	0.0020
Copper (t)	ND	mg/L	5/1/2009	7211	0.0006	0.0020
Iron (t)	0.18	mg/L	4/28/2009	6010B	0.04	0.14
Lead (t)	ND	mg/L	4/30/2009	7421	0.0006	0.0020
Magnesium (t)	55.8	mg/L	4/28/2009	6010B	0.02	0.06
Nickel (t)	ND	mg/L	4/29/2009	6010B	0.003	0.010
Potassium (t)	1.96	mg/L	4/28/2009	6010B	0.05	0.20
Selenium (t)	0.003 J-	mg/L	4/29/2009	7740	0.001	0.004
Silver (t)	0.0014	mg/L	4/29/2009	6010B	0.0003	0.0010
Sodium (t)	40.9	mg/L	4/28/2009	6010B	0.2	0.6
Thallium (t)	ND	mg/L	5/7/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	4/29/2009	6010B	0.01	0.03

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28908

Project: Monitoring DTE Monroe, MI **Sample Matrix:** Water
Date Received: 4/16/2009 **Date Reported:** 6/2/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28908-002 / MW 384D						
Antimony (t)	ND	mg/L	4/23/2009	7041	0.001	0.004
Arsenic (t)	0.002 J-	mg/L	4/28/2009	7060	0.001	0.004
Beryllium (t)	ND	mg/L	4/29/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	5/6/2009	7131	0.00008	0.0004
Calcium (t)	518	mg/L	4/30/2009	6010B	0.1	0.3
Chromium (t)	0.0077	mg/L	4/29/2009	6010B	0.0006	0.0020
Copper (t)	ND	mg/L	5/1/2009	7211	0.0006	0.0020
Iron (t)	0.04 J-	mg/L	4/28/2009	6010B	0.04	0.14
Lead (t)	ND	mg/L	4/30/2009	7421	0.0006	0.0020
Magnesium (t)	176	mg/L	4/28/2009	6010B	0.02	0.06
Nickel (t)	ND	mg/L	4/29/2009	6010B	0.003	0.010
Potassium (t)	3.07	mg/L	4/28/2009	6010B	0.05	0.20
Selenium (t)	0.004 J-	mg/L	4/29/2009	7740	0.001	0.004
Silver (t)	0.0044	mg/L	4/29/2009	6010B	0.0003	0.0010
Sodium (t)	28.9	mg/L	4/28/2009	6010B	0.2	0.6
Thallium (t)	ND	mg/L	5/7/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	4/29/2009	6010B	0.01	0.03

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28908

Project: Monitoring DTE Monroe, MI **Sample Matrix:** Water
Date Received: 4/16/2009 **Date Reported:** 6/2/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28908-003 / SCW						
Antimony (t)	ND	mg/L	4/23/2009	7041	0.001	0.004
Arsenic (t)	0.002 J-	mg/L	4/28/2009	7060	0.001	0.004
Beryllium (t)	ND	mg/L	4/29/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	5/6/2009	7131	0.00008	0.0004
Calcium (t)	55.8	mg/L	4/28/2009	6010B	0.04	0.14
Chromium (t)	0.0033	mg/L	4/29/2009	6010B	0.0006	0.0020
Copper (t)	0.0016 J-	mg/L	5/1/2009	7211	0.0006	0.0020
Lead (t)	0.0011 J-	mg/L	4/30/2009	7421	0.0006	0.0020
Magnesium (t)	14.1	mg/L	4/28/2009	6010B	0.02	0.06
Nickel (t)	ND	mg/L	4/29/2009	6010B	0.003	0.010
Potassium (t)	2.86	mg/L	4/28/2009	6010B	0.05	0.20
Selenium (t)	0.001 J-	mg/L	4/29/2009	7740	0.001	0.004
Silver (t)	0.0005 J-	mg/L	4/29/2009	6010B	0.0003	0.0010
Sodium (t)	24.6	mg/L	4/28/2009	6010B	0.2	0.6
Thallium (t)	ND	mg/L	5/7/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	4/29/2009	6010B	0.01	0.03

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28908

Project: Monitoring DTE Monroe, MI **Sample Matrix:** Water
Date Received: 4/16/2009 **Date Reported:** 6/2/2009

Trace Metals - Total

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28908-004 / LEIW						
Antimony (t)	ND	mg/L	4/23/2009	7041	0.001	0.004
Arsenic (t)	0.001 J-	mg/L	4/28/2009	7060	0.001	0.004
Beryllium (t)	ND	mg/L	4/29/2009	6010B	0.0001	0.0004
Cadmium (t)	ND	mg/L	5/6/2009	7131	0.00008	0.0004
Calcium (t)	41.9	mg/L	4/28/2009	6010B	0.04	0.14
Chromium (t)	0.0026	mg/L	4/29/2009	6010B	0.0006	0.0020
Copper (t)	0.0012 J-	mg/L	5/1/2009	7211	0.0006	0.0020
Lead (t)	0.0016 J-	mg/L	4/30/2009	7421	0.0006	0.0020
Magnesium (t)	11.5	mg/L	4/28/2009	6010B	0.02	0.06
Nickel (t)	ND	mg/L	4/29/2009	6010B	0.003	0.010
Potassium (t)	1.95	mg/L	4/28/2009	6010B	0.05	0.20
Selenium (t)	ND	mg/L	4/29/2009	7740	0.001	0.004
Silver (t)	0.0006 J-	mg/L	4/29/2009	6010B	0.0003	0.0010
Sodium (t)	20.6	mg/L	4/28/2009	6010B	0.2	0.6
Thallium (t)	ND M-	mg/L	5/7/2009	7841	0.001	0.004
Zinc (t)	ND	mg/L	4/29/2009	6010B	0.01	0.03

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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ANALYTICAL REPORT

ECOLOGICAL CONSULTING AND
ENVIRONMENTAL LABORATORY SERVICES

WHITE WATER ASSOCIATES, INC.

Client: Great Lakes Environmental Center **WWA Job #:** 28908

Project: Monitoring DTE Monroe, MI **Sample Matrix:** Water
Date Received: 4/16/2009 **Date Reported:** 6/2/2009

General Chemistry Parameters

Sample / Client Sample ID	Result	Units	Date	Method	MDL	MQL
28908-001 / MW 381D						
Chemical Oxygen Demand	ND	mg/L	4/21/2009	410.4	6	20
SiO2	5.6 M-	mg/L	5/21/2009	7000	0.3	1.4
Sulfate	417	mg/L	4/23/2009	6010B	1.5	4.5
Turbidity	1.74	NTU's	4/17/2009	180.1	1	1
28908-002 / MW 384D						
Chemical Oxygen Demand	8 J-	mg/L	4/21/2009	410.4	6	20
SiO2	8.9	mg/L	5/21/2009	7000	0.7	2.7
Sulfate	1800	mg/L	4/23/2009	6010B	4	14
Turbidity	ND	NTU's	4/17/2009	180.1	1	1
28908-003 / SCW						
Chemical Oxygen Demand	9 J-	mg/L	4/21/2009	410.4	6	20
SiO2	8.1	mg/L	5/21/2009	7000	0.7	2.7
Sulfate	53.6	mg/L	4/23/2009	6010B	0.09	0.27
Turbidity	20.9 2	NTU's	4/17/2009	180.1	2	2
28908-004 / LEIW						
Chemical Oxygen Demand	8 J-	mg/L	4/21/2009	410.4	6	20
SiO2	2.9	mg/L	5/21/2009	7000	0.3	1.4
Sulfate	32.5	mg/L	4/23/2009	6010B	0.09	0.27
Turbidity	24.4	NTU's	4/17/2009	180.1	1	1

ND = Not Detected, MDL = Method Detection Limit, MQL = Method Quantitation Limit,
ppm = mg/l (liquid) or mg/kg (solid), ppb = ug/l (liquid) or ug/kg (solid)

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North Shore
Analytical, Inc.

MDH Lab # 027-137-389
WDNR Lab # 399017190

4511 W. 1st St., Suite #1
Duluth, MN 55807
Phone: (218) 729-4658
Fax: (218) 729-4659

Analytical Report

Date Reported: 4/22/2009

Client:

White Water Associates, Inc.
Attn: Dr. Bette Premo
429 River Lane
PO Box 27
Amasa, MI 49903

Phone: (906) 822-7889
Fax: (906) 822-7977

Sample Information:

Chain of Custody: 10665
Sampled By:

Method: EPA 1631

Sample ID	Laboratory ID #	Mercury (ng/L)	Sample Date	Analysis Date	MDL (ng/L)
28908-1A	37949	< 0.5	4/15/2009	4/21/2009	0.1
28908-2A	37950	< 0.5	4/15/2009	4/21/2009	0.1
28908-3A	37951	3.6	4/15/2009	4/21/2009	0.1
28908-4A	37952	5.4	4/15/2009	4/21/2009	0.1
28908-5 Blank	37953	< 0.5	4/15/2009	4/21/2009	0.1

Low-level mercury results are reagent blank corrected.

Reviewed By: LC

RECEIVED
APR 2 7 2009

If you have any questions regarding this report, please call (218) 729-4658.

Sincerely,

Linda Christensen
Chemical Engineer

The results provided above pertain only to the samples indicated. All results provided by NSA should be considered in their entirety, and are strictly for the use of its Customers. NSA is in no way responsible for subsequent use of said results, including, but not limited to, separation, detachment, reproduction, or any other use of any portion thereof, by Customers or third parties.

North Shore Analytical, Inc.
4511 W. 1st St., Suite #1
Duluth, MN 55807
Phone (218) 729-4658
Fax (218) 729-4659

Record # : 10664

STF-COC-001
Revision Number: 5
Revision Date: 05/01/06

20

Chain of Custody

Client Name: WWA						Report to: B Premo			Sampled by: SFL		
Address: 429 Rivers Lane						Phone: 906-822-7889			Project:		
City: Amasa			State: MI	Zip: 49903		Fax:					
NSA Lab #	Bottle #	Client Sample Identification	Date Collected	Time Collected	Matrix	Sample Type: Grab	Sample Type: Composite	Container/ Preservation	Analysis Requested		
KG 37917	117.61	28906-8 Eff	4-15-9		WW	X		G/	LL Hg		
37918	78.61	FB	↓		DI	X		G/	1		
Transfer #	Relinquished By		Date	Time	Accepted By			Date	Time	Condition	
1	[signature]		4-16-9	15:00	Kristin Gross			4/17/09	10:30	OK	
2											
3											
4											

ADDITIONAL COMMENTS:

Low-level mercury bottles supplied by North Shore Analytical? (Y) N

KEY:	Matrix:		Containers:		Preservation:
	SW = Surface Water	GW = Ground Water	P = Plastic	T = Teflon/Fluoropolymer	NA = None Added
	WW = Wastewater	DW = Drinking Water	G = Glass		H = Hydrochloric Acid
	P = Precipitation		B = Plastic Bag		B = Bromine Monochloride

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

White Water Associates, Inc.
429 River Lane, P.O. Box 27
Amasa, Michigan 49903
Phone (906) 822-7373, Fax -7977

J.O.#	CLIENT NAME	NO. OF CONTAINERS	ANALYSIS TYPE REQUESTED
28908	Great Lakes Environmental Ctr		
SAMPLER'S SIGNATURE	ADDRESS Jamie Saxton 739 HASTINGS ST Traverse City MI 49684		
	PHONE # (231) 941-2230		

SAMPLE LOCATION	SAMPLE I.D.#	TIME	DATE	SAMPLE TYPE: GRAB	SAMPLE TYPE: COMPOSITE	SAMPLE TYPE: MATRIX	LL Hg	500ml Plastic Fe	250ml Plastic COD	250ml Plastic Metals	500ml HNO3			REMARKS:
1 MW 381D →	DTE Monroe MI	1050	4/15/09	X			X	X	X	X	X			See bottle Rino
2 MW 384D →	DTE Monroe MI	1240	4/15/09	X			X	X	X	X	X			
3 DTE ENSR Monroe MI	SCW	1430	4/15/09	X			X	X		X	X			
4 DTE ENSR Monroe MI	FIELD	1530	4/15/09	X			X	X		X	X			
5 ↓	Blank	1530	4/15/09	N/A			X							
							A	D		B	C			

RELINQUISHED BY	DATE	TIME	RECEIVED BY	RELINQUISHED BY	DATE	TIME	RECEIVED BY
Sara Reif	4/15/09	1700					
RELINQUISHED BY	DATE	TIME	RECEIVED BY LABORATORY	DATE	TIME	REMARKS:	
			Chad Orr	4-16-9	11:30		

Customer retain pink; send white and yellow with samples. Original (white) will be returned with report.

Attach to the COC and include with the final report.

WHITE WATER ASSOCIATES, INC.

Login Checklist

Project Number: 28908 Date Logged in: 4/16/19 Login Person Initials: EL

# of Coolers: 1 Courier: Fedex

Client: GLEC Project Name: _____

If no to any, notify the project manager and project manager documents client response below.

		YES	NO
1.	Were custody seals/original packing tape intact?	✓	
2.	Are the samples in good condition, i.e. not broken or leaking?	✓	
3.	Are samples within holding times?	✓	
4.	Were the samples received on ice (ice in direct contact with the samples)?	✓	
5.	Is the temperature of the samples between 2-6°C? Temp. 0 *NOTE: Samples not between 2-6 °C that are received at the laboratory on the day of sample collections do not require client notification.*		✓
6.	Do the samples match the COC?	✓	
7.	Were the proper containers used?	✓	
8.	Were the samples collected in White Water lab containers? *No corrective action required.*	✓	
9.	Is there adequate sample volume for requested analyses and QC?	✓	
10.	Do water VOC samples contain headspace less than the size of a pea?	NA	
11.	Are samples preserved to the proper pH? *If no, identify sample bottle and preservative,adjust to the proper pH, and note below.*	✓	
12.	Is the chain of custody signed?	✓	
13.	Is sub-sampling required? *(Note bottles created and preserved below.)*		✓
14.	For Dissolved Analysis, were samples filtered in the lab?		
15.	Were encores received? (VOC analysis)		
16.	Were soil VOCs preserved with methanol in the lab?		
17.	Is client contact necessary? Provide documentation below.		✓

COMMENTS/CORRECTIVE ACTION

_____

_____

_____

CLIENT RESPONSE (Provide date/time of contact, client response and project manager initials)

_____

_____

_____

_____

bSampleID	SampleDescription	ParamID	Results	Units	RL	LabQualifie	AnalysisMethod	AnalysisDate	SampleDate	Analyst	Calibration Date	Calibration Person
'07220010	LE1	TKN	0.416	mg/L	0.3		EPA 351.2	8/4/2008	7/22/2008	Ben Cook	8/4/2008	Ben Cook
'07220001	SC	TKN	0.906	mg/L	0.3		EPA 351.2	8/4/2008	7/22/2008	Ben Cook	8/4/2008	Ben Cook
'07220002	LE2	TKN	0.526	mg/L	0.3		EPA 351.2	8/4/2008	7/22/2008	Ben Cook	8/4/2008	Ben Cook
'07220003	393	TKN	0.357	mg/L	0.3		EPA 351.2	8/4/2008	7/22/2008	Ben Cook	8/4/2008	Ben Cook
'07220001A	SC	TSS	29.8	mg/L	0.5		A2540D	7/29/2008	7/22/2008	Ben Cook	7/29/2008	Ben Cook
'07220001B	SC	TSS	20.0	mg/L	0.5		A2540D	7/29/2008	7/22/2008	Ben Cook	7/29/2008	Ben Cook
'07220002	LE2	TSS	2.3	mg/L	0.5		A2540D	7/29/2008	7/22/2008	Ben Cook	7/29/2008	Ben Cook
'07220003	393	TSS	24.5	mg/L	0.5		A2540D	7/29/2008	7/22/2008	Ben Cook	7/29/2008	Ben Cook
'07220004	IP	TSS	5.0	mg/L	0.5		A2540D	7/29/2008	7/22/2008	Ben Cook	7/29/2008	Ben Cook
'07220005	LA	TSS	24.1	mg/L	0.5		A2540D	7/29/2008	7/22/2008	Ben Cook	7/29/2008	Ben Cook
'07220006	381	TSS	1.6	mg/L	0.5		A2540D	7/29/2008	7/22/2008	Ben Cook	7/29/2008	Ben Cook
'07220005	LA	CL	122.64	mg/L	4		A4500Cl-E	7/30/2008	7/22/2008	Ben Cook	7/30/2008	Ben Cook
'07220011A	SC	CHLRPHYLA	0.01740	mg/L	0.0005		A10200H	7/25/2008	7/22/2008	Ben Cook	7/25/2008	Ben Cook
'07220011B	SC	CHLRPHYLA	0.01726	mg/L	0.0005		A10200H	7/25/2008	7/22/2008	Ben Cook	7/25/2008	Ben Cook
'07220012	LE1	CHLRPHYLA	0.00194	mg/L	0.0005		A10200H	7/25/2008	7/22/2008	Ben Cook	7/25/2008	Ben Cook
'07220013	LE2	CHLRPHYLA	0.00296	mg/L	0.0005		A10200H	7/25/2008	7/22/2008	Ben Cook	7/25/2008	Ben Cook
'07220014	IP	CHLRPHYLA	0.00286	mg/L	0.0005		A10200H	7/25/2008	7/22/2008	Ben Cook	7/25/2008	Ben Cook
'07220015	QU	CHLRPHYLA	0.00068	mg/L	0.0005		A10200H	7/25/2008	7/22/2008	Ben Cook	7/25/2008	Ben Cook
'07220016	LA	CHLRPHYLA	0.03039	mg/L	0.0005		A10200H	7/25/2008	7/22/2008	Ben Cook	7/25/2008	Ben Cook
'07220001	SC	NO3N	0.347	mg/L	0.02		A4500F	7/28/2008	7/22/2008	Ben Cook	7/28/2008	Ben Cook
'07220002	LE2	NO3N	0.745	mg/L	0.05		A4500F	7/28/2008	7/22/2008	Ben Cook	7/28/2008	Ben Cook
'07220003	393	NO3N	0.0246	mg/L	0.005		A4500F	7/28/2008	7/22/2008	Ben Cook	7/28/2008	Ben Cook
'07220004A	IP	NO3N	<0.002	mg/L	0.005	U	A4500F	7/28/2008	7/22/2008	Ben Cook	7/28/2008	Ben Cook
'07220004B	IP	NO3N	<0.002	mg/L	0.005	U	A4500F	7/28/2008	7/22/2008	Ben Cook	7/28/2008	Ben Cook
'07220005	LA	NO3N	0.0107	mg/L	0.005		A4500F	7/28/2008	7/22/2008	Ben Cook	7/28/2008	Ben Cook
'07220006	381	NO3N	0.0459	mg/L	0.005		A4500F	7/28/2008	7/22/2008	Ben Cook	7/28/2008	Ben Cook
'07220007	384	NO3N	0.955	mg/L	0.05		A4500F	7/28/2008	7/22/2008	Ben Cook	7/28/2008	Ben Cook
'07220008	QU	NO3N	0.0441	mg/L	0.005		A4500F	7/28/2008	7/22/2008	Ben Cook	7/28/2008	Ben Cook
'07220007	384	TSS	13.6	mg/L	0.5		A2540D	7/29/2008	7/22/2008	Ben Cook	7/29/2008	Ben Cook
'07220008	QU	TSS	1.4	mg/L	0.5		A2540D	7/29/2008	7/22/2008	Ben Cook	7/29/2008	Ben Cook
'07220009	391	TSS	8.2	mg/L	0.5		A2540D	7/29/2008	7/22/2008	Ben Cook	7/29/2008	Ben Cook
'07220010	LE1	TSS	5.6	mg/L	0.5		A2540D	7/29/2008	7/22/2008	Ben Cook	7/29/2008	Ben Cook
'07220001A	SC	Hardness	148	mg/L	1		A2340C	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220001B	SC	Hardness	156	mg/L	1		A2340C	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220002	LE2	Hardness	124	mg/L	1		A2340C	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220003	393	Hardness	2330	mg/L	1		A2340C	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220004	IP	Hardness	136	mg/L	1		A2340C	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220005	LA	Hardness	268	mg/L	1		A2340C	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220006	381	Hardness	656	mg/L	1		A2340C	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220007	384	Hardness	2200	mg/L	1		A2340C	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220008	QU	Hardness	512	mg/L	1		A2340C	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220009	391	Hardness	368	mg/L	1		A2340C	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220010	LE1	Hardness	136	mg/L	1		A2340C	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220001	SC	CL	41.97	mg/L	1		A4500Cl-E	7/30/2008	7/22/2008	Ben Cook	7/30/2008	Ben Cook
'07220007	384	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.

'07220008	QU	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220009	391	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220010	LE1	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220001A	SC	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220001B	SC	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220002	LE2	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220003	393	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220004	IP	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220005	LA	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220001A	SC	COLOR	189	mg/L	5	A2120C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220001B	SC	COLOR	188	mg/L	5	A2120C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220002	LE2	COLOR	39	mg/L	5	A2120C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220003	393	COLOR	74	mg/L	5	A2120C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220004	IP	COLOR	53	mg/L	5	A2120C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220005	LA	COLOR	81	mg/L	5	A2120C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220006	381	COLOR	7	mg/L	5	A2120C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220007	384	COLOR	23	mg/L	5	A2120C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220008	QU	COLOR	21	mg/L	5	A2120C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220009	391	COLOR	7	mg/L	5	A2120C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220010	LE1	COLOR	28	mg/L	5	A2120C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220006	381	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	7/29/2008	7/22/2008	Angela C.	7/29/2008	Angela C.
'07220002	LE2	Alkalinity	98	mg/L	2	A2320B	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220003	393	Alkalinity	436	mg/L	2	A2320B	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220004	IP	Alkalinity	132	mg/L	2	A2320B	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220005	LA	Alkalinity	134	mg/L	2	A2320B	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220006	381	Alkalinity	276	mg/L	2	A2320B	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220007	384	Alkalinity	382	mg/L	2	A2320B	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220008	QU	Alkalinity	98	mg/L	2	A2320B	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220009	391	Alkalinity	356	mg/L	2	A2320B	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220010	LE1	Alkalinity	96	mg/L	2	A2320B	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220002	LE2	TP	0.0362	mg/L	0.003	A4500PF	7/24/2008	7/22/2008	Ben Cook	7/24/2008	Ben Cook
'07220003	393	TP	0.0484	mg/L	0.003	A4500PF	7/24/2008	7/22/2008	Ben Cook	7/24/2008	Ben Cook
'07220004A	IP	TP	0.0785	mg/L	0.003	A4500PF	7/24/2008	7/22/2008	Ben Cook	7/24/2008	Ben Cook
'07220001A	SC	NO2N	0.0242	mg/L	0.005	A4500B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220001B	SC	NO2N	0.0247	mg/L	0.005	A4500B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220002	LE2	NO2N	0.0293	mg/L	0.005	A4500B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220003	393	NO2N	0.0046	mg/L	0.005 J	A4500B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220007	384	TDS	3015	mg/L	5	A2540C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220008	QU	TDS	959	mg/L	5	A2540C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220009	391	TDS	516	mg/L	5	A2540C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220010	LE1	TDS	194	mg/L	5	A2540C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220004B	IP	TP	0.0781	mg/L	0.003	A4500PF	7/24/2008	7/22/2008	Ben Cook	7/24/2008	Ben Cook
'07220007	384	TP	0.0029	mg/L	0.003 J	A4500PF	7/24/2008	7/22/2008	Ben Cook	7/24/2008	Ben Cook
'07220008	QU	TP	0.0032	mg/L	0.003	A4500PF	7/24/2008	7/22/2008	Ben Cook	7/24/2008	Ben Cook
'07220009	391	TP	0.0046	mg/L	0.003	A4500PF	7/24/2008	7/22/2008	Ben Cook	7/24/2008	Ben Cook
'07220010	LE1	TP	0.0456	mg/L	0.003	A4500PF	7/24/2008	7/22/2008	Ben Cook	7/24/2008	Ben Cook

'07220001	SC	TP	0.0735	mg/L	0.003	A4500PF	7/24/2008	7/22/2008	Ben Cook	7/24/2008	Ben Cook
'07220005	LA	TP	0.1060	mg/L	0.009	A4500PF	7/24/2008	7/22/2008	Ben Cook	7/24/2008	Ben Cook
'07220006	381	TP	0.0851	mg/L	0.009	A4500PF	7/24/2008	7/22/2008	Ben Cook	7/24/2008	Ben Cook
'07220004	IP	NO2N	<0.0011	mg/L	0.005 U	A4500B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220005	LA	NO2N	0.0040	mg/L	0.005 J	A4500B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220006	381	NO2N	<0.0011	mg/L	0.005 U	A4500B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220007	384	NO2N	<0.0011	mg/L	0.005 U	A4500B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220008	QU	NO2N	<0.0011	mg/L	0.005 U	A4500B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220009	391	NO2N	0.0086	mg/L	0.005	A4500B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220010	LE1	NO2N	0.0230	mg/L	0.005	A4500B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220001A	SC	TDS	260	mg/L	5	A2540C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220001B	SC	TDS	261	mg/L	5	A2540C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220002	LE2	TDS	177	mg/L	5	A2540C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220003	393	TDS	3277	mg/L	5	A2540C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220004	IP	TDS	241	mg/L	5	A2540C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220005	LA	TDS	506	mg/L	5	A2540C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220006	381	TDS	978	mg/L	5	A2540C	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220010	LE1	NO3N	0.92	mg/L	0.1	A4500F	7/28/2008	7/22/2008	Ben Cook	7/28/2008	Ben Cook
'07220009	391	NO3N	0.197	mg/L	0.015	A4500F	7/28/2008	7/22/2008	Ben Cook	7/28/2008	Ben Cook
'07220002	LE2	CL	23.33	mg/L	1	A4500Cl-E	7/30/2008	7/22/2008	Ben Cook	7/30/2008	Ben Cook
'07220003	393	CL	113.11	mg/L	4	A4500Cl-E	7/30/2008	7/22/2008	Ben Cook	7/30/2008	Ben Cook
'07220004A	IP	CL	49.19	mg/L	1	A4500Cl-E	7/30/2008	7/22/2008	Ben Cook	7/30/2008	Ben Cook
'07220004B	IP	CL	49.74	mg/L	1	A4500Cl-E	7/30/2008	7/22/2008	Ben Cook	7/30/2008	Ben Cook
'07220006	381	CL	95.18	mg/L	3	A4500Cl-E	7/30/2008	7/22/2008	Ben Cook	7/30/2008	Ben Cook
'07220007	384	CL	44.07	mg/L	1	A4500Cl-E	7/30/2008	7/22/2008	Ben Cook	7/30/2008	Ben Cook
'07220008	QU	CL	199.75	mg/L	10	A4500Cl-E	7/30/2008	7/22/2008	Ben Cook	7/30/2008	Ben Cook
'07220009	391	CL	52.51	mg/L	1	A4500Cl-E	7/30/2008	7/22/2008	Ben Cook	7/30/2008	Ben Cook
'07220010	LE1	CL	26.04	mg/L	1	A4500Cl-E	7/30/2008	7/22/2008	Ben Cook	7/30/2008	Ben Cook
'07220003	393	SRP	<0.0005	mg/L	0.003 U	EPA 365.1	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220004A	IP	SRP	0.0223	mg/L	0.003	EPA 365.1	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220004B	IP	SRP	0.0231	mg/L	0.003	EPA 365.1	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220005	LA	SRP	0.0034	mg/L	0.003	EPA 365.1	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220006	381	SRP	0.0368	mg/L	0.003	EPA 365.1	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220007	384	SRP	<0.0005	mg/L	0.003 U	EPA 365.1	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220001	SC	BOD	2.6	mg/L	0.2	A5210B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220002	LE2	BOD	1.2	mg/L	0.2	A5210B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220003	393	BOD	0.8	mg/L	0.2	A5210B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220004	IP	BOD	1.6	mg/L	0.2	A5210B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220005	LA	BOD	11.7	mg/L	0.2	A5210B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220006	381	BOD	0.6	mg/L	0.2	A5210B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220007	384	BOD	1.2	mg/L	0.2	A5210B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220008	QU	BOD	1.0	mg/L	0.2	A5210B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220009	391	BOD	0.5	mg/L	0.2	A5210B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220010	LE1	BOD	0.8	mg/L	0.2	A5210B	7/23/2008	7/22/2008	Ben Cook	7/23/2008	Ben Cook
'07220001A	SC	Alkalinity	124	mg/L	2	A2320B	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220001B	SC	Alkalinity	128	mg/L	2	A2320B	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook

'07220008	QU	SRP	<0.0005	mg/L	0.003 U	EPA 365.1	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220009	391	SRP	<0.0005	mg/L	0.003 U	EPA 365.1	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220010	LE1	SRP	0.0134	mg/L	0.003	EPA 365.1	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220001	SC	SRP	<0.0005	mg/L	0.003 U	EPA 365.1	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220002	LE2	SRP	0.0070	mg/L	0.003	EPA 365.1	7/31/2008	7/22/2008	Ben Cook	7/31/2008	Ben Cook
'07220004A	IP	TKN	0.790	mg/L	0.3	EPA 351.2	8/4/2008	7/22/2008	Ben Cook	8/4/2008	Ben Cook
'07220004B	IP	TKN	0.760	mg/L	0.3	EPA 351.2	8/4/2008	7/22/2008	Ben Cook	8/4/2008	Ben Cook
'07220005	LA	TKN	2.006	mg/L	0.3	EPA 351.2	8/4/2008	7/22/2008	Ben Cook	8/4/2008	Ben Cook
'07220006	381	TKN	0.154	mg/L	0.3 J	EPA 351.2	8/4/2008	7/22/2008	Ben Cook	8/4/2008	Ben Cook
'07220007	384	TKN	0.407	mg/L	0.3	EPA 351.2	8/4/2008	7/22/2008	Ben Cook	8/4/2008	Ben Cook
'07220008	QU	TKN	0.224	mg/L	0.3 J	EPA 351.2	8/4/2008	7/22/2008	Ben Cook	8/4/2008	Ben Cook
'07220009	391	TKN	0.253	mg/L	0.3 J	EPA 351.2	8/4/2008	7/22/2008	Ben Cook	8/4/2008	Ben Cook

LabSampleID	SampleDes	ParamID	Results	Units	RL	LabQualifie	AnalysisMetl	AnalysisDate	SampleDate	Analyst	Calibration Date	Calibration Person
DT10220024	391	CL	37.33	mg/L	1		A4500Cl-E	10/27/2008	10/22/2008	Ben Cook	10/27/2008	Ben Cook
DT10220025	284	CL	39.43	mg/L	1		A4500Cl-E	10/27/2008	10/22/2008	Ben Cook	10/27/2008	Ben Cook
DT10220026	IUPW	CL	29.89	mg/L	1		A4500Cl-E	10/27/2008	10/22/2008	Ben Cook	10/27/2008	Ben Cook
DT10210018	LA-W	CL	149.27	mg/L	5		A4500Cl-E	10/27/2008	10/21/2008	Ben Cook	10/27/2008	Ben Cook
DT10210021	QU-W	CL	123.62	mg/L	5		A4500Cl-E	10/27/2008	10/21/2008	Ben Cook	10/27/2008	Ben Cook
DT10220022	381	CL	83.35	mg/L	4		A4500Cl-E	10/27/2008	10/22/2008	Ben Cook	10/27/2008	Ben Cook
DT10210017A	SC-W	CL	50.61	mg/L	1		A4500Cl-E	10/27/2008	10/21/2008	Ben Cook	10/27/2008	Ben Cook
DT10210017B	SC-W	CL	50.51	mg/L	1		A4500Cl-E	10/27/2008	10/21/2008	Ben Cook	10/27/2008	Ben Cook
DT10210019	LE1-W	CL	18.14	mg/L	1		A4500Cl-E	10/27/2008	10/21/2008	Ben Cook	10/27/2008	Ben Cook
DT10210020	LE2-W	CL	44.32	mg/L	1		A4500Cl-E	10/27/2008	10/21/2008	Ben Cook	10/27/2008	Ben Cook
DT10220023	393	CL	40.64	mg/L	1		A4500Cl-E	10/27/2008	10/22/2008	Ben Cook	10/27/2008	Ben Cook
DT10210017B	SC-W	NO3N	<0.002	mg/L	0.005	U	A4500F	10/29/2008	10/21/2008	Ben Cook	10/29/2008	Ben Cook
DT10220025	284	NO3N	<0.002	mg/L	0.005	U	A4500F	10/29/2008	10/22/2008	Ben Cook	10/29/2008	Ben Cook
DT10220026	IUPW	NO3N	0.0165	mg/L	0.005		A4500F	10/29/2008	10/22/2008	Ben Cook	10/29/2008	Ben Cook
DT10210018	LA-W	TDS	643	mg/L	5		A2540C	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210019	LE1-W	TDS	165	mg/L	5		A2540C	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210020	LE2-W	TDS	162	mg/L	5		A2540C	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210021	QU-W	TDS	939	mg/L	5		A2540C	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10220022A	381	TDS	918	mg/L	5		A2540C	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220022B	381	TDS	948	mg/L	5		A2540C	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220023	393	TDS	1620	mg/L	5		A2540C	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220024	391	TDS	499	mg/L	5		A2540C	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10210017A	SC-W	Color	93	mg/L	0		A2120C	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210017B	SC-W	Color	94	mg/L	0		A2120C	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210018	LA-W	Color	82	mg/L	0		A2120C	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210019	LE1-W	Color	9	mg/L	0		A2120C	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210020	LE2-W	Color	27	mg/L	0		A2120C	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210021	QU-W	Color	70	mg/L	0		A2120C	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10220022A	381	Color	7	mg/L	0		A2120C	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220022B	381	Color	8	mg/L	0		A2120C	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220023	393	Color	18	mg/L	0		A2120C	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220024	391	Color	14	mg/L	0		A2120C	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220025	284	Color	130	mg/L	0		A2120C	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220026	IUPW	Color	215	mg/L	0		A2120C	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10210017A	SC-W	TSS	20.7	mg/L	0.5		A2540D	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10220025	284	TDS	2787	mg/L	5		A2540C	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220026	IUPW	TDS	225	mg/L	5		A2540C	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10210017A	SC-W	TDS	275	mg/L	5		A2540C	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook

DT10210017B	SC-W	TDS	272	mg/L	5	A2540C	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210017A	SC-W	Alkalinity	120	mg/L	2	A2320B	10/30/2008	10/21/2008	Ben Cook	10/30/2008	Ben Cook
DT10210017B	SC-W	Alkalinity	122	mg/L	2	A2320B	10/30/2008	10/21/2008	Ben Cook	10/30/2008	Ben Cook
DT10210018	LA-W	Alkalinity	154	mg/L	2	A2320B	10/30/2008	10/21/2008	Ben Cook	10/30/2008	Ben Cook
DT10210019	LE1-W	Alkalinity	88	mg/L	2	A2320B	10/30/2008	10/21/2008	Ben Cook	10/30/2008	Ben Cook
DT10210020	LE2-W	Alkalinity	94	mg/L	2	A2320B	10/30/2008	10/21/2008	Ben Cook	10/30/2008	Ben Cook
DT10210021	QU-W	Alkalinity	102	mg/L	2	A2320B	10/30/2008	10/21/2008	Ben Cook	10/30/2008	Ben Cook
DT10220022	381	Alkalinity	254	mg/L	2	A2320B	10/30/2008	10/22/2008	Ben Cook	10/30/2008	Ben Cook
DT10220023	393	Alkalinity	306	mg/L	2	A2320B	10/30/2008	10/22/2008	Ben Cook	10/30/2008	Ben Cook
DT10220024	391	Alkalinity	168	mg/L	2	A2320B	10/30/2008	10/22/2008	Ben Cook	10/30/2008	Ben Cook
DT10220025	284	Alkalinity	432	mg/L	2	A2320B	10/30/2008	10/22/2008	Ben Cook	10/30/2008	Ben Cook
DT10220026	IUPW	Alkalinity	140	mg/L	2	A2320B	10/30/2008	10/22/2008	Ben Cook	10/30/2008	Ben Cook
DT10210017A	SC-W	Hardness	188	mg/L	1	A2340C	10/30/2008	10/21/2008	Ben Cook	10/30/2008	Ben Cook
DT10210017B	SC-W	Hardness	184	mg/L	1	A2340C	10/30/2008	10/21/2008	Ben Cook	10/30/2008	Ben Cook
DT10210018	LA-W	Hardness	336	mg/L	1	A2340C	10/30/2008	10/21/2008	Ben Cook	10/30/2008	Ben Cook
DT10210019	LE1-W	Hardness	112	mg/L	1	A2340C	10/30/2008	10/21/2008	Ben Cook	10/30/2008	Ben Cook
DT10210020	LE2-W	Hardness	120	mg/L	1	A2340C	10/30/2008	10/21/2008	Ben Cook	10/30/2008	Ben Cook
DT10210021	QU-W	Hardness	548	mg/L	1	A2340C	10/30/2008	10/21/2008	Ben Cook	10/30/2008	Ben Cook
DT10220022	381	Hardness	620	mg/L	1	A2340C	10/30/2008	10/22/2008	Ben Cook	10/30/2008	Ben Cook
DT10220023	393	Hardness	1180	mg/L	1	A2340C	10/30/2008	10/22/2008	Ben Cook	10/30/2008	Ben Cook
DT10220024	391	Hardness	352	mg/L	1	A2340C	10/30/2008	10/22/2008	Ben Cook	10/30/2008	Ben Cook
DT10220025	284	Hardness	2168	mg/L	1	A2340C	10/30/2008	10/22/2008	Ben Cook	10/30/2008	Ben Cook
DT10220026	IUPW	Hardness	128	mg/L	1	A2340C	10/30/2008	10/22/2008	Ben Cook	10/30/2008	Ben Cook
DT10220022	381	BOD	1.0	mg/L	0.2	A5210B	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220023	393	BOD	1.2	mg/L	0.2	A5210B	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10210017A	SC-W	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	11/5/2008	10/21/2008	Ben Cook	11/5/2008	Ben Cook
DT10210017B	SC-W	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	11/5/2008	10/21/2008	Ben Cook	11/5/2008	Ben Cook
DT10210018	LA-W	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	11/5/2008	10/21/2008	Ben Cook	11/5/2008	Ben Cook
DT10210021	QU-W	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	11/5/2008	10/21/2008	Ben Cook	11/5/2008	Ben Cook
DT10220022	381	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	11/5/2008	10/22/2008	Ben Cook	11/5/2008	Ben Cook
DT10220023	393	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	11/5/2008	10/22/2008	Ben Cook	11/5/2008	Ben Cook
DT10220024	391	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	11/5/2008	10/22/2008	Ben Cook	11/5/2008	Ben Cook
DT10220025	284	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	11/5/2008	10/22/2008	Ben Cook	11/5/2008	Ben Cook
DT10220026	IUPW	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	11/5/2008	10/22/2008	Ben Cook	11/5/2008	Ben Cook
DT10210019	LE1-W	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	11/5/2008	10/21/2008	Ben Cook	11/5/2008	Ben Cook
DT10210020	LE2-W	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	11/5/2008	10/21/2008	Ben Cook	11/5/2008	Ben Cook
DT10210027	SC-W	CHLRPHYL	0.01674	mg/L	0.0005	A10200H	10/24/2008	10/21/2008	Ben Cook	10/24/2008	Ben Cook
DT10210028	LA-W	CHLRPHYL	0.02221	mg/L	0.0005	A10200H	10/24/2008	10/21/2008	Ben Cook	10/24/2008	Ben Cook
DT10210029	LE1-W	CHLRPHYL	0.00483	mg/L	0.0005	A10200H	10/24/2008	10/21/2008	Ben Cook	10/24/2008	Ben Cook

DT10210030	LE2-W	CHLRPHYL	0.00332	mg/L	0.0005	A10200H	10/24/2008	10/21/2008	Ben Cook	10/24/2008	Ben Cook
DT10210031A	QU-W	CHLRPHYL	0.00059	mg/L	0.0005	A10200H	10/24/2008	10/21/2008	Ben Cook	10/24/2008	Ben Cook
DT10210031B	QU-W	CHLRPHYL	0.00059	mg/L	0.0005	A10200H	10/24/2008	10/21/2008	Ben Cook	10/24/2008	Ben Cook
DT10220032A	IUPW	CHLRPHYL	0.02060	mg/L	0.0005	A10200H	10/24/2008	10/22/2008	Ben Cook	10/24/2008	Ben Cook
DT10220032B	IUPW	CHLRPHYL	0.02050	mg/L	0.0005	A10200H	10/24/2008	10/22/2008	Ben Cook	10/24/2008	Ben Cook
DT10210017B	SC-W	TSS	20.6	mg/L	0.5	A2540D	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210018	LA-W	TSS	11.8	mg/L	0.5	A2540D	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210019	LE1-W	TSS	2.9	mg/L	0.5	A2540D	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210020	LE2-W	TSS	7.3	mg/L	0.5	A2540D	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210021	QU-W	TSS	0.6	mg/L	0.5	A2540D	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10220022A	381	TSS	1.7	mg/L	0.5	A2540D	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220022B	381	TSS	1.7	mg/L	0.5	A2540D	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220023	393	TSS	3.8	mg/L	0.5	A2540D	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220024	391	TSS	2.9	mg/L	0.5	A2540D	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220025	284	TSS	7.4	mg/L	0.5	A2540D	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220026	IUPW	TSS	29.4	mg/L	0.5	A2540D	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10210017A	SC-W	TP	0.0460	mg/L	0.003	A4500PF	10/28/2008	10/21/2008	Ben Cook	10/28/2008	Ben Cook
DT10210017B	SC-W	TP	0.0460	mg/L	0.003	A4500PF	10/28/2008	10/21/2008	Ben Cook	10/28/2008	Ben Cook
DT10210018	LA-W	TP	0.0353	mg/L	0.003	A4500PF	10/28/2008	10/21/2008	Ben Cook	10/28/2008	Ben Cook
DT10210019	LE1-W	TP	0.0189	mg/L	0.003	A4500PF	10/28/2008	10/21/2008	Ben Cook	10/28/2008	Ben Cook
DT10210020	LE2-W	TP	0.0280	mg/L	0.003	A4500PF	10/28/2008	10/21/2008	Ben Cook	10/28/2008	Ben Cook
DT10210021	QU-W	TP	0.0024	mg/L	0.003 J	A4500PF	10/28/2008	10/21/2008	Ben Cook	10/28/2008	Ben Cook
DT10220022	381	TP	0.0028	mg/L	0.003 J	A4500PF	10/28/2008	10/22/2008	Ben Cook	10/28/2008	Ben Cook
DT10220023	393	TP	0.0114	mg/L	0.003	A4500PF	10/28/2008	10/22/2008	Ben Cook	10/28/2008	Ben Cook
DT10220024	391	TP	0.0011	mg/L	0.003 J	A4500PF	10/28/2008	10/22/2008	Ben Cook	10/28/2008	Ben Cook
DT10220025	284	TP	0.0025	mg/L	0.003 J	A4500PF	10/28/2008	10/22/2008	Ben Cook	10/28/2008	Ben Cook
DT10220026	IUPW	TP	0.0678	mg/L	0.003	A4500PF	10/28/2008	10/22/2008	Ben Cook	10/28/2008	Ben Cook
DT10220024	391	BOD	0.8	mg/L	0.2	A5210B	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220025	284	BOD	2.2	mg/L	0.2	A5210B	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220026	IUPW	BOD	9.0	mg/L	0.2	A5210B	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10210017	SC-W	BOD	5.2	mg/L	0.2	A5210B	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210018	LA-W	BOD	6.9	mg/L	0.2	A5210B	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210019	LE1-W	BOD	1.8	mg/L	0.2	A5210B	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210020	LE2-W	BOD	1.7	mg/L	0.2	A5210B	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210021	QU-W	BOD	1.1	mg/L	0.2	A5210B	10/22/2008	10/21/2008	Ben Cook	10/22/2008	Ben Cook
DT10210021	QU-W	NO3N	<0.002	mg/L	0.005 U	A4500F	10/29/2008	10/21/2008	Ben Cook	10/29/2008	Ben Cook
DT10220022	381	NO3N	<0.002	mg/L	0.005 U	A4500F	10/29/2008	10/22/2008	Ben Cook	10/29/2008	Ben Cook
DT10220023	393	NO3N	<0.002	mg/L	0.005 U	A4500F	10/29/2008	10/22/2008	Ben Cook	10/29/2008	Ben Cook
DT10220024	391	NO3N	0.0596	mg/L	0.005	A4500F	10/29/2008	10/22/2008	Ben Cook	10/29/2008	Ben Cook

DT10210018	LA-W	NO3N	0.310	mg/L	0.015	A4500F	10/29/2008	10/21/2008	Ben Cook	10/29/2008	Ben Cook
DT10210019	LE1-W	NO3N	0.447	mg/L	0.05	A4500F	10/29/2008	10/21/2008	Ben Cook	10/29/2008	Ben Cook
DT10210020	LE2-W	NO3N	0.471	mg/L	0.05	A4500F	10/29/2008	10/21/2008	Ben Cook	10/29/2008	Ben Cook
DT10210017A	SC-W	NO3N	<0.002	mg/L	0.005 U	A4500F	10/29/2008	10/21/2008	Ben Cook	10/29/2008	Ben Cook
DT10210018	LA-W	SRP	0.0057	mg/L	0.003	EPA 365.1	10/31/2008	10/21/2008	Ben Cook	10/31/2008	Ben Cook
DT10210019	LE1-W	SRP	0.0059	mg/L	0.003	EPA 365.1	10/31/2008	10/21/2008	Ben Cook	10/31/2008	Ben Cook
DT10210020	LE2-W	SRP	0.0073	mg/L	0.003	EPA 365.1	10/31/2008	10/21/2008	Ben Cook	10/31/2008	Ben Cook
DT10210021	QU-W	SRP	0.0020	mg/L	0.003 J	EPA 365.1	10/31/2008	10/21/2008	Ben Cook	10/31/2008	Ben Cook
DT10220025	284	SRP	0.0010	mg/L	0.003 J	EPA 365.1	10/31/2008	10/22/2008	Ben Cook	10/31/2008	Ben Cook
DT10220026	IUPW	SRP	0.0073	mg/L	0.003	EPA 365.1	10/31/2008	10/22/2008	Ben Cook	10/31/2008	Ben Cook
DT10210017A	SC-W	SRP	0.0058	mg/L	0.003	EPA 365.1	10/31/2008	10/21/2008	Ben Cook	10/31/2008	Ben Cook
DT10210017B	SC-W	SRP	0.0053	mg/L	0.003	EPA 365.1	10/31/2008	10/21/2008	Ben Cook	10/31/2008	Ben Cook
DT10220022	381	SRP	0.0016	mg/L	0.003 J	EPA 365.1	10/31/2008	10/22/2008	Ben Cook	10/31/2008	Ben Cook
DT10220023	393	SRP	0.0020	mg/L	0.003 J	EPA 365.1	10/31/2008	10/22/2008	Ben Cook	10/31/2008	Ben Cook
DT10220024	391	SRP	0.0011	mg/L	0.003 J	EPA 365.1	10/31/2008	10/22/2008	Ben Cook	10/31/2008	Ben Cook
DT10210017A	SC-W	TKN	0.665	mg/L	0.3	EPA 351.2	11/3/2008	10/21/2008	Ben Cook	11/3/2008	Ben Cook
DT10210017B	SC-W	TKN	0.624	mg/L	0.3	EPA 351.2	11/3/2008	10/21/2008	Ben Cook	11/3/2008	Ben Cook
DT10210018	LA-W	TKN	0.584	mg/L	0.3	EPA 351.2	11/3/2008	10/21/2008	Ben Cook	11/3/2008	Ben Cook
DT10210019	LE1-W	TKN	0.226	mg/L	0.3 J	EPA 351.2	11/3/2008	10/21/2008	Ben Cook	11/3/2008	Ben Cook
DT10210020	LE2-W	TKN	1.005	mg/L	0.3	EPA 351.2	11/3/2008	10/21/2008	Ben Cook	11/3/2008	Ben Cook
DT10210021	QU-W	TKN	0.226	mg/L	0.3 J	EPA 351.2	11/3/2008	10/21/2008	Ben Cook	11/3/2008	Ben Cook
DT10220022	381	TKN	0.106	mg/L	0.3 J	EPA 351.2	11/3/2008	10/22/2008	Ben Cook	11/3/2008	Ben Cook
DT10220023	393	TKN	1.327	mg/L	0.3	EPA 351.2	11/3/2008	10/22/2008	Ben Cook	11/3/2008	Ben Cook
DT10220024	391	TKN	0.061	mg/L	0.3 J	EPA 351.2	11/3/2008	10/22/2008	Ben Cook	11/3/2008	Ben Cook
DT10220025	284	TKN	0.576	mg/L	0.3	EPA 351.2	11/3/2008	10/22/2008	Ben Cook	11/3/2008	Ben Cook
DT10220026	IUPW	TKN	1.379	mg/L	0.3	EPA 351.2	11/3/2008	10/22/2008	Ben Cook	11/3/2008	Ben Cook
DT10210017A	SC-W	NO2N	0.0033	mg/L	0.005 J	A4500B	10/23/2008	10/21/2008	Ben Cook	10/23/2008	Ben Cook
DT10210017B	SC-W	NO2N	0.0031	mg/L	0.005 J	A4500B	10/23/2008	10/21/2008	Ben Cook	10/23/2008	Ben Cook
DT10210018	LA-W	NO2N	0.0133	mg/L	0.005	A4500B	10/23/2008	10/21/2008	Ben Cook	10/23/2008	Ben Cook
DT10210019	LE1-W	NO2N	0.0187	mg/L	0.005	A4500B	10/23/2008	10/21/2008	Ben Cook	10/23/2008	Ben Cook
DT10210020	LE2-W	NO2N	0.0188	mg/L	0.005	A4500B	10/23/2008	10/21/2008	Ben Cook	10/23/2008	Ben Cook
DT10210021	QU-W	NO2N	<0.0011	mg/L	0.005 U	A4500B	10/23/2008	10/21/2008	Ben Cook	10/23/2008	Ben Cook
DT10220022	381	NO2N	<0.0011	mg/L	0.005 U	A4500B	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220023	393	NO2N	<0.0011	mg/L	0.005 U	A4500B	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220024	391	NO2N	<0.0011	mg/L	0.005 U	A4500B	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220025	284	NO2N	0.0021	mg/L	0.005 J	A4500B	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook
DT10220026	IUPW	NO2N	0.0357	mg/L	0.005	A4500B	10/23/2008	10/22/2008	Ben Cook	10/23/2008	Ben Cook

LabSampleID	SampleDescription	ParamID	Results	Units	RL	LabQualifier	AnalysisMethod	AnalysisDate	SampleDate	Analyst	Calibration Date	Calibration Person
DT02170033	SCW	TKN	1.069	mg/L	0.3		EPA 351.2	3/12/2009	2/17/2009	Ben Cook	3/12/2009	Ben Cook
DT02170034A	393	TKN	1.467	mg/L	0.3		EPA 351.2	3/12/2009	2/17/2009	Ben Cook	3/12/2009	Ben Cook
DT02170033A	SCW	TSS	29.9	mg/L	0.5		A2540D	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170033B	SCW	TSS	29.5	mg/L	0.5		A2540D	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170034	393	TSS	5.7	mg/L	0.5		A2540D	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170035	391	TSS	2.0	mg/L	0.5		A2540D	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170036	381	TSS	2.7	mg/L	0.5		A2540D	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170037	384	TSS	1.9	mg/L	0.5		A2540D	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02180039A	IUPW	TSS	8.2	mg/L	0.5		A2540D	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02180039B	IUPW	TSS	8.1	mg/L	0.5		A2540D	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02180040	LE2W	TSS	10.5	mg/L	0.5		A2540D	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02180040	LE2W	TDS	206	mg/L	5		A2540C	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02180039A	IUPW	TDS	600	mg/L	5		A2540C	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02180039B	IUPW	TDS	610	mg/L	5		A2540C	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02170033	SCW	CL	48.38	mg/L	1		A4500Cl-E	3/4/2009	2/17/2009	Ben Cook	3/4/2009	Ben Cook
DT02170034A	393	CL	40.09	mg/L	1		A4500Cl-E	3/4/2009	2/17/2009	Ben Cook	3/4/2009	Ben Cook
DT02170034B	393	CL	40.20	mg/L	1		A4500Cl-E	3/4/2009	2/17/2009	Ben Cook	3/4/2009	Ben Cook
DT02170035	391	CL	39.06	mg/L	1		A4500Cl-E	3/4/2009	2/17/2009	Ben Cook	3/4/2009	Ben Cook
DT02170037	384	CL	36.39	mg/L	1		A4500Cl-E	3/4/2009	2/17/2009	Ben Cook	3/4/2009	Ben Cook
DT02170036	381	CL	87.21	mg/L	3		A4500Cl-E	3/4/2009	2/17/2009	Ben Cook	3/4/2009	Ben Cook
DT02180039	IUPW	CL	123.32	mg/L	4		A4500Cl-E	3/4/2009	2/18/2009	Ben Cook	3/4/2009	Ben Cook
DT02180040	LE2W	CL	38.72	mg/L	2		A4500Cl-E	3/4/2009	2/18/2009	Ben Cook	3/4/2009	Ben Cook
DT02170034B	393	TKN	1.419	mg/L	0.3		EPA 351.2	3/12/2009	2/17/2009	Ben Cook	3/12/2009	Ben Cook
DT02170035	391	TKN	0.420	mg/L	0.3		EPA 351.2	3/12/2009	2/17/2009	Ben Cook	3/12/2009	Ben Cook
DT02170036	381	TKN	0.226	mg/L	0.3	J	EPA 351.2	3/12/2009	2/17/2009	Ben Cook	3/12/2009	Ben Cook
DT02170037	384	TKN	0.477	mg/L	0.3		EPA 351.2	3/12/2009	2/17/2009	Ben Cook	3/12/2009	Ben Cook
DT02180039	IUPW	TKN	1.110	mg/L	0.3		EPA 351.2	3/12/2009	2/18/2009	Ben Cook	3/12/2009	Ben Cook
DT02180040	LE2W	TKN	0.554	mg/L	0.3		EPA 351.2	3/12/2009	2/18/2009	Ben Cook	3/12/2009	Ben Cook
DT02180039	IUPW	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	3/6/2009	2/18/2009	Ben Cook	3/6/2009	Ben Cook
DT02180040	LE2W	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	3/6/2009	2/18/2009	Ben Cook	3/6/2009	Ben Cook
DT02170033A	SCW	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	3/6/2009	2/17/2009	Ben Cook	3/6/2009	Ben Cook
DT02170033B	SCW	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	3/6/2009	2/17/2009	Ben Cook	3/6/2009	Ben Cook
DT02170034	393	NH3N	0.88	mg/L	0.5		A4500NH3D	3/6/2009	2/17/2009	Ben Cook	3/6/2009	Ben Cook
DT02170035	391	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	3/6/2009	2/17/2009	Ben Cook	3/6/2009	Ben Cook
DT02170036	381	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	3/6/2009	2/17/2009	Ben Cook	3/6/2009	Ben Cook
DT02170033A	SCW	TDS	264	mg/L	5		A2540C	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170033B	SCW	TDS	267	mg/L	5		A2540C	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170034	393	TDS	1591	mg/L	5		A2540C	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170035	391	TDS	363	mg/L	5		A2540C	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170036	381	TDS	735	mg/L	5		A2540C	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170037	384	TDS	3316	mg/L	5		A2540C	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170033	SCW	Color	419	mg/L	0		A2120C	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170034	393	Color	85	mg/L	0		A2120C	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170035	391	Color	11	mg/L	0		A2120C	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170036	381	Color	8	mg/L	0		A2120C	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook

DT02170037	384	Color	164	mg/L	0	A2120C	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02180039	IUPW	Color	153	mg/L	0	A2120C	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02180040	LE2W	Color	99	mg/L	0	A2120C	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02170033A	SCW	NO2N	0.0447	mg/L	0.01	A4500B	2/19/2009	2/17/2009	Ben Cook	2/19/2009	Ben Cook
DT02170033B	SCW	NO2N	0.0444	mg/L	0.01	A4500B	2/19/2009	2/17/2009	Ben Cook	2/19/2009	Ben Cook
DT02170037	384	NO3N	0.0274	mg/L	0.01	A4500F	2/19/2009	2/17/2009	Ben Cook	2/19/2009	Ben Cook
DT02170033A	SCW	SRP	0.0310	mg/L	0	EPA 365.1	2/20/2009	2/17/2009	Ben Cook	2/20/2009	Ben Cook
DT02170033B	SCW	SRP	0.0303	mg/L	0	EPA 365.1	2/20/2009	2/17/2009	Ben Cook	2/20/2009	Ben Cook
DT02170034	393	SRP	0.0030	mg/L	0	EPA 365.1	2/20/2009	2/17/2009	Ben Cook	2/20/2009	Ben Cook
DT02170035	391	SRP	0.0021	mg/L	0 J	EPA 365.1	2/20/2009	2/17/2009	Ben Cook	2/20/2009	Ben Cook
DT02170036	381	SRP	0.0072	mg/L	0	EPA 365.1	2/20/2009	2/17/2009	Ben Cook	2/20/2009	Ben Cook
DT02170037	384	SRP	0.0016	mg/L	0 J	EPA 365.1	2/20/2009	2/17/2009	Ben Cook	2/20/2009	Ben Cook
DT02180039	IUPW	SRP	0.0099	mg/L	0	EPA 365.1	2/20/2009	2/18/2009	Ben Cook	2/20/2009	Ben Cook
DT02180040	LE2W	SRP	0.0138	mg/L	0	EPA 365.1	2/20/2009	2/18/2009	Ben Cook	2/20/2009	Ben Cook
DT02170035	391	Alkalinity	144	mg/L	2	A2320B	3/2/2009	2/17/2009	Ben Cook	3/2/2009	Ben Cook
DT02170036	381	Alkalinity	244	mg/L	2	A2320B	3/2/2009	2/17/2009	Ben Cook	3/2/2009	Ben Cook
DT02170037	384	Alkalinity	394	mg/L	2	A2320B	3/2/2009	2/17/2009	Ben Cook	3/2/2009	Ben Cook
DT02180039	IUPW	Alkalinity	162	mg/L	2	A2320B	3/2/2009	2/18/2009	Ben Cook	3/2/2009	Ben Cook
DT02180040	LE2W	Alkalinity	92	mg/L	2	A2320B	3/2/2009	2/18/2009	Ben Cook	3/2/2009	Ben Cook
DT02170033A	SCW	Hardness	148	mg/L	1	A2340C	3/2/2009	2/17/2009	Ben Cook	3/2/2009	Ben Cook
DT02170033B	SCW	Hardness	144	mg/L	1	A2340C	3/2/2009	2/17/2009	Ben Cook	3/2/2009	Ben Cook
DT02170034	393	Hardness	1184	mg/L	1	A2340C	3/2/2009	2/17/2009	Ben Cook	3/2/2009	Ben Cook
DT02170035	391	Hardness	308	mg/L	1	A2340C	3/2/2009	2/17/2009	Ben Cook	3/2/2009	Ben Cook
DT02170036	381	Hardness	612	mg/L	1	A2340C	3/2/2009	2/17/2009	Ben Cook	3/2/2009	Ben Cook
DT02170037	384	Hardness	2180	mg/L	1	A2340C	3/2/2009	2/17/2009	Ben Cook	3/2/2009	Ben Cook
DT02180039	IUPW	Hardness	332	mg/L	1	A2340C	3/2/2009	2/18/2009	Ben Cook	3/2/2009	Ben Cook
DT02180040	LE2W	Hardness	144	mg/L	1	A2340C	3/2/2009	2/18/2009	Ben Cook	3/2/2009	Ben Cook
DT02170037	384	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	3/6/2009	2/17/2009	Ben Cook	3/6/2009	Ben Cook
DT02170038A	SCW	CHLRPHY	0.00068	mg/L	0	A10200H	3/5/2009	2/17/2009	Ben Cook	3/5/2009	Ben Cook
DT02170038B	SCW	CHLRPHY	0.00074	mg/L	0	A10200H	3/5/2009	2/17/2009	Ben Cook	3/5/2009	Ben Cook
DT02180041	IUPW	CHLRPHY	0.00266	mg/L	0	A10200H	3/5/2009	2/18/2009	Ben Cook	3/5/2009	Ben Cook
DT02180042A	LE2W	CHLRPHY	0.00087	mg/L	0	A10200H	3/5/2009	2/18/2009	Ben Cook	3/5/2009	Ben Cook
DT02180042B	LE2W	CHLRPHY	0.00093	mg/L	0	A10200H	3/5/2009	2/18/2009	Ben Cook	3/5/2009	Ben Cook
DT02170034A	393	TP	0.0143	mg/L	0	A4500PF	2/23/2009	2/17/2009	Ben Cook	2/23/2009	Ben Cook
DT02170034B	393	TP	0.0140	mg/L	0	A4500PF	2/23/2009	2/17/2009	Ben Cook	2/23/2009	Ben Cook
DT02170035	391	TP	0.0064	mg/L	0	A4500PF	2/23/2009	2/17/2009	Ben Cook	2/23/2009	Ben Cook
DT02170037	384	TP	0.0030	mg/L	0	A4500PF	2/23/2009	2/17/2009	Ben Cook	2/23/2009	Ben Cook
DT02180039	IUPW	TP	0.0664	mg/L	0	A4500PF	2/23/2009	2/18/2009	Ben Cook	2/23/2009	Ben Cook
DT02180040	LE2W	TP	0.0408	mg/L	0	A4500PF	2/23/2009	2/18/2009	Ben Cook	2/23/2009	Ben Cook
DT02170033	SCW	TP	0.116	mg/L	0.01	A4500PF	2/23/2009	2/17/2009	Ben Cook	2/23/2009	Ben Cook
DT02170036	381	TP	0.0094	mg/L	0	A4500PF	2/23/2009	2/17/2009	Ben Cook	2/23/2009	Ben Cook
DT02170034	393	NO2N	<0.0011	mg/L	0.01 U	A4500B	2/19/2009	2/17/2009	Ben Cook	2/19/2009	Ben Cook
DT02170035	391	NO2N	0.0062	mg/L	0.01	A4500B	2/19/2009	2/17/2009	Ben Cook	2/19/2009	Ben Cook
DT02170036	381	NO2N	<0.0011	mg/L	0.01 U	A4500B	2/19/2009	2/17/2009	Ben Cook	2/19/2009	Ben Cook
DT02170037	384	NO2N	0.0208	mg/L	0.01	A4500B	2/19/2009	2/17/2009	Ben Cook	2/19/2009	Ben Cook
DT02180039	IUPW	NO2N	0.0515	mg/L	0.01	A4500B	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook

DT02180040	LE2W	NO2N	0.0173	mg/L	0.01		A4500B	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02170033A	SCW	NO3N	1.08	mg/L	0.1		A4500F	2/19/2009	2/17/2009	Ben Cook	2/19/2009	Ben Cook
DT02170033B	SCW	NO3N	1.08	mg/L	0.1		A4500F	2/19/2009	2/17/2009	Ben Cook	2/19/2009	Ben Cook
DT02170034	393	NO3N	<0.002	mg/L	0.01	U	A4500F	2/19/2009	2/17/2009	Ben Cook	2/19/2009	Ben Cook
DT02170035	391	NO3N	0.418	mg/L	0.08		A4500F	2/19/2009	2/17/2009	Ben Cook	2/19/2009	Ben Cook
DT02170036	381	NO3N	<0.002	mg/L	0.01	U	A4500F	2/19/2009	2/17/2009	Ben Cook	2/19/2009	Ben Cook
DT02180039	IUPW	NO3N	2.91	mg/L	0.15		A4500F	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02180040	LE2W	NO3N	0.559	mg/L	0.08		A4500F	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02170033A	SCW	Alkalinity	108	mg/L	2		A2320B	3/2/2009	2/17/2009	Ben Cook	3/2/2009	Ben Cook
DT02170033B	SCW	Alkalinity	108	mg/L	2		A2320B	3/2/2009	2/17/2009	Ben Cook	3/2/2009	Ben Cook
DT02170034	393	Alkalinity	320	mg/L	2		A2320B	3/2/2009	2/17/2009	Ben Cook	3/2/2009	Ben Cook
DT02170033	SCW	BOD	3.7	mg/L	0.2		A5210B	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170034	393	BOD	2.1	mg/L	0.2		A5210B	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170035	391	BOD	0.8	mg/L	0.2		A5210B	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170036	381	BOD	0.8	mg/L	0.2		A5210B	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02170037	384	BOD	1.7	mg/L	0.2		A5210B	2/18/2009	2/17/2009	Ben Cook	2/18/2009	Ben Cook
DT02180039	IUPW	BOD	4.0	mg/L	0.2		A5210B	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02180040	LE2W	BOD	4.0	mg/L	0.2		A5210B	2/19/2009	2/18/2009	Ben Cook	2/19/2009	Ben Cook
DT02170038B	SCW	CHLRPHY	0.00074	mg/L	0		A10200H	3/5/2009	2/17/2009	Ben Cook	3/5/2009	Ben Cook

LabSampleID	SampleDescription	ParamID	Results	Units	RL	LabQualifier	AnalysisMethod	AnalysisDate	SampleDate	Analyst	Calibration Date	Calibration Person
DT04140047	MW 393	CL	38.93	mg/L	1		A4500Cl-E	4/28/2009	4/14/2009	Ben Cook	4/28/2009	Ben Cook
DT04140048	MW 391	CL	36.97	mg/L	1		A4500Cl-E	4/28/2009	4/14/2009	Ben Cook	4/28/2009	Ben Cook
DT04150055	SCW	CL	46.96	mg/L	1		A4500Cl-E	4/28/2009	4/15/2009	Ben Cook	4/28/2009	Ben Cook
DT04150056	LE1W	CL	37.99	mg/L	1		A4500Cl-E	4/28/2009	4/15/2009	Ben Cook	4/28/2009	Ben Cook
DT04140043A	QUW	CL	167.81	mg/L	12		A4500Cl-E	4/28/2009	4/14/2009	Ben Cook	4/28/2009	Ben Cook
DT04140043B	QUW	CL	177.87	mg/L	12		A4500Cl-E	4/28/2009	4/14/2009	Ben Cook	4/28/2009	Ben Cook
DT04140046	LAW	CL	61.31	mg/L	3		A4500Cl-E	4/28/2009	4/14/2009	Ben Cook	4/28/2009	Ben Cook
DT04150053	MW 381	CL	72.78	mg/L	5		A4500Cl-E	4/28/2009	4/15/2009	Ben Cook	4/28/2009	Ben Cook
DT04150054	MW 384	CL	85.88	mg/L	4		A4500Cl-E	4/28/2009	4/15/2009	Ben Cook	4/28/2009	Ben Cook
DT04140043B	QUW	Alkalinity	110	mg/L	2		A2320B	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04140044A	LE2-W	NO3N	0.490	mg/L	0.05		A4500F	4/24/2009	4/14/2009	Ben Cook	4/24/2009	Ben Cook
DT04140044B	LE2-W	NO3N	0.493	mg/L	0.05		A4500F	4/24/2009	4/14/2009	Ben Cook	4/24/2009	Ben Cook
DT04140045	IUPW	NO3N	0.320	mg/L	0.015		A4500F	4/24/2009	4/14/2009	Ben Cook	4/24/2009	Ben Cook
DT04140046	LAW	NO3N	0.665	mg/L	0.05		A4500F	4/24/2009	4/14/2009	Ben Cook	4/24/2009	Ben Cook
DT04140048	MW 391	NO3N	0.356	mg/L	0.02		A4500F	4/24/2009	4/14/2009	Ben Cook	4/24/2009	Ben Cook
DT04150055	SCW	NO3N	0.552	mg/L	0.03		A4500F	4/24/2009	4/15/2009	Ben Cook	4/24/2009	Ben Cook
DT04150056	LE1W	NO3N	0.473	mg/L	0.05		A4500F	4/24/2009	4/15/2009	Ben Cook	4/24/2009	Ben Cook
DT04140043A	QUW	NO2N	0.0043	mg/L	0.005	J	A4500B	4/16/2009	4/14/2009	Ben Cook	4/16/2009	Ben Cook
DT04140043B	QUW	NO2N	0.0044	mg/L	0.005	J	A4500B	4/16/2009	4/14/2009	Ben Cook	4/16/2009	Ben Cook
DT04140044	LE2-W	NO2N	0.0339	mg/L	0.005		A4500B	4/16/2009	4/14/2009	Ben Cook	4/16/2009	Ben Cook
DT04140045	IUPW	TKN	0.556	mg/L	0.3		EPA 351.2	5/7/2009	4/14/2009	Ben Cook	5/7/2009	Ben Cook
DT04140046	LAW	TKN	0.799	mg/L	0.3		EPA 351.2	5/7/2009	4/14/2009	Ben Cook	5/7/2009	Ben Cook
DT04140047	MW 393	TKN	1.246	mg/L	0.3		EPA 351.2	5/7/2009	4/14/2009	Ben Cook	5/7/2009	Ben Cook
DT04140048	MW 391	TKN	0.143	mg/L	0.3	J	EPA 351.2	5/7/2009	4/14/2009	Ben Cook	5/7/2009	Ben Cook
DT04150053	MW 381	TKN	0.238	mg/L	0.3	J	EPA 351.2	5/7/2009	4/15/2009	Ben Cook	5/7/2009	Ben Cook
DT04150054	MW 384	TKN	0.564	mg/L	0.3		EPA 351.2	5/7/2009	4/15/2009	Ben Cook	5/7/2009	Ben Cook
DT04150055	SCW	TKN	0.842	mg/L	0.3		EPA 351.2	5/7/2009	4/15/2009	Ben Cook	5/7/2009	Ben Cook
DT04150056	LE1W	TKN	0.710	mg/L	0.3		EPA 351.2	5/7/2009	4/15/2009	Ben Cook	5/7/2009	Ben Cook
DT04140044	LE2-W	Alkalinity	126	mg/L	2		A2320B	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04140045	IUPW	Alkalinity	126	mg/L	2		A2320B	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04140046	LAW	Alkalinity	132	mg/L	2		A2320B	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04140047	MW 393	Alkalinity	320	mg/L	2		A2320B	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04140048	MW 391	Alkalinity	138	mg/L	2		A2320B	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04150053	MW 381	Alkalinity	270	mg/L	2		A2320B	4/27/2009	4/15/2009	Ben Cook	4/27/2009	Ben Cook
DT04150054	MW 384	Alkalinity	208	mg/L	2		A2320B	4/27/2009	4/15/2009	Ben Cook	4/27/2009	Ben Cook
DT04150055	SCW	Alkalinity	124	mg/L	2		A2320B	4/27/2009	4/15/2009	Ben Cook	4/27/2009	Ben Cook
DT04150056	LE1W	Alkalinity	108	mg/L	2		A2320B	4/27/2009	4/15/2009	Ben Cook	4/27/2009	Ben Cook
DT04140043A	QUW	Alkalinity	110	mg/L	2		A2320B	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04140043A	QUW	Hardness	536	mg/L	1		A2340C	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04140043B	QUW	Hardness	540	mg/L	1		A2340C	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04140044	LE2-W	Hardness	180	mg/L	1		A2340C	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04140045	IUPW	Hardness	188	mg/L	1		A2340C	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04140046	LAW	Hardness	220	mg/L	1		A2340C	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04140047	MW 393	Hardness	1252	mg/L	1		A2340C	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook
DT04140048	MW 391	Hardness	328	mg/L	1		A2340C	4/27/2009	4/14/2009	Ben Cook	4/27/2009	Ben Cook

DT04150053	MW 381	Hardness	684	mg/L	1	A2340C	4/27/2009	4/15/2009	Ben Cook	4/27/2009	Ben Cook
DT04150054	MW 384	Hardness	1896	mg/L	1	A2340C	4/27/2009	4/15/2009	Ben Cook	4/27/2009	Ben Cook
DT04150055	SCW	Hardness	172	mg/L	1	A2340C	4/27/2009	4/15/2009	Ben Cook	4/27/2009	Ben Cook
DT04150056	LE1W	Hardness	160	mg/L	1	A2340C	4/27/2009	4/15/2009	Ben Cook	4/27/2009	Ben Cook
DT04140046	LAW	NH3N	<0.5	mg/L	0.5 U	A4500NH3D	5/8/2009	4/14/2009	Ben Cook	5/8/2009	Ben Cook
DT04140047	MW 393	NH3N	0.72	mg/L	0.5	A4500NH3D	5/8/2009	4/14/2009	Ben Cook	5/8/2009	Ben Cook
DT04140046	LAW	BOD	2.7	mg/L	0.2	A5210B	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140047	MW 393	BOD	1.0	mg/L	0.2	A5210B	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140048	MW 391	BOD	0.4	mg/L	0.2	A5210B	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04150053	MW 381	BOD	0.8	mg/L	0.2	A5210B	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150054	MW 384	BOD	1.0	mg/L	0.2	A5210B	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150055	SCW	BOD	2.3	mg/L	0.2	A5210B	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150056	LE1W	BOD	1.7	mg/L	0.2	A5210B	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04140043	QUW	BOD	1.0	mg/L	0.2	A5210B	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140044	LE2-W	BOD	2.7	mg/L	0.2	A5210B	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140045	IUPW	BOD	2.3	mg/L	0.2	A5210B	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140045	IUPW	NO2N	0.0189	mg/L	0.005	A4500B	4/16/2009	4/14/2009	Ben Cook	4/16/2009	Ben Cook
DT04140043	QUW	COLOR	20	mg/L	0	A2120C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140044	LE2-W	COLOR	379	mg/L	0	A2120C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140045	IUPW	COLOR	152	mg/L	0	A2120C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140046	LAW	COLOR	206	mg/L	0	A2120C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140047	MW 393	COLOR	48	mg/L	0	A2120C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140048	MW 391	COLOR	15	mg/L	0	A2120C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04150053	MW 381	COLOR	8	mg/L	0	A2120C	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150054	MW 384	COLOR	6	mg/L	0	A2120C	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04140043B	QUW	TSS	1.5	mg/L	0.5	A2540D	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140044	LE2-W	TSS	98.5	mg/L	0.5	A2540D	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140045	IUPW	TSS	4.5	mg/L	0.5	A2540D	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140046	LAW	TSS	21.1	mg/L	0.5	A2540D	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140047	MW 393	TSS	1.7	mg/L	0.5	A2540D	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140048	MW 391	TSS	43.0	mg/L	0.5	A2540D	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04150053A	MW 381	TSS	3.2	mg/L	0.5	A2540D	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150053B	MW 381	TSS	3.1	mg/L	0.5	A2540D	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150054	MW 384	TSS	1.7	mg/L	0.5	A2540D	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150055	SCW	TSS	40.7	mg/L	0.5	A2540D	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150056	LE1W	TSS	34.5	mg/L	0.5	A2540D	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04140046	LAW	NO2N	0.0246	mg/L	0.005	A4500B	4/16/2009	4/14/2009	Ben Cook	4/16/2009	Ben Cook
DT04150053	MW 381	NO2N	<0.0011	mg/L	0.005 U	A4500B	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150054	MW 384	NO2N	<0.0011	mg/L	0.005 U	A4500B	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150055	SCW	NO2N	0.0321	mg/L	0.005	A4500B	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150056	LE1W	NO2N	0.0173	mg/L	0.005	A4500B	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04140047	MW 393	NO2N	<0.0011	mg/L	0.005 U	A4500B	4/16/2009	4/14/2009	Ben Cook	4/16/2009	Ben Cook
DT04140044	LE2-W	CL	48.68	mg/L	1	A4500Cl-E	4/28/2009	4/14/2009	Ben Cook	4/28/2009	Ben Cook
DT04140045	IUPW	CL	49.00	mg/L	1	A4500Cl-E	4/28/2009	4/14/2009	Ben Cook	4/28/2009	Ben Cook
DT04150055	SCW	COLOR	261	mg/L	0	A2120C	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150056	LE1W	COLOR	100	mg/L	0	A2120C	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook

DT04140043A	QUW	TDS	969	mg/L	5	A2540C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140043B	QUW	TDS	969	mg/L	5	A2540C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140044	LE2-W	TDS	322	mg/L	5	A2540C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140045	IUPW	TDS	304	mg/L	5	A2540C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140046	LAW	TDS	383	mg/L	5	A2540C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140047	MW 393	TDS	1657	mg/L	5	A2540C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140048	MW 391	TDS	483	mg/L	5	A2540C	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04150053A	MW 381	TDS	897	mg/L	5	A2540C	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150053B	MW 381	TDS	916	mg/L	5	A2540C	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150054	MW 384	TDS	2487	mg/L	5	A2540C	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150055	SCW	TDS	317	mg/L	5	A2540C	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04150056	LE1W	TDS	213	mg/L	5	A2540C	4/16/2009	4/15/2009	Ben Cook	4/16/2009	Ben Cook
DT04140043A	QUW	TSS	1.5	mg/L	0.5	A2540D	4/15/2009	4/14/2009	Ben Cook	4/15/2009	Ben Cook
DT04140043	QUW	NO3N	0.0510	mg/L	0.005	A4500F	4/24/2009	4/14/2009	Ben Cook	4/24/2009	Ben Cook
DT04140047	MW 393	NO3N	<0.0012	mg/L	0.005 U	A4500F	4/24/2009	4/14/2009	Ben Cook	4/24/2009	Ben Cook
DT04150053	MW 381	NO3N	<0.0012	mg/L	0.005 U	A4500F	4/24/2009	4/15/2009	Ben Cook	4/24/2009	Ben Cook
DT04150054	MW 384	NO3N	<0.0012	mg/L	0.005 U	A4500F	4/24/2009	4/15/2009	Ben Cook	4/24/2009	Ben Cook
DT04140048	MW 391	NO2N	0.0044	mg/L	0.005 J	A4500B	4/16/2009	4/14/2009	Ben Cook	4/16/2009	Ben Cook
DT04140043	QUW	TP	0.0026	mg/L	0.003 J	A4500PF	4/30/2009	4/14/2009	Ben Cook	4/30/2009	Ben Cook
DT04140045	IUPW	TP	0.0455	mg/L	0.003	A4500PF	4/30/2009	4/14/2009	Ben Cook	4/30/2009	Ben Cook
DT04140046	LAW	TP	0.0741	mg/L	0.003	A4500PF	4/30/2009	4/14/2009	Ben Cook	4/30/2009	Ben Cook
DT04140047	MW 393	TP	0.0137	mg/L	0.003	A4500PF	4/30/2009	4/14/2009	Ben Cook	4/30/2009	Ben Cook
DT04140048	MW 391	TP	0.0259	mg/L	0.003	A4500PF	4/30/2009	4/14/2009	Ben Cook	4/30/2009	Ben Cook
DT04150053	MW 381	TP	0.0052	mg/L	0.003	A4500PF	4/30/2009	4/15/2009	Ben Cook	4/30/2009	Ben Cook
DT04150054	MW 384	TP	0.0120	mg/L	0.003	A4500PF	4/30/2009	4/15/2009	Ben Cook	4/30/2009	Ben Cook
DT04150055	SCW	TP	0.0434	mg/L	0.003	A4500PF	4/30/2009	4/15/2009	Ben Cook	4/30/2009	Ben Cook
DT04150056	LE1W	TP	0.0387	mg/L	0.003	A4500PF	4/30/2009	4/15/2009	Ben Cook	4/30/2009	Ben Cook
DT04140044A	LE2-W	TP	0.0881	mg/L	0.009	A4500PF	4/30/2009	4/14/2009	Ben Cook	4/30/2009	Ben Cook
DT04140044B	LE2-W	TP	0.0843	mg/L	0.009	A4500PF	4/30/2009	4/14/2009	Ben Cook	4/30/2009	Ben Cook
DT04140045	IUPW	SRP	0.0027	mg/L	0.003 J	EPA 365.1	5/4/2009	4/14/2009	Ben Cook	5/4/2009	Ben Cook
DT04140046	LAW	SRP	0.0059	mg/L	0.003	EPA 365.1	5/4/2009	4/14/2009	Ben Cook	5/4/2009	Ben Cook
DT04140047	MW 393	SRP	0.0023	mg/L	0.003 J	EPA 365.1	5/4/2009	4/14/2009	Ben Cook	5/4/2009	Ben Cook
DT04140048	MW 391	SRP	<0.0005	mg/L	0.003 U	EPA 365.1	5/4/2009	4/14/2009	Ben Cook	5/4/2009	Ben Cook
DT04150053	MW 381	SRP	0.0032	mg/L	0.003	EPA 365.1	5/4/2009	4/15/2009	Ben Cook	5/4/2009	Ben Cook
DT04150054	MW 384	SRP	0.0109	mg/L	0.003	EPA 365.1	5/4/2009	4/15/2009	Ben Cook	5/4/2009	Ben Cook
DT04150055	SCW	SRP	0.0031	mg/L	0.003	EPA 365.1	5/4/2009	4/15/2009	Ben Cook	5/4/2009	Ben Cook
DT04150056	LE1W	SRP	0.0046	mg/L	0.003	EPA 365.1	5/4/2009	4/15/2009	Ben Cook	5/4/2009	Ben Cook
DT04140043A	QUW	SRP	0.0016	mg/L	0.003 J	EPA 365.1	5/4/2009	4/14/2009	Ben Cook	5/4/2009	Ben Cook
DT04140043B	QUW	SRP	0.0015	mg/L	0.003 J	EPA 365.1	5/4/2009	4/14/2009	Ben Cook	5/4/2009	Ben Cook
DT04140044	LE2-W	SRP	0.0017	mg/L	0.003 J	EPA 365.1	5/4/2009	4/14/2009	Ben Cook	5/4/2009	Ben Cook
DT04140049A	QUW	CHLRPHYLA	0.00050	mg/L	0.0005	A10200H	5/5/2009	4/14/2009	Ben Cook	5/5/2009	Ben Cook
DT04140049B	QUW	CHLRPHYLA	0.00044	mg/L	0.0005 J	A10200H	5/5/2009	4/14/2009	Ben Cook	5/5/2009	Ben Cook
DT04140050	LE2-W	CHLRPHYLA	0.01088	mg/L	0.0005	A10200H	5/5/2009	4/14/2009	Ben Cook	5/5/2009	Ben Cook
DT04140051	IUPW	CHLRPHYLA	0.00650	mg/L	0.0005	A10200H	5/5/2009	4/14/2009	Ben Cook	5/5/2009	Ben Cook
DT04140052	LAW	CHLRPHYLA	0.00976	mg/L	0.0005	A10200H	5/5/2009	4/14/2009	Ben Cook	5/5/2009	Ben Cook
DT04150057A	SCW	CHLRPHYLA	0.00638	mg/L	0.0005	A10200H	5/5/2009	4/15/2009	Ben Cook	5/5/2009	Ben Cook

DT04150057B	SCW	CHLRPHYLA	0.00644	mg/L	0.0005		A10200H	5/5/2009	4/15/2009	Ben Cook	5/5/2009	Ben Cook
DT04150058	LE1W	CHLRPHYLA	0.00269	mg/L	0.0005		A10200H	5/5/2009	4/15/2009	Ben Cook	5/5/2009	Ben Cook
DT04140043A	QUW	TKN	0.179	mg/L	0.3	J	EPA 351.2	5/7/2009	4/14/2009	Ben Cook	5/7/2009	Ben Cook
DT04140043B	QUW	TKN	0.172	mg/L	0.3	J	EPA 351.2	5/7/2009	4/14/2009	Ben Cook	5/7/2009	Ben Cook
DT04140044	LE2-W	TKN	0.787	mg/L	0.3		EPA 351.2	5/7/2009	4/14/2009	Ben Cook	5/7/2009	Ben Cook
DT04140048	MW 391	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	5/8/2009	4/14/2009	Ben Cook	5/8/2009	Ben Cook
DT04150053	MW 381	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	5/8/2009	4/15/2009	Ben Cook	5/8/2009	Ben Cook
DT04150054	MW 384	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	5/8/2009	4/15/2009	Ben Cook	5/8/2009	Ben Cook
DT04150055	SCW	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	5/8/2009	4/15/2009	Ben Cook	5/8/2009	Ben Cook
DT04150056	LE1W	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	5/8/2009	4/15/2009	Ben Cook	5/8/2009	Ben Cook
DT04140043A	QUW	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	5/8/2009	4/14/2009	Ben Cook	5/8/2009	Ben Cook
DT04140043B	QUW	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	5/8/2009	4/14/2009	Ben Cook	5/8/2009	Ben Cook
DT04140044	LE2-W	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	5/8/2009	4/14/2009	Ben Cook	5/8/2009	Ben Cook
DT04140045	IUPW	NH3N	<0.5	mg/L	0.5	U	A4500NH3D	5/8/2009	4/14/2009	Ben Cook	5/8/2009	Ben Cook

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

ANALYTICAL REPORT

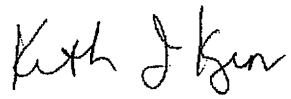
DTE-MI

Lot #: A8G230150

John Barkach

Great Lakes Environmental Cent
33045 Hamilton Court
Suite W106
Farmington Hills, MI 48334

TESTAMERICA LABORATORIES, INC.



Kenneth J. Kuzior
Project Manager

August 14, 2008

CASE NARRATIVE

A8G230150

The following report contains the analytical results for four water samples submitted to TestAmerica North Canton by Great Lakes Environmental Center, Inc. from the DTE-MI Site. The samples were received July 23, 2008, according to documented sample acceptance procedures.

The 175 Carbon Dioxide analysis was performed at the TestAmerica Burlington Laboratory.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

Any reference within this document to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.)

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Kenneth J. Kuzior, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 36.

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 2.1°C.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A8G230150

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
381 07/22/08 18:35 001				
Bicarbonate Alkalinity	291	5.0	mg/L	SM18 2320 B
393 07/22/08 16:00 002				
Bicarbonate Alkalinity	542	5.0	mg/L	SM18 2320 B
391 07/22/08 16:27 003				
Bicarbonate Alkalinity	191	5.0	mg/L	SM18 2320 B
384 07/22/08 14:25 004				
Bicarbonate Alkalinity	413	5.0	mg/L	SM18 2320 B

ANALYTICAL METHODS SUMMARY

A8G230150

PARAMETER	ANALYTICAL METHOD
Bicarbonate alkalinity	SM18 2320 B

References:

SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

SAMPLE SUMMARY

A8G230150

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KR1T9	001	381	07/22/08	18:35
KR1VD	002	393	07/22/08	16:00
KR1VE	003	391	07/22/08	16:27
KR1VG	004	384	07/22/08	14:25

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.

Great Lakes Environmental Center Inc

Client Sample ID: 381

General Chemistry

Lot-Sample #...: A8G230150-001 **Work Order #...:** KR1T9 **Matrix.....:** WG
Date Sampled...: 07/22/08 18:35 **Date Received..:** 07/23/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	**291**	**5.0**	**mg/L**	**SM18 2320 B**	**07/24/08**	**8207072**

Dilution Factor: 1

Great Lakes Environmental Center Inc

Client Sample ID: 393

General Chemistry

Lot-Sample #...: A8G230150-002 **Work Order #...:** KR1VD **Matrix.....:** WG
Date Sampled...: 07/22/08 16:00 **Date Received..:** 07/23/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	542	5.0	mg/L	SM18 2320 B	07/24/08	8207072

Dilution Factor: 1

Great Lakes Environmental Center Inc

Client Sample ID: 391

General Chemistry

Lot-Sample #...: A8G230150-003 **Work Order #...:** KR1VE **Matrix.....:** WG
Date Sampled...: 07/22/08 16:27 **Date Received..:** 07/23/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	191	5.0	mg/L	SM18 2320 B	07/24/08	8207072

Dilution Factor: 1

Great Lakes Environmental Center Inc

Client Sample ID: 384

General Chemistry

Lot-Sample #...: A8G230150-004 **Work Order #...:** KR1VG **Matrix.....:** WG
Date Sampled...: 07/22/08 14:25 **Date Received..:** 07/23/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	413	5.0	mg/L	SM18 2320 B	07/24/08	8207072

Dilution Factor: 1

TestAmerica

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QUALITY CONTROL SECTION

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A8G230150 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity		Work Order #: KR5RD1AC		MB Lot-Sample #:	A8G250000-072	
	ND	5.0	mg/L	SM18 2320 B	07/24/08	8207072
		Dilution Factor: 1				

NOTE(S):

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

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A8G230150 **Work Order #...:** KR1PK-SMP KR1PK-DUP **Matrix.....:** WATER

Date Sampled...: 07/22/08 09:26 **Date Received..:** 07/23/08

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity						SD Lot-Sample #: A8G230131-004		
	62.5	62.8	mg/L	0.50	(0-20)	SM18 2320 B	07/24/08	8207072

Dilution Factor: 1

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

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AL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Jamie Saxton - GLEC	Jamie Saxton	7/22/08	085235
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
739 Hastings Street	231-941-2230 231-941-2240		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
Traverse City / MI / 49686			
Project Name and Location (State)	**Carrier/Waybill Number**		
DTE - MI	847942393772		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: bicarbonate	CO_3	Special Instructions/ Conditions of Receipt
381	7/22/08	635P		X			X						X	X	
393	7/22/08	300P		X			X						X	X	
391	7/22/08	429P		X			X						X	X	
384	7/22/08	525P		X			X						X	X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time
Relinquished By: Jamie N. Saxton	7/22/08	7:30 PM
Relinquished By:		
Relinquished By:		

	Date	Time
1. Received By:	7-23-8	9:20
2. Received By:		
3. Received By:		

Comments

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

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** A8G230150
North Canton Facility

Client Elec Project _____ By: _____ (Signature)
Cooler Received on 7-25-8 Opened on 7-25-8
FedEx ☑ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____
TestAmerica Cooler # 102 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☐ No ☑ Intact? Yes ☐ No ☑ NA ☑
   If YES, Quantity _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☐ No ☐ NA ☑
   Were custody seals on the bottle(s)? Yes ☐ No ☑
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☑ No ☐
3. Did custody papers accompany the sample(s)? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☑ None ☐ Other _____
6. Cooler temperature upon receipt 2.1 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☑ Other ☐ _____
   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 be reconciled with the COC? Yes ☑ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☑
10. Were correct bottle(s) used for the test(s) 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 ☐
13. Was a trip blank present in the cooler(s)? Yes ☐ No ☑ Were VOAs on the COC? Yes ☑ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐
Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

_____
_____
_____
_____
_____
_____

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot#* 113007-HNO_3; *Sulfuric Acid Lot#* 031808-H_2SO_4; *Sodium Hydroxide Lot#* 073007 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 050205-$(CH_3COO)_2ZN$/*NaOH.*
What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp °C	Method	Coolant

Discrepancies Cont'd

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

BURLINGTON DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

August 13, 2008

TestAmerica Laboratories, Inc.

Mr. Ken Kuzior
TestAmerica, Inc.
4101 Shuffel Drive NW
North Canton, OH 44720

Re: Laboratory Project No. 28008
Case: DTE-MI; SDG: 8G230150

Dear Mr. Kuzior:

Enclosed are the analytical results for the samples that were received by TestAmerica Burlington on July 24th, 2008. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 07/24/08 ETR No: 126722		
761089	381	07/22/08	WATER
761090	393	07/22/08	WATER
761091	391	07/22/08	WATER
761092	384	07/22/08	WATER

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.

The samples were analyzed for carbon dioxide by RSK175. Samples 393 and 384 were analyzed at a dilution for in order to quantity within the response of the instrument calibration.

Any reference within this report to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.) 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,

Kristine A. Dusablon
Project Manager

Enclosure

North 30 Community Drive Suite 11 South Burlington, VT 05403 **tel** 802.660.1990 **fax** 802.660.1919 **www.testamericainc.com**

TestAmerica 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: SW-846: The relative percent difference for detected concentrations between two GC columns is greater than 40%. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified 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 conden sation 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

North Canton

Laboratory

TestAmerica Burlington
55 South Park Drive

Colchester, VT 05446

TestAmerica Laboratories, Inc.
SAMPLE ANALYSIS REQUISTION

Lab Request SR105113

Report Package: **Report**

Need Analytical Report 2008-08-04

Client Code: 1380492

Project Manager: KEN KUZIOR

Sample I.D.	Work Order Number	Client Sample ID	Sampling Date	Analysis Required
A8G230150-1	KR1T9	381	2008-07-22 18:35	WATER, RSK-175, Carbon Dioxide (CO2)
A8G230150-2	KR1VD	393	2008-07-22 16:00	WATER, RSK-175, Carbon Dioxide (CO2)
A8G230150-3	KR1VE	391	2008-07-22 16:27	WATER, RSK-175, Carbon Dioxide (CO2)
A8G230150-4	KR1VG	384	2008-07-22 14:25	WATER, RSK-175, Carbon Dioxide (CO2)

3X40

Please use Client Sample ID for report

Call KEN KUZIOR with questions at 330-497-9396

at the TAL North Canton Laboratory

Shipping Method: FEDEX

Need detection limit and analysis date included in report.

Please send a signed copy of this form with the report at completion of analysis.

Relinquished by: W-Miller Date/Time: 7/23/08 1700

Relinquished by: _____ Date/Time: _____

Received for lab by: TA Date/Time: 07-24-08 1045

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Data Summary – RSK-175 CO2

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

381

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTE_MI SAS No.: SDG No.: 8G230150

Matrix: (soil/water) WATER Lab Sample ID: 761089

Sample wt/vol: _____ (g/mL) ML Lab File ID: 26JUL081356-R011

Level: (low/med) LOW Date Received: 07/24/08

% Moisture: not dec. _____ Date Analyzed: 07/26/08

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	2600	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

384

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTE_MI SAS No.: SDG No.: 8G230150

Matrix: (soil/water) WATER Lab Sample ID: 761092

Sample wt/vol: _____ (g/mL) ML Lab File ID: 26JUL081509-R071

Level: (low/med) LOW Date Received: 07/24/08

% Moisture: not dec. _____ Date Analyzed: 07/26/08

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 10.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	28000	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

391

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTE_MI SAS No.: SDG No.: 8G230150

Matrix: (soil/water) WATER Lab Sample ID: 761091

Sample wt/vol: _____ (g/mL) ML Lab File ID: 26JUL081356-R031

Level: (low/med) LOW Date Received: 07/24/08

% Moisture: not dec. _____ Date Analyzed: 07/26/08

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	2300	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

393

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTE_MI SAS No.: SDG No.: 8G230150

Matrix: (soil/water) WATER Lab Sample ID: 761090

Sample wt/vol: _____ (g/mL) ML Lab File ID: 26JUL081509-R061

Level: (low/med) LOW Date Received: 07/24/08

% Moisture: not dec. _____ Date Analyzed: 07/26/08

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 10.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	28000	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MBLKC072608A

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTE_MI SAS No.: SDG No.: 8G230150

Matrix: (soil/water) WATER Lab Sample ID: MBLKC072608A

Sample wt/vol: _____ (g/mL) ML Lab File ID: 26JUL081257-R021

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 07/26/08

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	1000	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

C072608ALCS

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTE_MI SAS No.: SDG No.: 8G230150

Matrix: (soil/water) WATER Lab Sample ID: C072608ALCS

Sample wt/vol: _____ (g/mL) ML Lab File ID: 26JUL081257-R011

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 07/26/08

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	4300	

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTE_MI SAS No.: SDG No.: 8G230150

Matrix Spike - Sample No.: C072608ALCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Carbon Dioxide	5000		4300	86	70-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MBLKC072608A

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTE_MI SAS No.: SDG No.: 8G230150

Lab File ID: 26JUL081257-R021 Lab Sample ID: MBLKC072608A

Date Analyzed: 07/26/08 Time Analyzed: 1307

GC Column: CTR-1 ID: 6.35 (mm) Heated Purge: (Y/N) N

Instrument ID: 2866_2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	C072608ALCS	C072608ALCS	26JUL081257-	1300
02	381	761089	26JUL081356-	1400
03	391	761091	26JUL081356-	1409
04	393	761090	26JUL081509-	1538
05	384	761092	26JUL081509-	1542
06				
07				
08				
09				
10				
11				
12				
13				
14				
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16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTE_MI SAS No.: SDG No.: 8G230150

Instrument ID: 2866_2 Calibration Date(s): 06/28/08 06/28/08

Heated Purge: (Y/N) N Calibration Time(s): 0918 0948

GC Column: CTR-1 ID: 6.35 (mm)

LAB FILE ID: RRF1000=28JUN080946-R RRF2500=28JUN080907-R
RRF5000=28JUN080907-R RRF7500=28JUN080907-R RRF10000=28JUN080907-

COMPOUND	RRF 1000	RRF 2500	RRF 5000	RRF 7500	RRF 10000	$\overline{RRF}$	% RSD
Carbon Dioxide *	0.439	0.464	0.441	0.422	0.414	0.436	4.5*

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTE_MI SAS No.: SDG No.: 8G230150

Instrument ID: 2866_2 Calibration Date: 07/26/08 Time: 1246

Lab File ID: 26JUL081244-R0 Init. Calib. Date(s): 06/28/08 06/28/08

Heated Purge: (Y/N) N Init. Calib. Times: 0918 0948

GC Column: CTR-1 ID: 6.35 (mm)

COMPOUND	$\overline{RRF}$	RRF 5000	MIN RRF	%D	MAX %D
Carbon Dioxide	0.436	0.342		21.6	30.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTE_MI SAS No.: SDG No.: 8G230150

Instrument ID: 2866_2 Calibration Date: 07/26/08 Time: 1610

Lab File ID: 26JUL081609-R0 Init. Calib. Date(s): 06/28/08 06/28/08

Heated Purge: (Y/N) N Init. Calib. Times: 0918 0948

GC Column: CTR-1 ID: 6.35 (mm)

COMPOUND	$\overline{RRF}$	RRF 5000	MIN RRF	%D	MAX %D
Carbon Dioxide	0.436	0.427		2.1	30.0

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTE_MI SAS No.: SDG No.: 8G230150

GC Column: CTR-1 ID: 6.35 (mm) Init. Calib. Date(s): 06/28/08 06/28/08

Instrument ID: 2866_2

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	MEAN SURROGATE RT FROM INITIAL CALIBRATION					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #	RT #
01	CAL2	CAL2	06/28/08	0918		
02	CAL3	CAL3	06/28/08	0922		
03	CAL4	CAL4	06/28/08	0926		
04	CAL5	CAL5	06/28/08	0931		
05	CAL1	CAL1	06/28/08	0948		
06	CCV	CCV	07/26/08	1246		
07	C072608ALCS	C072608ALCS	07/26/08	1300		
08	MBLKC072608A	MBLKC072608A	07/26/08	1307		
09	381	761089	07/26/08	1400		
10	391	761091	07/26/08	1409		
11	393	761090	07/26/08	1538		
12	384	761092	07/26/08	1542		
13	CCV	CCV	07/26/08	1610		
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

DTE 1967-00

Lot #: A8J230272

John Barkach

Great Lakes Environmental Cent
33045 Hamilton Court
Suite W106
Farmington Hills, MI 48334

TESTAMERICA LABORATORIES, INC.

Approved for release.
Kenneth J. Kuzior
Project Manager
11/10/2008 4:05 PM

Kenneth J. Kuzior
Project Manager
ken.kuzior@testamericainc.com

November 6, 2008

CASE NARRATIVE

A8J230272

The following report contains the analytical results for four water samples submitted to TestAmerica North Canton by Great Lakes Environmental Center, Inc. from the DTE 1967-00 Site. The samples were received October 23, 2008, according to documented sample acceptance procedures.

The Carbon Dioxide analysis was performed at the TestAmerica Burlington Laboratory.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

Any reference within this document to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.)

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Kenneth J. Kuzior, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.0°C.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A8J230272

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW 381 10/22/08 10:37 001				
Bicarbonate Alkalinity	272	5.0	mg/L	SM18 2320 B
MW 393 10/22/08 12:45 002				
Bicarbonate Alkalinity	335	5.0	mg/L	SM18 2320 B
MW 391 10/22/08 13:44 003				
Bicarbonate Alkalinity	182	5.0	mg/L	SM18 2320 B
MW 384 10/22/08 15:00 004				
Bicarbonate Alkalinity	482	5.0	mg/L	SM18 2320 B

ANALYTICAL METHODS SUMMARY

A8J230272

PARAMETER	ANALYTICAL METHOD
Bicarbonate alkalinity	SM18 2320 B

References:

SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

SAMPLE SUMMARY

A8J230272

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
K1GH1	001	MW 381	10/22/08	10:37
K1GJJ	002	MW 393	10/22/08	12:45
K1GJL	003	MW 391	10/22/08	13:44
K1GJM	004	MW 384	10/22/08	15:00

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.

Great Lakes Environmental Center Inc

Client Sample ID: MW 381

General Chemistry

Lot-Sample #...: A8J230272-001 Work Order #...: K1GH1 Matrix.....: WG
Date Sampled...: 10/22/08 10:37 Date Received..: 10/23/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	272	5.0	mg/L	SM18 2320 B	10/27/08	8302082

Dilution Factor: 1

Great Lakes Environmental Center Inc

Client Sample ID: MW 393

General Chemistry

Lot-Sample #...: A8J230272-002 **Work Order #...:** K1GJJ **Matrix.....:** WG
Date Sampled...: 10/22/08 12:45 **Date Received..:** 10/23/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	335	5.0	mg/L	SM18 2320 B	10/27/08	8302082

Dilution Factor: 1

Great Lakes Environmental Center Inc

Client Sample ID: MW 391

General Chemistry

Lot-Sample #...: A8J230272-003 Work Order #...: K1GJL Matrix.....: WG
Date Sampled...: 10/22/08 13:44 Date Received..: 10/23/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	182	5.0	mg/L	SM18 2320 B	10/27/08	8302082

Dilution Factor: 1

Great Lakes Environmental Center Inc

Client Sample ID: MW 384

General Chemistry

Lot-Sample #...: A8J230272-004 Work Order #...: K1GJM Matrix.....: WG
Date Sampled...: 10/22/08 15:00 Date Received..: 10/23/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	482	5.0	mg/L	SM18 2320 B	10/27/08	8302082

Dilution Factor: 1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

QUALITY CONTROL SECTION

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A8J230272 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity		Work Order #: K1PWQ1AD		MB Lot-Sample #:	A8J280000-082	
	ND	5.0	mg/L	SM18 2320 B	10/27/08	8302082
		Dilution Factor: 1				

NOTE(S):

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

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A8J230272 **Work Order #...:** K03R8-SMP K03R8-DUP **Matrix.....:** WATER

Date Sampled...: 10/16/08 11:50 **Date Received..:** 10/17/08

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity						SD Lot-Sample #: A8J170156-001		
	597	577	mg/L	3.4	(0-20)	SM18 2320 B	10/27/08	8302082
			Dilution Factor: 1					

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A8J230272 **Work Order #...:** K03WA-SMP K03WA-DUP **Matrix.....:** WATER

Date Sampled...: 10/16/08 13:05 **Date Received..:** 10/17/08

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity						SD Lot-Sample #: A8J170156-002		
	639	632	mg/L	1.1	(0-20)	SM18 2320 B	10/27/08	8302082
			Dilution Factor: 1					

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

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THE LEADER IN ENVIRONMENTAL TESTING

1124 (1007)

Client: GLEC	Project Manager: Jamie Saxton	Date: 10/22/08	Chain of Custody Number: 104391
Address: 739 Hastings Street	Telephone Number (Area Code)/Fax Number: (231)941-2230 / (231)941-2240	Lab Number	Page 1 of 1
City: Traverse City; State: MI; Zip Code: 49686	Site Contact	Lab Contact	
Project Name and Location (State): DTE 1967-00	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: CO3	Bicarbonate	Special Instructions/ Conditions of Receipt
MW 381	10/22/08	10:37		X			X						X	X	
MW 393	10/22/08	12:45		X			X						X	X	
MW 391	10/22/08	13:44		X			X						X	X	
MW 384	10/22/08	15:00		X			X						X	X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

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

QC Requirements (Specify)

1. Relinquished By	Date 10/22/08	Time 1700	1. Received By	Date 10/23/08	Time 9:20
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 - Stays with the Sample; PINK - Field Copy

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** A8J230272
North Canton Facility

Client GLEC Project _____ By: _____ (Signature)
Cooler Received on 10-23-08 Opened on 10-23-08
FedEx ☒ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____
TestAmerica Cooler # _____ Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 0 Quantity Unsalvageable _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt 1.0 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☒ Other ☐ _____
   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 be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☒
10. Were correct bottle(s) used for the test(s) 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 ☐
13. Was a trip blank present in the cooler(s)? Yes ☐ No ☒ Were VOAs on the COC? Yes ☒ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐
Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

_____

_____

_____

_____

_____

_____

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot# 031808-HNO_3; Sulfuric Acid Lot# 031808-H_2SO_4; Sodium Hydroxide Lot# 073007 -NaOH; Hydrochloric Acid Lot# 092006-HCl; Sodium Hydroxide and Zinc Acetate Lot# 050205-$(CH_3COO)_2ZN$/NaOH.* What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

BURLINGTON DATA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

November 5, 2008

Mr. Ken Kuzior
TestAmerica, Inc.
4101 Shuffel Drive NW
North Canton, OH 44720

TestAmerica Laboratories, Inc.

Re: Laboratory Project No. 28008
Case: DTEME; SDG: 8J230272

Dear Mr. Kuzior:

Enclosed are the analytical results for the samples that were received by TestAmerica Burlington on October 24th, 2008. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 10/24/08 ETR No: 128384		
772853	MW 381	10/22/08	WATER
772854	MW 393	10/22/08	WATER
772855	MW 391	10/22/08	WATER
772856	MW 384	10/22/08	WATER

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.

The samples were analyzed for carbon dioxide by RSK175. Sample MW 384 was analyzed at a dilution for carbon dioxide in order to quantity within the response of the instrument calibration.

Any reference within this report to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.) 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,

Kristine A. Dusablon
Project Manager

Enclosure

30 Community Drive Suite 11 South Burlington, VT 05403 tel 802 660 1990 fax 802 660 1919 www.testamericainc.com

TestAmerica 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: SW-846: The relative percent difference for detected concentrations between two GC columns is greater than 40%. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified 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

TestAmerica Laboratories, Inc.

SAMPLE ANALYSIS REQUISTION

Laboratory: **TestAmerica Burlington**
55 South Park Drive
Colchester, VT 05446

Lab Request: SR107319

Report Package: **Report**

Need Analytical Report: 2008-11-06

Client Code: 1380492

Project Manager: KEN KUZIOR

Sample I.D.	Work Order Number	Client Sample ID	Sampling Date	Analysis Required
A8J230272-1	K1GH1	MW 381	2008-10-22 10:37	WATER, RSK-175, Carbon Dioxide (Burlingt
A8J230272-2	K1GJJ	MW 393	2008-10-22 12:45	WATER, RSK-175, Carbon Dioxide (Burlingt
A8J230272-3	K1GJL	MW 391	2008-10-22 13:44	WATER, RSK-175, Carbon Dioxide (Burlingt
A8J230272-4	K1GJM	MW 384	2008-10-22 15:00	WATER, RSK-175, Carbon Dioxide (Burlingt

(3 x 40)

Please use Client Sample ID for report

Call KEN KUZIOR with questions at 330-497-9396
at the TAL North Canton Laboratory

Shipping Method: FEDEX

Need detection limit and analysis date included in report.

Please send a signed copy of this form with the report at completion of analysis.

Relinquished by: Claire Morgan Date/Time: 10/23/08 1:15

Relinquished by: _____ Date/Time: _____

Received for lab by: _____ Date/Time: 10/24/08 1030

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Data Summary – RSK-175 CO2

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

MW 381

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTEME SAS No.: SDG No.: 8J230272

Matrix: (soil/water) WATER Lab Sample ID: 772853

Sample wt/vol: _____ (g/mL) ML Lab File ID: 29OCT081450-R011

Level: (low/med) LOW Date Received: 10/24/08

% Moisture: not dec. _____ Date Analyzed: 10/29/08

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	1900	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

MW 384

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTEME SAS No.: SDG No.: 8J230272

Matrix: (soil/water) WATER Lab Sample ID: 772856

Sample wt/vol: _____ (g/mL) ML Lab File ID: 29OCT081631-R021

Level: (low/med) LOW Date Received: 10/24/08

% Moisture: not dec. _____ Date Analyzed: 10/29/08

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 5.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	30000	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

MW 391

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTEME SAS No.: SDG No.: 8J230272

Matrix: (soil/water) WATER Lab Sample ID: 772855

Sample wt/vol: _____ (g/mL) ML Lab File ID: 29OCT081450-R031

Level: (low/med) LOW Date Received: 10/24/08

% Moisture: not dec. _____ Date Analyzed: 10/29/08

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	2000	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

MW 393

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTEME SAS No.: SDG No.: 8J230272

Matrix: (soil/water) WATER Lab Sample ID: 772854

Sample wt/vol: _____ (g/mL) ML Lab File ID: 29OCT081450-R021

Level: (low/med) LOW Date Received: 10/24/08

% Moisture: not dec. _____ Date Analyzed: 10/29/08

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	1700	

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MBLKC102908A

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DIEME SAS No.: SDG No.: 8J230272

Matrix: (soil/water) WATER Lab Sample ID: MBLKC102908A

Sample wt/vol: _____ (g/mL) ML Lab File ID: 29OCT081400-R021

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/29/08

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	1000	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

C102908ALCS

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTEME SAS No.: SDG No.: 8J230272

Matrix: (soil/water) WATER Lab Sample ID: C102908ALCS

Sample wt/vol: _____ (g/mL) ML Lab File ID: 29OCT081400-R011

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 10/29/08

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	4300	

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTEME SAS No.: SDG No.: 8J230272

Matrix Spike - Sample No.: C102908ALCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Carbon Dioxide	5000		4300	86	70-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MBLKC102908A

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTEME SAS No.: SDG No.: 8J230272

Lab File ID: 29OCT081400-R021 Lab Sample ID: MBLKC102908A

Date Analyzed: 10/29/08 Time Analyzed: 1406

GC Column: CTR-1 ID: 6.35 (mm) Heated Purge: (Y/N) N

Instrument ID: 2866_2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	C102908ALCS	C102908ALCS	29OCT081400-	1402
02	MW 381	772853	29OCT081450-	1458
03	MW 393	772854	29OCT081450-	1503
04	MW 391	772855	29OCT081450-	1511
05	MW 384	772856	29OCT081631-	1648
06				
07				
08				
09				
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30				

COMMENTS:

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTEME SAS No.: SDG No.: 8J230272

Instrument ID: 2866_2 Calibration Date(s): 10/01/08 10/01/08

Column: CTR-1 ID: 6.35 (mm) Calibration Time(s): 1210 1227

LAB FILE ID: RF1000: 01OCT08120RF2500: 01OCT08120RF5000: 01OCT08120
RF7500: 01OCT08120RF10000: 01OCT0812

COMPOUND	RF1000	RF2500	RF5000	RF7500	RF10000
Carbon Dioxide	0.377	0.413	0.419	0.392	0.372

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTEME SAS No.: SDG No.: 8J230272

Instrument ID: 2866_2 Calibration Date(s): 10/01/08 10/01/08

Column: CTR-1 ID: 6.35 (mm) Calibration Time(s): 1210 1227

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2
Carbon Dioxide	AVRG	0.39468000	5.3

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTEME SAS No.: SDG No.: 8J230272

Instrument ID: 2866_2 Calibration Date: 10/29/08 Time: 1352

Lab File ID: 29OCT081348-R0 Init. Calib. Date(s): 10/01/08 10/01/08

Heated Purge: (Y/N) N Init. Calib. Times: 1210 1227

GC Column: CTR-1 ID: 6.35 (mm)

COMPOUND	$\overline{RRF}$	RRF 5000	MIN RRF	%D	MAX %D
Carbon Dioxide	0.395	0.286		27.6	30.0

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTEME SAS No.: SDG No.: 8J230272

Instrument ID: 2866_2 Calibration Date: 10/29/08 Time: 1805

Lab File ID: 29OCT081805-R0 Init. Calib. Date(s): 10/01/08 10/01/08

Heated Purge: (Y/N) N Init. Calib. Times: 1210 1227

GC Column: CTR-1 ID: 6.35 (mm)

COMPOUND	$\overline{RRF}$	RRF 5000	MIN RRF	%D	MAX %D
Carbon Dioxide	0.395	0.356		9.9	30.0

FORM VII VOA

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA BURLINGTON Contract: 28008

Lab Code: STLV Case No.: DTEME SAS No.: SDG No.: 8J230272

GC Column: CTR-1 ID: 6.35 (mm) Init. Calib. Date(s): 10/01/08 10/01/08

Instrument ID: 2866_2

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	MEAN SURROGATE RT FROM INITIAL CALIBRATION					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #	RT #
01	CAL1	CAL1	10/01/08	1210		
02	CAL2	CAL2	10/01/08	1213		
03	CAL3	CAL3	10/01/08	1218		
04	CAL4	CAL4	10/01/08	1222		
05	CAL5	CAL5	10/01/08	1227		
06	CCV	CCV	10/29/08	1352		
07	C102908ALCS	C102908ALCS	10/29/08	1402		
08	MBLKC102908A	MBLKC102908A	10/29/08	1406		
09	MW 381	772853	10/29/08	1458		
10	MW 393	772854	10/29/08	1503		
11	MW 391	772855	10/29/08	1511		
12	MW 384	772856	10/29/08	1648		
13	CCV	CCV	10/29/08	1805		
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

DTE ENSR MONROE, MI

Lot #: A9B180226

John Barkach

Great Lakes Environmental Cent
33045 Hamilton Court
Suite W106
Farmington Hills, MI 48334

TESTAMERICA LABORATORIES, INC.

Approved for release.
Kenneth J. Kuzior
Project Manager
3/10/2009 10:47 AM

Kenneth J. Kuzior
Project Manager
ken.kuzior@testamericainc.com

March 10, 2009

CASE NARRATIVE

A9B180226

The following report contains the analytical results for four water samples submitted to TestAmerica North Canton by Great Lakes Environmental Center Inc. from the DTE ENSR Monroe, MI Site. The samples were received February 18, 2009, according to documented sample acceptance procedures.

The Carbon Dioxide analysis was performed at the TestAmerica Burlington laboratory.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

Any reference within this document to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.)

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Kenneth J. Kuzior, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 1.2°C.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

A9B180226

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW 393 02/17/09 11:00 001				
Bicarbonate Alkalinity	337	5.0	mg/L	SM18 2320 B
MW 391 02/17/09 12:15 002				
Bicarbonate Alkalinity	157	5.0	mg/L	SM18 2320 B
MW 384 02/17/09 14:45 003				
Bicarbonate Alkalinity	421	5.0	mg/L	SM18 2320 B
MW 381 02/17/09 13:15 004				
Bicarbonate Alkalinity	255	5.0	mg/L	SM18 2320 B

ANALYTICAL METHODS SUMMARY

A9B180226

PARAMETER	ANALYTICAL METHOD
Bicarbonate alkalinity	SM18 2320 B

References:

SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

SAMPLE SUMMARY

A9B180226

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
K7DJ3	001	MW 393	02/17/09	11:00
K7DJ9	002	MW 391	02/17/09	12:15
K7DKA	003	MW 384	02/17/09	14:45
K7DKC	004	MW 381	02/17/09	13:15

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.

Great Lakes Environmental Center Inc

Client Sample ID: MW 393

General Chemistry

Lot-Sample #...: A9B180226-001 Work Order #...: K7DJ3 Matrix.....: WG
Date Sampled...: 02/17/09 11:00 Date Received..: 02/18/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	337	5.0	mg/L	SM18 2320 B	02/24/09	9056249

Dilution Factor: 1

Great Lakes Environmental Center Inc

Client Sample ID: MW 391

General Chemistry

Lot-Sample #...: A9B180226-002 Work Order #...: K7DJ9 Matrix.....: WG
Date Sampled...: 02/17/09 12:15 Date Received..: 02/18/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	157	5.0	mg/L	SM18 2320 B	02/24/09	9056249

Dilution Factor: 1

Great Lakes Environmental Center Inc

Client Sample ID: MW 384

General Chemistry

Lot-Sample #...: A9B180226-003 Work Order #...: K7DKA Matrix.....: WG
Date Sampled...: 02/17/09 14:45 Date Received..: 02/18/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	421	5.0	mg/L	SM18 2320 B	02/24/09	9056249

Dilution Factor: 1

Great Lakes Environmental Center Inc

Client Sample ID: MW 381

General Chemistry

Lot-Sample #...: A9B180226-004 Work Order #...: K7DKC Matrix.....: WG
Date Sampled...: 02/17/09 13:15 Date Received..: 02/18/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	255	5.0	mg/L	SM18 2320 B	02/24/09	9056249

Dilution Factor: 1

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QUALITY CONTROL SECTION

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A9B180226 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity		Work Order #: K7NXH1AA		MB Lot-Sample #:	A9B250000-249	
	ND	5.0	mg/L	SM18 2320 B	02/24/09	9056249
		Dilution Factor: 1				

NOTE(S):

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

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A9B180226 **Work Order #...:** K7DJ3-SMP K7DJ3-DUP **Matrix.....:** WG

Date Sampled...: 02/17/09 11:00 **Date Received..:** 02/18/09

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity						SD Lot-Sample #: A9B180226-001		
	337	345	mg/L	2.2	(0-20)	SM18 2320 B	02/24/09	9056249
			Dilution Factor: 1					

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

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TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Great Lakes Environmental Center (GLEC)	James Sexton	2/17/2009	129916
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
739 Hastings St	(231) 941-2230 / Fax 941-2240		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Traverse City / MI / 49686			
Project Name and Location (State)	**Carrier/Waybill Number**		
DTE ENSR Monroe, MI			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: Carbon Dioxide	Bicarbonate	Special Instructions/ Conditions of Receipt
mw 393	2/17/2009	11:00		X			X						X	X	
mw 391		12:15		X			X						X	X	
mw 384		14:45		X			X						X	X	
mw 381		13:15		X			X						X	X	

Analysis (Attach list if more space is needed)

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

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

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	2/17/09	1630	1. Received By	2/18/09	950
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

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

TestAmerica Cooler Receipt Form/Narrative Lot Number: A9B180226
North Canton Facility

Client Great Lakes Env Project ______ By: [signature] (Signature)
Cooler Received on 2/18/09 Opened on 2/18/09
FedEx [X] UPS [ ] DHL [ ] FAS [ ] Stetson [ ] Client Drop Off [ ] TestAmerica Courier [ ] Other ______
TestAmerica Cooler # 241-900 Multiple Coolers [ ] Foam Box [ ] Client Cooler [ ] Other ______

1. Were custody seals on the outside of the cooler(s)? Yes [X] No [ ] Intact? Yes [X] No [ ] NA [ ]
   If YES, Quantity 2 Quantity Unsalvageable ______
   Were custody seals on the outside of cooler(s) signed and dated? Yes [X] No [ ] NA [ ]
   Were custody seals on the bottle(s)? Yes [ ] No [X]
   If YES, are there any exceptions? ______
2. Shippers' packing slip attached to the cooler(s)? Yes [X] No [ ]
3. Did custody papers accompany the sample(s)? Yes [X] No [ ] Relinquished by client? Yes [X] No [ ]
4. Were the custody papers signed in the appropriate place? Yes [X] No [ ]
5. Packing material used: Bubble Wrap [X] Foam [X] None [ ] Other ______
6. Cooler temperature upon receipt 1.2 °C See back of form for multiple coolers/temps [ ]
   METHOD: IR [X] Other [ ] ______
   COOLANT: Wet Ice [X] Blue Ice [ ] Dry Ice [ ] Water [ ] None [ ]
7. Did all bottles arrive in good condition (Unbroken)? Yes [X] No [ ]
8. Could all bottle labels be reconciled with the COC? Yes [X] No [ ]
9. Were sample(s) at the correct pH upon receipt? Yes [ ] No [ ] NA [X]
10. Were correct bottle(s) used for the test(s) indicated? Yes [X] No [ ]
11. Were air bubbles >6 mm in any VOA vials? Yes [ ] No [X] ~~NA [X]~~ ar 2/18/09
12. Sufficient quantity received to perform indicated analyses? Yes [X] No [ ]
13. Was a trip blank present in the cooler(s)? Yes [ ] No [X] Were VOAs on the COC? Yes [X] No [ ]

Contacted PM ______ Date ______ by ______ via Verbal [ ] Voice Mail [ ] Other [ ]
Concerning ______

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) ______ were received after the recommended holding time had expired.
Sample(s) ______ were received in a broken container.
Sample(s) ______ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) ______ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 100108-*HNO_3*; *Sulfuric Acid Lot#* 100108-*H_2SO_4*; *Sodium Hydroxide Lot#* 073007 -*NaOH*; *Hydrochloric Acid Lot#* 092006-*HCl*; *Sodium Hydroxide and Zinc Acetate Lot#* 050205-*$(CH_3COO)_2ZN/NaOH$*. What time was preservative added to sample(s)? ______

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica
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BURLINGTON DATA

TestAmerica
South Burlington, VT

Sample Data Summary Package

9B180226

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

March 9, 2009

Mr. Ken Kuzior
TestAmerica, Inc.
4101 Shuffel Drive NW
North Canton, OH 44720

Re: Laboratory Project No. 29008
Case: DTE-MI; SDG: 9B180226

Dear Mr. Kuzior:

Enclosed are the analytical results for the samples that were received by TestAmerica Burlington on February 19th, 2009. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 02/19/09 ETR No: 130286		
785698	MW 393	02/17/09	WATER
785699	MW 391	02/17/09	WATER
785700	MW 384	02/17/09	WATER
785701	MW 381	02/17/09	WATER

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.

RSK-175 - Carbon Dioxide only:

The analyses of samples MW 393 and MW 384 were accomplished at a dilution in order to get the response of the analyte with the highest concentration within the initial calibration range. Only the results for the dilution analysis were provided.

Any reference within this report to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.) 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.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

Sincerely,

Ron Pentkowski
Project Manager

Enclosure

TestAmerica 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: SW-846: The relative percent difference for detected concentrations between two GC columns is greater than 40%. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified 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

FQA009:02.18.08:4
TestAmerica Burlington

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody

DG: 9B180226

TestAmerica Laboratories, Inc.

Laboratory **TestAmerica Burlington**
55 South Park Drive
Colchester, VT 05446

SAMPLE ANALYSIS REQUISTION
Lab Request SR109958

·Report Package: **Report**
Need Analytical Report 2009-02-27

Client Code: 1380492

Project Manager: KEN KUZIOR

Sample I.D.	Work Order Number	Client Sample ID	Sampling Date	Analysis Required
A9B180226-1	K7DJ3	MW 393	2009-02-17 11:00	WATER, RSK-175, Carbon Dioxide (Burlingt
A9B180226-2	K7DJ9	MW 391	2009-02-17 12:15	WATER, RSK-175, Carbon Dioxide (Burlingt
A9B180226-3	K7DKA	MW 384	2009-02-17 14:45	WATER, RSK-175, Carbon Dioxide (Burlingt
A9B180226-4	K7DKC	MW 381	2009-02-17 13:15	WATER, RSK-175, Carbon Dioxide (Burlingt

3r40

Please use Client Sample ID for report

Call KEN KUZIOR with questions at 330-497-9396
at the TAL North Canton Laboratory

Shipping Method: FED EX

Need detection limit and analysis date included in report.

Please send a signed copy of this form with the report at completion of analysis.

Relinquished by: _____ Date/Time: 2-18-09 3:00p

Relinquished by: _____ Date/Time: _____

Received for lab by: _____ Date/Time: 2/19/09 1025

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

TestAmerica Burlington

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Data Summary – RSK-175

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

MW 381

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9B180226

Matrix: (soil/water) WATER Lab Sample ID: 785701

Sample wt/vol: _____ (g/mL) ML Lab File ID: 26FEB091223-R061

Level: (low/med) LOW Date Received: 02/19/09

% Moisture: not dec. _____ Date Analyzed: 02/26/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	8300	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

MW 384

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9B180226

Matrix: (soil/water) WATER Lab Sample ID: 785700

Sample wt/vol: _____ (g/mL) ML Lab File ID: 26FEB091604-R021

Level: (low/med) LOW Date Received: 02/19/09

% Moisture: not dec. _____ Date Analyzed: 02/26/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 5.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	46000	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

MW 391

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9B180226

Matrix: (soil/water) WATER Lab Sample ID: 785699

Sample wt/vol: _____ (g/mL) ML Lab File ID: 26FEB091223-R041

Level: (low/med) LOW Date Received: 02/19/09

% Moisture: not dec. _____ Date Analyzed: 02/26/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	2100	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

MW.393

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9B180226

Matrix: (soil/water) WATER Lab Sample ID: 785698

Sample wt/vol: _____ (g/mL) ML Lab File ID: 26FEB091447-R021

Level: (low/med) LOW Date Received: 02/19/09

% Moisture: not dec. _____ Date Analyzed: 02/26/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 2.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	19000	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MBLKC022609A

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9B180226

Matrix: (soil/water) WATER Lab Sample ID: MBLKC022609A

Sample wt/vol: _____ (g/mL) ML Lab File ID: 26FEB090916-R031

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/26/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	1000	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

C022609ALCS

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9B180226

Matrix: (soil/water) WATER Lab Sample ID: C022609ALCS

Sample wt/vol: _____ (g/mL) ML Lab File ID: 26FEB090916-R021

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/26/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	5400	

FORM I VOA

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9B180226

Matrix Spike - Sample No.: C022609ALCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Carbon Dioxide	5000		5400	108	70-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

FORM III VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MBLKC022609A

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9B180226

Lab File ID: 26FEB090916-R031 Lab Sample ID: MBLKC022609A

Date Analyzed: 02/26/09 Time Analyzed: 0930

GC Column: CTR-1 ID: 6.35 (mm) Heated Purge: (Y/N) N

Instrument ID: 2866_2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	C022609ALCS	C022609ALCS	26FEB090916-	0925
02	MW 391	785699	26FEB091223-	1256
03	MW 381	785701	26FEB091223-	1322
04	MW 393	785698	26FEB091447-	1459
05	MW 384	785700	26FEB091604-	1615
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
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20				
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22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9B180226

Instrument ID: 2866_2 Calibration Date(s): 01/15/09 01/15/09

Heated Purge: (Y/N) N Calibration Time(s): 1019 1037

GC Column: CTR-1 ID: 6.35 (mm)

LAB FILE ID: RRF1000=15JAN091018-R RRF2500=15JAN091018-R
RRF5000=15JAN091018-R RRF7500=15JAN091018-R RRF10000=15JAN091018-

COMPOUND	RRF 1000	RRF 2500	RRF 5000	RRF 7500	RRF 10000	$\overline{RRF}$	% RSD
Carbon Dioxide *	0.497	0.490	0.476	0.443	0.401	0.461	8.6*

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9B180226

Instrument ID: 2866_2 Calibration Date: 02/26/09 Time: 0920

Lab File ID: 26FEB090916-R0 Init. Calib. Date(s): 01/15/09 01/15/09

Heated Purge: (Y/N) N Init. Calib. Times: 1019 1037

GC Column: CTR-1 ID: 6.35 (mm)

COMPOUND	$\overline{RRF}$	RRF 5000	MIN RRF	%D	MAX %D
Carbon Dioxide	0.461	0.494		7.2	30.0

FORM VII VOA

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9B180226

Instrument ID: 2866_2 Calibration Date: 02/26/09 Time: 1631

Lab File ID: 26FEB091631-R0 Init. Calib. Date(s): 01/15/09 01/15/09

Heated Purge: (Y/N) N Init. Calib. Times: 1019 1037

GC Column: CTR-1 ID: 6.35 (mm)

COMPOUND	$\overline{RRF}$	RRF 5000	MIN RRF	%D	MAX %D
Carbon Dioxide	0.461	0.422		8.4	30.0

FORM VII VOA

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9B180226

GC Column: CTR-1 ID: 6.35 (mm) Init. Calib. Date(s): 01/15/09 01/15/09

Instrument ID: 2866_2

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	MEAN SURROGATE RT FROM INITIAL CALIBRATION					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #	RT #
01	CAL1	CAL1	01/15/09	1019		
02	CAL2	CAL2	01/15/09	1023		
03	CAL3	CAL3	01/15/09	1027		
04	CAL4	CAL4	01/15/09	1033		
05	CAL5	CAL5	01/15/09	1037		
06	CCV	CCV	02/26/09	0920		
07	C022609ALCS	C022609ALCS	02/26/09	0925		
08	MBLKC022609A	MBLKC022609A	02/26/09	0930		
09	MW 391	785699	02/26/09	1256		
10	MW 381	785701	02/26/09	1322		
11	MW 393	785698	02/26/09	1459		
12	MW 384	785700	02/26/09	1615		
13	CCV	CCV	02/26/09	1631		
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Handling

ORIGIN ID: PHDA
AL HAIDET
TEST AMERICA
4101 SHUFFEL DR

NORTH CANTON, OH 44720
UNITED STATES US

Ship Date: 18FEB09
ActWgt: 22.6 LB
System#: 507102/CAFE2359
Account: S *********

TO SAMPLE RECEIVING
TESTAMERICA
30 COMMUNITY DRIVE

SOUTH BURLINGTON, VT 05403

Ref: AL HAIDET
Dept: AL HAIDET

FedEx Express

E

CLS050107/22/23

Delivery Address Barcode

BILL RECIPIENT

PRIORITY OVERNIGHT

THU
Deliver By:
19FEB09

TRK# 9784 4668 6485 Form 0201

BTV AA

05403 -VT-US XH BTVA

TestAmerica Burlington
SAMPLE RECEIPT & LOG IN CHECKLIST

Client: STLOHN	Date Received: 2/19/09	Log In Date: 02/24/09
ETR: 130286	Time Received: 1625	By: JLD
SDG: 9B180226	Received By: GT	Signature:
Project: 29908	# Coolers Received: 1	PM Signature:
Samples Delivered By: X 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	X			
Custody seals are present and intact	X			
Custody seal numbers are present		X		
If yes, list custody seal numbers:				

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

IR Gun ID: 96 Correction Factor (CF) = -2 °C

Cooler 1:	2.3 °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			
• 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			
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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

DTE ENSR MONROE, MI
SDG #: 9D16101

John Barkach

Great Lakes Environmental Cent
33045 Hamilton Court
Suite W106
Farmington Hills, MI 48334

TESTAMERICA LABORATORIES, INC.

Approved for release.
Kenneth J. Kuzior
Project Manager
5/8/2009 4:05 PM

Kenneth J. Kuzior
Project Manager
ken.kuzior@testamericainc.com

May 8, 2009

CASE NARRATIVE

9D16101

The following report contains the analytical results for four water samples submitted to TestAmerica North Canton by Great Lakes Environmental Center, Inc. from the DTE ENSR Monroe, MI Site. The samples were received April 15, 2009 and April 16, 2009, according to documented sample acceptance procedures.

This SDG consists of (2) laboratory ID's: A9D160101 and A9D160107.

The Carbon Dioxide analysis was performed at the TestAmerica Burlington Laboratory.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Kenneth J. Kuzior, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 1.3 and 0.3°C.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

EXECUTIVE SUMMARY - Detection Highlights

9D16101 : A9D160101

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW 393 04/14/09 001				
Bicarbonate Alkalinity	339	5.0	mg/L	SM18 2320 B
MW 391 04/14/09 002				
Bicarbonate Alkalinity	164	5.0	mg/L	SM18 2320 B

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

9D16101 : A9D160107

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
MW381D 04/15/09 10:50 001				
Bicarbonate Alkalinity	300	5.0	mg/L	SM18 2320 B
MW384D 04/15/09 12:40 002				
Bicarbonate Alkalinity	238	5.0	mg/L	SM18 2320 B

ANALYTICAL METHODS SUMMARY

9D16101

PARAMETER	ANALYTICAL METHOD
Bicarbonate alkalinity	SM18 2320 B

References:

SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

SAMPLE SUMMARY

9D16101 : A9D160101

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
K96DM	001	MW 393	04/14/09	
K96DN	002	MW 391	04/14/09	

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.

(Continued on next page)

SAMPLE SUMMARY

9D16101 : A9D160107

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
K96HX	001	MW381D	04/15/09	10:50
K96H5	002	MW384D	04/15/09	12:40

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.

Great Lakes Environmental Center Inc

Client Sample ID: MW 393

General Chemistry

Lot-Sample #...: A9D160101-001 Work Order #...: K96DM Matrix.....: WG
Date Sampled...: 04/14/09 Date Received..: 04/15/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	339	5.0	mg/L	SM18 2320 B	04/17/09	9108117

Dilution Factor: 1

Great Lakes Environmental Center Inc

Client Sample ID: MW 391

General Chemistry

Lot-Sample #...: A9D160101-002 Work Order #...: K96DN Matrix.....: WG
Date Sampled...: 04/14/09 Date Received..: 04/15/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	164	5.0	mg/L	SM18 2320 B	04/17/09	9108117

Dilution Factor: 1

Great Lakes Environmental Center Inc

Client Sample ID: MW381D

General Chemistry

Lot-Sample #...: A9D160107-001 Work Order #...: K96HX Matrix.....: WG
Date Sampled...: 04/15/09 10:50 Date Received..: 04/16/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	300	5.0	mg/L	SM18 2320 B	04/16/09	9107069

Dilution Factor: 1

Great Lakes Environmental Center Inc

Client Sample ID: MW384D

General Chemistry

Lot-Sample #...: A9D160107-002 Work Order #...: K96H5 Matrix.....: WG
Date Sampled...: 04/15/09 12:40 Date Received..: 04/16/09

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity	238	5.0	mg/L	SM18 2320 B	04/16/09	9107069

Dilution Factor: 1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

QUALITY CONTROL SECTION

METHOD BLANK REPORT

General Chemistry

Client Lot #...: 9D16101 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity		Work Order #: K98N61AA		MB Lot-Sample #:	A9D170000-069	
	ND	5.0	mg/L	SM18 2320 B	04/16/09	9107069
		Dilution Factor: 1				
Bicarbonate Alkalinity		Work Order #: LADGR1AA		MB Lot-Sample #:	A9D180000-117	
	ND	5.0	mg/L	SM18 2320 B	04/17/09	9108117
		Dilution Factor: 1				

NOTE(S):

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

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A9D160101 **Work Order #...:** K943T-SMP K943T-DUP **Matrix.....:** WATER

Date Sampled...: 04/10/09 10:30 **Date Received..:** 04/15/09

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity						SD Lot-Sample #: A9D150161-001		
	ND	ND	mg/L	0	(0-20)	SM18 2320 B	04/16/09	9107069

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A9D160101 **Work Order #...:** K96HX-SMP K96HX-DUP **Matrix.....:** WG

Date Sampled...: 04/15/09 10:50 **Date Received..:** 04/16/09

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity						SD Lot-Sample #: A9D160107-001		
	300	310	mg/L	3.1	(0-20)	SM18 2320 B	04/16/09	9107069

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A9D160101 **Work Order #...:** K9TVP-SMP K9TVP-DUP **Matrix.....:** WATER

Date Sampled...: 04/08/09 14:10 **Date Received..:** 04/09/09

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity						SD Lot-Sample #: A9D090119-002		
	490	480	mg/L	2.7	(0-20)	SM18 2320 B	04/17/09	9108116
			Dilution Factor: 1					

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client: GREAT LAKES ENV. CNTR	Project Manager:	Date: 4/14/09	Chain of Custody Number: 129367
Address: 739 HASTINGS	Telephone Number (Area Code)/Fax Number:	Lab Number:	Page 1 of 1
City: TRAVERSE CITY / State: MI / Zip Code: 49686	Site Contact:	Lab Contact:	
Project Name and Location (State): DTE ENSR MONROE, MI	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.: Jamie Saxton (231) 941-2230			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: Carbon Dioxide	Bicarbonate	Special Instructions/ Conditions of Receipt
MW 393	4/14/09			X			X						X	X	
MW 391	4/14/09			X			X						X	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☒ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

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

QC Requirements (Specify)

1. Relinquished By: Jim Reitz	Date	Time	1. Received By:	Date: 4/15/09	Time: 9:20am
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 - Stays with the Sample; PINK - Field Copy

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** 440160101
North Canton Facility

Client Great Lakes Env. Cntr. Project _____ By: _____
Cooler Received on 4/15/09 Opened on 4/15/09 (Signature)
FedEx [X] UPS [ ] DHL [ ] FAS [ ] Stetson [ ] Client Drop Off [ ] TestAmerica Courier [ ] Other _____
TestAmerica Cooler # 1433 Multiple Coolers [ ] Foam Box [ ] Client Cooler [ ] Other _____

1. Were custody seals on the outside of the cooler(s)? Yes [ ] No [X] Intact? Yes [ ] No [ ] NA [X]
   If YES, Quantity_____ Quantity Unsalvageable_____
   Were custody seals on the outside of cooler(s) signed and dated? Yes [ ] No [ ] NA [X]
   Were custody seals on the bottle(s)? Yes [ ] No [X]
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes [X] No [ ]
3. Did custody papers accompany the sample(s)? Yes [X] No [ ] Relinquished by client? Yes [X] No [ ]
4. Were the custody papers signed in the appropriate place? Yes [X] No [ ]
5. Packing material used: Bubble Wrap [X] Foam [X] None [ ] Other _____
6. Cooler temperature upon receipt 1.3 °C See back of form for multiple coolers/temps [ ]
   METHOD: IR [X] Other [ ] _____
   COOLANT: Wet Ice [X] Blue Ice [ ] Dry Ice [ ] Water [ ] None [ ]
7. Did all bottles arrive in good condition (Unbroken)? Yes [X] No [ ]
8. Could all bottle labels be reconciled with the COC? Yes [X] No [ ]
9. Were sample(s) at the correct pH upon receipt? Yes [ ] No [ ] NA [X]
10. Were correct bottle(s) used for the test(s) indicated? Yes [X] No [ ]
11. Were air bubbles >6 mm in any VOA vials? Yes [ ] No [ ] NA [X]
12. Sufficient quantity received to perform indicated analyses? Yes [X] No [ ]
13. Was a trip blank present in the cooler(s)? Yes [ ] No [X] Were VOAs on the COC? Yes [ ] No [X]

Contacted PM _____ Date _____ by _____ via Verbal [ ] Voice Mail [ ] Other [ ]
Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

_____

_____

_____

_____

_____

_____

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 100108-HNO_3; *Sulfuric Acid Lot#* 100108-H_2SO_4; *Sodium Hydroxide Lot#* 073007 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 050205-$(CH_3COO)_2ZN$/*NaOH.* What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Great Lakes Environmental CNTR			129368
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
739 HASTINGS ST			
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Traverse City / MI / 49686			
Project Name and Location (State)	**Carrier/Waybill Number**		
DTE GBR monroe, MI			
Contract/Purchase Order/Quote No.			
Jamie Saxton			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: Carbon Dioxide	Bicarbonate	Special Instructions/ Conditions of Receipt
MW381D	4/15/09	1050		X			X						X	X	
MW384D	4/15/09	1240		X			X						X	X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

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

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By Sara RP	4/15/09	1700	1. Received By	4-16-09	0910
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

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

TestAmerica Cooler Receipt Form/Narrative **Lot Number:** 240-16010-1
North Canton Facility

Client G.L. Env. Cntr Project _____ By: _____
Cooler Received on 4-16-09 Opened on 4-16-09 (Signature)
FedEx ☑ UPS ☐ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other _____
TestAmerica Cooler # 241586 Multiple Coolers ☐ Foam Box ☐ Client Cooler ☐ Other _____

1. Were custody seals on the outside of the cooler(s)? Yes ☑ No ☐ Intact? Yes ☑ No ☐ NA ☐
   If YES, Quantity 1 Quantity Unsalvageable _____
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☑ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☑
   If YES, are there any exceptions? _____
2. Shippers' packing slip attached to the cooler(s)? Yes ☑ No ☐
3. Did custody papers accompany the sample(s)? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☐ None ☐ Other _____
6. Cooler temperature upon receipt 0.3 °C See back of form for multiple coolers/temps ☐
   METHOD: IR ☑ Other ☐ _____
   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 be reconciled with the COC? Yes ☑ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☐ No ☐ NA ☑
10. Were correct bottle(s) used for the test(s) 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 ☐
13. Was a trip blank present in the cooler(s)? Yes ☐ No ☑ Were VOAs on the COC? Yes ☑ No ☐

Contacted PM _____ Date _____ by _____ via Verbal ☐ Voice Mail ☐ Other ☐
Concerning _____

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 100108-HNO_3; *Sulfuric Acid Lot#* 100108-H_2SO_4; *Sodium Hydroxide Lot#* 073007 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 050205-$(CH_3COO)_2ZN$/*NaOH.* What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant

Discrepancies Cont'd:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

BURLINGTON DATA

TestAmerica 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: SW-846: The relative percent difference for detected concentrations between two GC columns is greater than 40%. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified 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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody

TestAmerica Laboratories, Inc.

Laboratory **TestAmerica Burlington**
55 South Park Drive
Colchester, VT 05446

SAMPLE ANALYSIS REQUISTION
Lab Request SR111099

Report Package: **Report**
Need Analytical Report 2009-04-29

Client Code: 1380492

Project Manager: KEN KUZIOR

Sample I.D.	Work Order Number	Client Sample ID	Sampling Date	Analysis Required
A9D160101-1	K96DM	MW 393 (3x40)	2009-04-14	WATER, RSK-175, Carbon Dioxide (Burlingt
A9D160101-2	K96DN	MW 391 1	2009-04-14	WATER, RSK-175, Carbon Dioxide (Burlingt

Please use Client Sample ID for report

Call KEN KUZIOR with questions at 330-497-9396

at the TAL North Canton Laboratory

Shipping Method: FEDEX

Need detection limit and analysis date included in report.

Please send a signed copy of this form with the report at completion of analysis.

Relinquished by: Alicia Marquez Date/Time: 4/16/09 830

Relinquished by: _____ Date/Time: _____

Received for lnb by: Chris Keller Date/Time: 4/17/09 1010

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Data Summary – RSK-175 CO2

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

MW 391

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160101

Matrix: (soil/water) WATER Lab Sample ID: 792877

Sample wt/vol: _____ (g/mL) ML Lab File ID: 18AP091113-R021

Level: (low/med) LOW Date Received: 04/17/09

% Moisture: not dec. _____ Date Analyzed: 04/18/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	1600	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

MW 393

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160101

Matrix: (soil/water) WATER Lab Sample ID: 792876

Sample wt/vol: _____ (g/mL) ML Lab File ID: 18AP091259-R011

Level: (low/med) LOW Date Received: 04/17/09

% Moisture: not dec. _____ Date Analyzed: 04/18/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 2.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	16000	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MBLKC041809A

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160101

Matrix: (soil/water) WATER Lab Sample ID: MBLKC041809A

Sample wt/vol: _____ (g/mL) ML Lab File ID: 18AP091033-R031

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 04/18/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	1000	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

C041809ALCS

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160101

Matrix: (soil/water) WATER Lab Sample ID: C041809ALCS

Sample wt/vol: _____ (g/mL) ML Lab File ID: 18AP091033-R021

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 04/18/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	5100	

FORM I VOA

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160101

Matrix Spike - Sample No.: C041809ALCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Carbon Dioxide	5000		5100	102	70-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

FORM III VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MBLKC041809A

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160101

Lab File ID: 18AP091033-R031 Lab Sample ID: MBLKC041809A

Date Analyzed: 04/18/09 Time Analyzed: 1052

GC Column: CTR-1 ID: 6.35 (mm) Heated Purge: (Y/N) N

Instrument ID: 2866_2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	C041809ALCS	C041809ALCS	18AP091033-R	1048
02	MW 391	792877	18AP091113-R	1129
03	MW 393	792876	18AP091259-R	1309
04				
05				
06				
07				
08				
09				
10				
11				
12				
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23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM 6
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160101

Instrument ID: 2866_2 Calibration Date(s): 03/28/09 03/28/09

Heated Purge: (Y/N) N Calibration Time(s): 1056 1114

GC Column: CTR-1 ID: 6.35 (mm)

LAB FILE ID: RRF1000=28MA091054-R0 RRF2500=28MA091054-R0
RRF5000=28MA091054-R0 RRF7500=28MA091054-R0 RRF10000=28MA091054-R

COMPOUND		RRF 1000	RRF 2500	RRF 5000	RRF 7500	RRF 10000	$\overline{RRF}$	% RSD
Carbon Dioxide	*	0.408	0.394	0.414	0.387	0.411	0.403	2.9*

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

FORM VI VOA

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160101

Instrument ID: 2866_2 Calibration Date: 04/18/09 Time: 1035

Lab File ID: 18AP091033-R01 Init. Calib. Date(s): 03/28/09 03/28/09

Heated Purge: (Y/N) N Init. Calib. Times: 1056 1114

GC Column: CTR-1 ID: 6.35 (mm)

COMPOUND	$\overline{RRF}$	RRF 5000	MIN RRF	%D	MAX %D
Carbon Dioxide	0.403	0.400		0.7	30.0

FORM VII VOA

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160101

Instrument ID: 2866_2 Calibration Date: 04/18/09 Time: 1422

Lab File ID: 18AP091420-R01 Init. Calib. Date(s): 03/28/09 03/28/09

Heated Purge: (Y/N) N Init. Calib. Times: 1056 1114

GC Column: CTR-1 ID: 6.35 (mm)

COMPOUND	$\overline{RRF}$	RRF 5000	MIN RRF	%D	MAX %D
Carbon Dioxide	0.403	0.415		3.0	30.0

FORM VII VOA

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160101

GC Column: CTR-1 ID: 6.35 (mm) Init. Calib. Date(s): 03/28/09 03/28/09

Instrument ID: 2866_2

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	MEAN SURROGATE RT FROM INITIAL CALIBRATION					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #	RT #
01	CAL1	CAL1	03/28/09	1056		
02	CAL2	CAL2	03/28/09	1100		
03	CAL3	CAL3	03/28/09	1104		
04	CAL4	CAL4	03/28/09	1109		
05	CAL5	CAL5	03/28/09	1114		
06	CCV	CCV	04/18/09	1035		
07	C041809ALCS	C041809ALCS	04/18/09	1048		
08	MBLKC041809A	MBLKC041809A	04/18/09	1052		
09	MW 391	792877	04/18/09	1129		
10	MW 393	792876	04/18/09	1309		
11	CCV	CCV	04/18/09	1422		
12						
13						
14						
15						
16						
17						
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32						

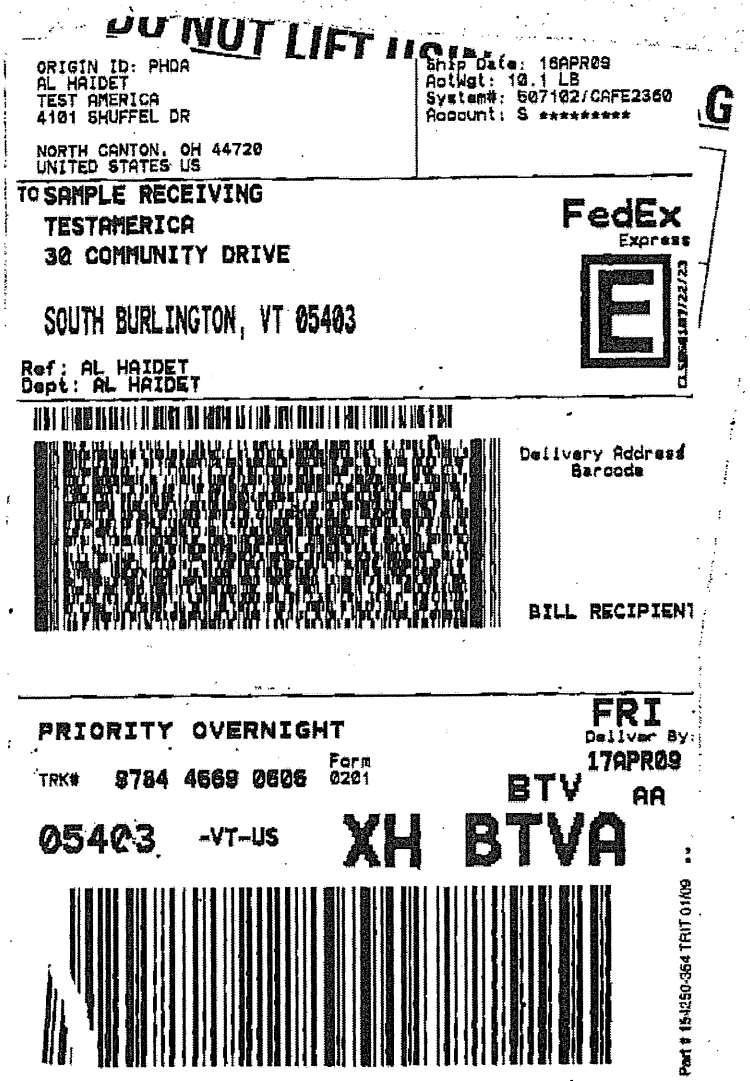
QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Handling


DO NOT LIFT
ORIGIN ID: PHOA
AL HAIDET
TEST AMERICA
4101 SHUFFEL DR
NORTH CANTON, OH 44720
UNITED STATES US
Ship Date: 16APR09
ActWgt: 10.1 LB
System#: 507102/CAFE2360
Account: S *********
TO SAMPLE RECEIVING
TESTAMERICA
30 COMMUNITY DRIVE
SOUTH BURLINGTON, VT 05403
Ref: AL HAIDET
Dept: AL HAIDET
FedEx
Express
Delivery Address Barcode
BILL RECIPIENT
PRIORITY OVERNIGHT
FRI
Deliver By:
17APR09
TRK# 8784 4569 0606
Form 0201
BTV
AA
05403 -VT-US
XH BTVA

TestAmerica Burlington
SAMPLE RECEIPT & LOG IN CHECKLIST

Client: STL OHN	Date Received: 04/17/09	Log In Date: 04/17/09	
ETR: 131281	Time Received: 1010	By:	
SDG: 9D160101	Received By: LR	Signature:	
Project: 29008	# Coolers Received: 1	PM Signature:	
Samples Delivered By: X 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	X			
Custody seals are present and intact	X			
Custody seal numbers are present		X		

If yes, list custody seal numbers:

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

IR Gun ID: 96	Correction Factor (CF) = -2 °C		
Cooler 1: 0.2 °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			
• 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 ~~04/17/09~~	~~X~~	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 labels list time of COC, COC doesn't list time. Not [illegible] for login.

FSR002:12.19.07:3
TestAmerica Burlington

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THE LEADER IN ENVIRONMENTAL TESTING

BURLINGTON DATA

TestAmerica 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: SW-846: The relative percent difference for detected concentrations between two GC columns is greater than 40%. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified 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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody

TestAmerica Laboratories, Inc.

Laboratory **TestAmerica Burlington**
55 South Park Drive
Colchester, VT 05446

SAMPLE ANALYSIS REQUISTION
Lab Request SR111101

Report Package: **Report**
Need Analytical Report 2009-04-30

Client Code: 1380492

Project Manager: KEN KUZIOR

Sample I.D.	Work Order Number	Client Sample ID	Sampling Date	Analysis Required
A9D160107-1	K96HX	MW381D (3x40)	2009-04-15 10:50	WATER, RSK-175, Carbon Dioxide (Burlingt
A9D160107-2	K96H5	MW384D 1	2009-04-15 12:40	WATER, RSK-175, Carbon Dioxide (Burlingt

Please use Client Sample ID for report

Call KEN KUZIOR with questions at 330-497-9396

at the TAL North Canton Laboratory

Shipping Method: FEDEX

Need detection limit and analysis date included in report.

Please send a signed copy of this form with the report at completion of analysis.

Relinquished by: Deana Mangum Date/Time: 4/16/09 1100

Relinquished by: _____ Date/Time: _____

Received for lab by: Chris Kelly Date/Time: 4/17/09 10 10

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Data Summary – RSK-175 CO2

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

MW381D

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160107

Matrix: (soil/water) WATER Lab Sample ID: 792878

Sample wt/vol: _____ (g/mL) ML Lab File ID: 18AP091113-R031

Level: (low/med) LOW Date Received: 04/17/09

% Moisture: not dec. _____ Date Analyzed: 04/18/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	9700	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

STLOHN SAMPLE NO.

MW384D

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160107

Matrix: (soil/water) WATER Lab Sample ID: 792879

Sample wt/vol: _____ (g/mL) ML Lab File ID: 18AP091113-R041

Level: (low/med) LOW Date Received: 04/17/09

% Moisture: not dec. _____ Date Analyzed: 04/18/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	9000	

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MBLKC041809A

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160107

Matrix: (soil/water) WATER Lab Sample ID: MBLKC041809A

Sample wt/vol: _____ (g/mL) ML Lab File ID: 18AP091033-R031

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 04/18/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	1000	U

FORM I VOA

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

C041809ALCS

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160107

Matrix: (soil/water) WATER Lab Sample ID: C041809ALCS

Sample wt/vol: _____ (g/mL) ML Lab File ID: 18AP091033-R021

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 04/18/09

GC Column: CTR-1 ID: 6.35 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
124-38-9	Carbon Dioxide	5100	

FORM I VOA

FORM 3
WATER VOLATILE LAB CONTROL SAMPLE

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160107

Matrix Spike - Sample No.: C041809ALCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Carbon Dioxide	5000		5100	102	70-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

FORM III VOA

FORM 4
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MBLKC041809A

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160107

Lab File ID: 18AP091033-R031 Lab Sample ID: MBLKC041809A

Date Analyzed: 04/18/09 Time Analyzed: 1052

GC Column: CTR-1 ID: 6.35 (mm) Heated Purge: (Y/N) N

Instrument ID: 2866_2

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	C041809ALCS	C041809ALCS	18AP091033-R	1048
02	MW381D	792878	18AP091113-R	1140
03	MW384D	792879	18AP091113-R	1150
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
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22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM 6
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160107

Instrument ID: 2866_2 Calibration Date(s): 03/28/09 03/28/09

Heated Purge: (Y/N) N Calibration Time(s): 1056 1114

GC Column: CTR-1 ID: 6.35 (mm)

LAB FILE ID: RRF1000=28MA091054-R0 RRF2500=28MA091054-R0
RRF5000=28MA091054-R0 RRF7500=28MA091054-R0 RRF10000=28MA091054-R

COMPOUND		RRF 1000	RRF 2500	RRF 5000	RRF 7500	RRF 10000	$\overline{RRF}$	% RSD
Carbon Dioxide	*	0.408	0.394	0.414	0.387	0.411	0.403	2.9*

* Compounds with required minimum RRF and maximim %RSD values.
All other compounds must meet a minimim RRF of 0.010.

FORM VI VOA

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160107

Instrument ID: 2866_2 Calibration Date: 04/18/09 Time: 1035

Lab File ID: 18AP091033-R01 Init. Calib. Date(s): 03/28/09 03/28/09

Heated Purge: (Y/N) N Init. Calib. Times: 1056 1114

GC Column: CTR-1 ID: 6.35 (mm)

COMPOUND	$\overline{RRF}$	RRF 5000	MIN RRF	%D	MAX %D
Carbon Dioxide	0.403	0.400		0.7	30.0

FORM VII VOA

FORM 7
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160107

Instrument ID: 2866_2 Calibration Date: 04/18/09 Time: 1422

Lab File ID: 18AP091420-R01 Init. Calib. Date(s): 03/28/09 03/28/09

Heated Purge: (Y/N) N Init. Calib. Times: 1056 1114

GC Column: CTR-1 ID: 6.35 (mm)

COMPOUND	$\overline{RRF}$	RRF 5000	MIN RRF	%D	MAX %D
Carbon Dioxide	0.403	0.415		3.0	30.0

FORM VII VOA

FORM 8
VOLATILE ANALYTICAL SEQUENCE

Lab Name: TESTAMERICA BURLINGTON Contract: 29008

Lab Code: STLV Case No.: DTE-MI SAS No.: SDG No.: 9D160107

GC Column: CTR-1 ID: 6.35 (mm) Init. Calib. Date(s): 03/28/09 03/28/09

Instrument ID: 2866_2

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	MEAN SURROGATE RT FROM INITIAL CALIBRATION					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	RT #	RT #
01	CAL1	CAL1	03/28/09	1056		
02	CAL2	CAL2	03/28/09	1100		
03	CAL3	CAL3	03/28/09	1104		
04	CAL4	CAL4	03/28/09	1109		
05	CAL5	CAL5	03/28/09	1114		
06	CCV	CCV	04/18/09	1035		
07	C041809ALCS	C041809ALCS	04/18/09	1048		
08	MBLKC041809A	MBLKC041809A	04/18/09	1052		
09	MW381D	792878	04/18/09	1140		
10	MW384D	792879	04/18/09	1150		
11	CCV	CCV	04/18/09	1422		
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
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28						
29						
30						
31						
32						

QC LIMITS

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Handling

DO NOT LIFT HIGH

ORIGIN ID: PHDA
AL HAIDET
TEST AMERICA
4101 SHUFFEL DR

NORTH CANTON, OH 44720
UNITED STATES US

Ship Date: 16APR09
ActWgt: 10.1 LB
System#: 507102/CAFE2360
Account: S *********

TO SAMPLE RECEIVING
TESTAMERICA
30 COMMUNITY DRIVE

SOUTH BURLINGTON, VT 05403

Ref: AL HAIDET
Dept: AL HAIDET

FedEx Express

Delivery Address Barcode

BILL RECIPIENT

PRIORITY OVERNIGHT

FRI
Deliver By:
17APR09

TRK# 9784 4869 0606 Form 0201

BTV AA

05403 -VT-US XH BTVA

Part # 154250-054 TRIT 01/08

TestAmerica Burlington
SAMPLE RECEIPT & LOG IN CHECKLIST

Client: STLOHN	Date Received: 04/17/09	Log In Date: 04/17/09	
ETR: 131282	Time Received: 1010	By: LWM	
SDG: 9D160107	Received By: CR	Signature:	
Project: 29004	# Coolers Received: 1	PM Signature:	
Samples Delivered By: X 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	X			
Custody seals are present and intact	X			
Custody seal numbers are present		X		
If yes, list custody seal numbers:				

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

IR Gun ID: 9b Correction Factor (CF) = −2 °C

Cooler 1: 0.2 °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			
• 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			
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

FSR002:12.19.07:3
TestAmerica Burlington

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT