

CON 12-15
Doc #15315

To: Lambert Nnadi
IDNR Contaminated Sites Section
Fax 515-281-8895

From: Dave Cleary – Terracon

Site 60 Former Napa Auto Parts
207 East 3rd Street, Waterloo, IA
74' x 91' 0.155 acres.

Ste 61 Former Gas Station Site
400 Commercial Street, Waterloo, IA
66' x 90' 0.136 acres

Please concentrate the efforts on the two above referenced sites. A copy of the Phase I will be mailed to your attention today. Attached is the additional soil sampling information for Site 86. The plan for Site 86 is that the lead contaminated soil will be overexcavated.

If you have any questions please do not hesitate to contact me at 319-277-4016.

Dave Cleary
Terracon

15 pages



April 22, 2005

City of Waterloo
715 Mulberry Street
Waterloo, Iowa 50703

Terracon Consultants, Inc.
6612 Chancellor Drive, Suite 102
Cedar Falls, Iowa 50613
Phone 319.277.4016
Fax 319.277.4320
www.terracon.com

Attn: Mr. Don Temeyer

RE: Limited Soil Sampling
Cedar Valley Art Mall
West of Site 86 (Morris Printing)
Waterloo, Iowa
Terracon Project No. 13057003.01

Dear Mr. Temeyer:

Terracon was retained by the City of Waterloo to conduct additional soil sampling from the site soils in and around TMW-7 exhibiting the highest concentrations of lead identified in the Limited Site Investigation (LSI) performed by Terracon dated April 1, 2005 (Project No. 13057003). A site plan from LSI is also attached.

Terracon mobilized to the site on April 13, 2005 to collect soil samples for laboratory analysis. Soil samples were collected with a GeoProbe to determine the limits of a proposed overexcavation to remove significant portions of the identified contaminated soil. Soil samples were relinquished under standard chain of custody procedures to Test America for analysis of lead using Environmental Protection Agency (EPA) method SW-6010B. In addition, one soil sample from TMW-7 (2' - 3') was submitted for Toxicity Characteristic Leachate Procedure (TCLP) lead using EPA method SW-6010B. The locations, results of field screening and laboratory testing are summarized on the attached Table 1 and a copy of the laboratory analytical report has been attached:

Based on the additional sampling performed, Terracon recommends an area in and around TMW-7 be excavated approximately 100 square feet by 3 feet to remove significant portions of the identified contaminated soil. Based on the above recommended area to be excavated approximately 18 tons of soil would be excavated from the area in and around TMW-7. Based on the analytical results, the excavated soil can be disposed of at an IDNR approved landfill or landfarm.

City of Waterloo
Project Number: 13057003.01
April 22, 2005

Terracon**Estimated project fees**

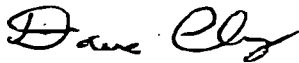
Excavate 10'x10'x3', replace with suitable fill material and transportation	\$1,725
Landfill Disposal Cost	\$690
Project oversight and management	\$500
ESTIMATED TOTAL	\$2,915

The analysis presented in this report is based upon data obtained from field activities and from other information discussed in this report. This report does not reflect any variations in the across the site which could be present. The extent of such variations may not become evident without additional testing.

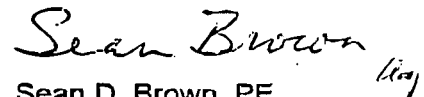
This report is prepared for the exclusive use of our client for the specific application to the project discussed and has been prepared in accordance with generally accepted environmental engineering practices. No warranties, either express or implied are intended or made. In the event any changes in nature or location of subsurface conditions as outlined in this report are observed, the conclusions contained in this report cannot be considered valid unless the changes are reviewed and the conclusions of this report are modified or verified in writing by the environmental engineer.

We appreciate the opportunity to work with you on this project and look forward to working with you in the future. If you have any questions concerning this report, please contact Dave Cleary at 319-277-4016.

Sincerely,

Terracon

Dave Cleary
Project Manager



Sean D. Brown, PE
Principal

Copies to: Addressee (2)

TABLE 1: SOIL ANALYTICAL DATA

Location	TMW-7 (2'-3') mg/kg	TMW-7 (2'-3') mg/L	TMW-7 (3'-4') mg/kg	12' north of TMW-7 (2'-3') mg/kg	10' northwest of TMW-7 (2'-3') mg/kg	12' east of TMW-7 (2'-3') mg/kg	12' west of TMW-7 (2'-3') mg/kg	12' south of TMW-7 (2'-3') mg/kg	TMW-8 (3'-4') mg/kg	IDNR Action Level / Statewide Standard
Location shown on Figure 3	TMW-7	TMW-7	TMW-7	A	B	C	D	E	TMW-8	
Date Sampled	3/22/05	4/13/05	4/13/05	4/13/05	4/13/05	4/13/05	4/13/05	4/13/05	3/22/05	
Arsenic	4.4	NS	NS	NS	NS	NS	NS	NS	BDL	1.4 mg/kg
Barium	290	NS	NS	NS	NS	NS	NS	NS	67	5,500 mg/kg
Cadmium	2.0	NS	NS	NS	NS	NS	NS	NS	0.56	39 mg/kg
Chromium	21	NS	NS	NS	NS	NS	NS	NS	11	230 mg/kg
Lead	1400	NS	386	218	23	80	304	170	3.4	400 mg/kg
TCLP Lead	NS	0.11	NS	NS	NS	NS	NS	NS	NS	0.75 mg/L

Notes:

BDL Below Detection Limits

NS Not Sampled

10 Indicates concentration over IDNR Target Levels or EPA MCLs

mg/kg -Indicates milligrams per kilogram, generally equivalent to parts per million

Mg/L -Indicates milligrams per Liter, generally equivalent to parts per million

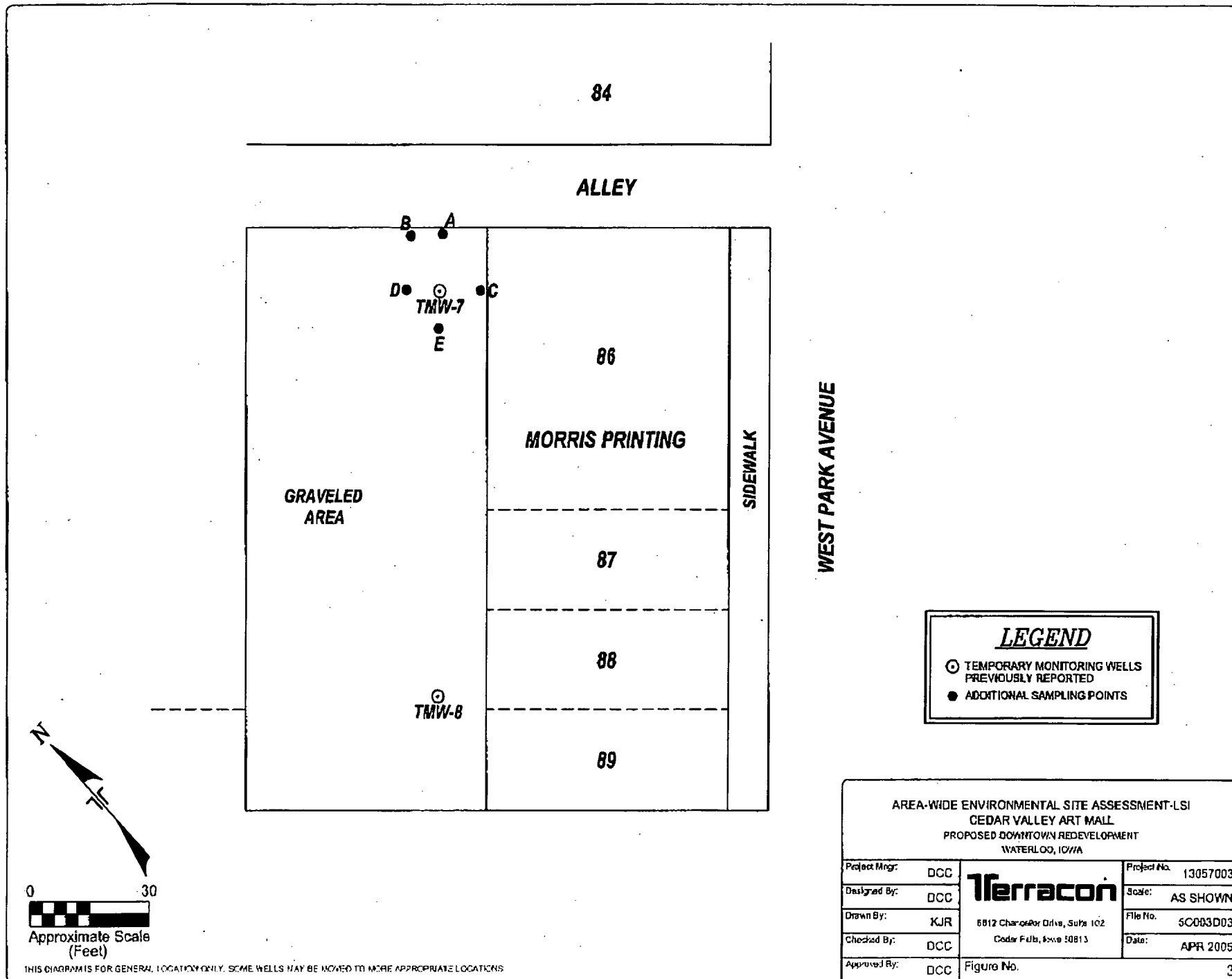
IDNR Action Level/Statewide Standard -Indicates Iowa Department of Natural Resources Action Level for LUST Sites
or Statewide Standard for Protected Groundwater

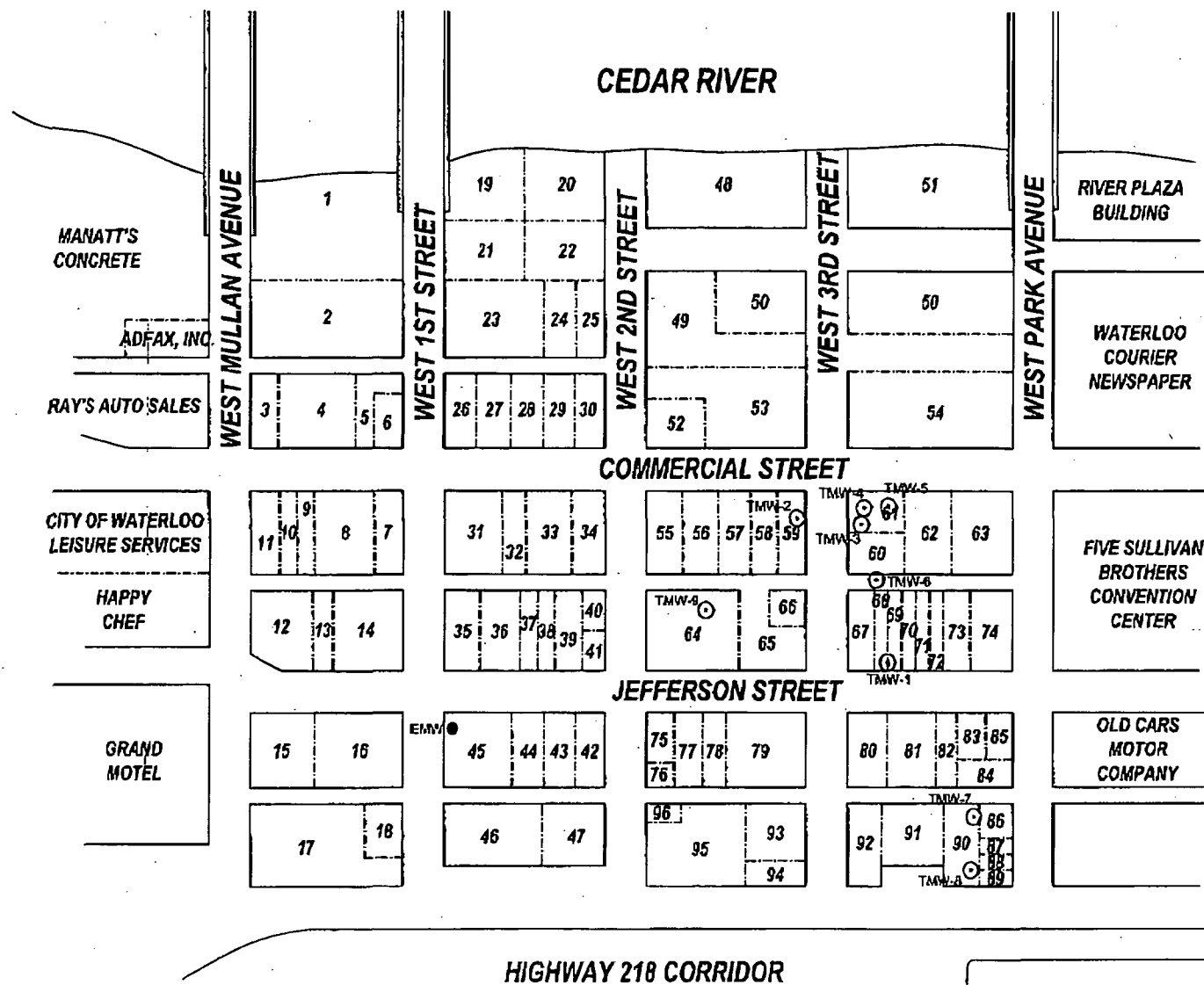
USEPA MCL -Indicates US Environmental Protection Agency Maximum Contaminant Level

Reference: IAC 567 Chapter 137 Table 2 - Standards for Soil, Iowa Land Recycling Program,
10/4/99

* Laboratory Analysis not complete

Terracon





THIS DIAGRAM IS FOR GENERAL LOCATION ONLY. SOME WELLS MAY BE MOVED TO MORE APPROPRIATE LOCATIONS.

LEGEND

- TEMPORARY MONITORING WELLS
- EXISTING MONITORING WELL

AREA-WIDE ENVIRONMENTAL SITE ASSESSMENT-LSI
CEDAR VALLEY ART MALL
PROPOSED DOWNTOWN REDEVELOPMENT
WATERLOO, IOWA

Project Mgr:	DCC	<p>6612 Cherokee Drive, Suite 102 Cedar Falls, Iowa 50613</p>	Project No.	13057003
Designed By:	DCC		Scale:	NONE
Drawn By:	KJR/TDK		File No.	13057003F2.dwg
Checked By:	DCC		Date:	MARCH 2005
Approved By:	DCC	Figure No.		1



ANALYTICAL REPORT

Dave Cleary
TERRACON, INC.-CEDAR FALLS
6612 Chancellor Drive
Suite #102
Cedar Falls, IA 50613

04/20/2005

TestAmerica Job: 05.04545

Project Number: 13057003
Project: West of Site 86-TCLP

Enclosed is the Analytical Reports for the following samples submitted to the Cedar Falls Division of TestAmerica Analytical Testing Corporation for analysis.

Sample Number	Sample Description	Date Taken	Date Received
860385	B-7 2-3'	04/13/2005	04/13/2005

TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific samples analyzed.

Reproduction of this analytical report is permitted only in its entirety.

Kristin Clay
Inorganics Operations Manager

www.testamericainc.com

TestAmerica Analytical Testing Corporation | TestAmerica Drilling Corporation | TestAmerica Air Emission Corporation



ANALYTICAL REPORT

Dave Cleary
TERRACON, INC.-CEDAR FALLS
6612 Chancellor Drive
Suite #102
Cedar Falls, IA 50613

04/20/2005

WEST OF SITE 86-WATERLOO, IA
13057003

Date Received: 04/13/2005
Job Number: 05.04545

	Result	Units	Flags	Date Taken	Date Analyzed	Regulatory Limit	Analyst	Analysis Method
860385 B-7 2-3'								
Solid pH Measured in Water	6.7	units		04/13/2005	04/14/2005	<2.0 & >12.5	sas	SW 9045
TCLP Metals Digest	Complete			04/13/2005	04/18/2005		nen	
ICP TCLP METALS				04/13/2005				
TCLP Lead (ICP)	0.11	mg/L		04/13/2005	04/19/2005	5.0	llw	SW 6010B
TCLP EXTRACTION	complete		TS	04/13/2005	04/14/2005		kak	SW 1311

Key to Flags:

TS - Temperature during TCLP extraction exceeds method range

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ANALYTICAL TESTING CORPORATION

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TestAmerica Job Number: 05.04545

ATTACHMENTS

Following are the sample receipt log and the chain of custody applicable to this analytical report.

Any abnormalities or departures from sample acceptance policy shall be documented on the "Sample Receipt and Temperature Log Form" and Sample Non-Conformance Form" (if applicable) included with this report.

For information concerning certifications of this facility or another TestAmerica facility please visit our website at www.TestAmericaInc.com.

This data has been produced in compliance with 2002 NELAC Standards (July 2004), except where noted.

Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) and are sampled in accordance with TA-CF SOP CF09-01.

This report shall not be reproduced, except in full, without written approval of the laboratory.

For questions regarding this report, please contact the individual who signed the analytical report.

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ANALYTICAL TESTING CORPORATION 704 ENTERPRISE DRIVE · CEDAR FALLS, IA 50613 · 319-277-2401 · 800-750-2401 · FAX 319-277-2425

ANALYTICAL REPORT

Dave Cleary
TERRACON, INC.-CEDAR FALLS
6612 Chancellor Drive
Suite #102
Cedar Falls, IA 50613

04/18/2005

TestAmerica Job: 05.04544

Project Number: 13057003
Project: West of Site 86

Enclosed is the Analytical Reports for the following samples submitted to the Cedar Falls Division of TestAmerica Analytical Testing Corporation for analysis.

Sample Number	Sample Description	Date Taken	Date Received
860379	B-7 3-4'	04/13/2005	04/13/2005
860380	B-7 North 2-3'	04/13/2005	04/13/2005
860381	B-7 Northwest 2-3'	04/13/2005	04/13/2005
860382	B-7 East 2-3'	04/13/2005	04/13/2005
860383	B-7 West 2-3'	04/13/2005	04/13/2005
860384	B-7 South 2-3'	04/13/2005	04/13/2005

TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific samples analyzed.

Reproduction of this analytical report is permitted only in its entirety.

Kristin Clay
Inorganics Operations Manager

www.testamericainc.com

TestAmerica Analytical Testing Corporation | TestAmerica Drilling Corporation | TestAmerica Air Emission Corporation



ANALYTICAL REPORT

Dave Cleary
TERRACON, INC.-CEDAR FALLS
6612 Chancellor Drive
Suite #102
Cedar Falls, IA 50613

04/18/2005

WEST OF SITE 86-WATERLOO, IA
13057003

Date Received: 04/13/2005
Job Number: 05.04544

	<u>Result</u>	<u>Units</u>	<u>Flags</u>	<u>Date Taken</u>	<u>Date Analyzed</u>	<u>Time Analyzed</u>	<u>Analyst</u>	<u>Analysis Method</u>
860379 B-7 3-4'								
Solids, Total	72.53	%		04/13/2005	04/14/2005		sas	SM 2540 G
ICP Metals Prep (Solid)	1.109	g		04/13/2005	04/14/2005		heh	SW 3050 B
ICP Metals-Solid				04/13/2005				
Lead, (ICP)	386	mg/kg dw M,MSO		04/13/2005	04/14/2005		heh	SW 6010B
860380 B-7 North 2-3'								
Solids, Total	82.68	%		04/13/2005	04/14/2005		sas	SM 2540 G
ICP Metals Prep (Solid)	1.039	g		04/13/2005	04/14/2005		heh	SW 3050 B
ICP Metals-Solid				04/13/2005				
Lead, (ICP)	218	mg/kg dw		04/13/2005	04/14/2005		heh	SW 6010B
860381 B-7 Northwest 2-3'								
Solids, Total	85.76	%		04/13/2005	04/14/2005		sas	SM 2540 G
ICP Metals Prep (Solid)	1.033	g		04/13/2005	04/14/2005		heh	SW 3050 B
ICP Metals-Solid				04/13/2005				
Lead, (ICP)	23	mg/kg dw		04/13/2005	04/14/2005		heh	SW 6010B
860382 B-7 East 2-3'								
Solids, Total	94.63	%		04/13/2005	04/14/2005		sas	SM 2540 G

Key to Flags:

M - Duplicate (or MS/MSD) RPD is outside of control limits.
MSO - MS and/or MSD recoveries are outside of control limits

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ANALYTICAL REPORT

Dave Cleary
TERRACON, INC.-CEDAR FALLS
6612 Chancellor Drive
Suite #102
Cedar Falls, IA 50613

04/18/2005

WEST OF SITE 86-WATERLOO, IA
13057003

Date Received: 04/13/2005
Job Number: 05.04544

	<u>Result</u>	<u>Units</u>	<u>Flags</u>	<u>Date Taken</u>	<u>Date Analyzed</u>	<u>Time Analyzed</u>	<u>Analyst</u>	<u>Analysis Method</u>
860382 B-7 East 2-3'								
ICP Metals Prep (Solid)	1.059	g		04/13/2005	04/14/2005		neh	SW 3050 B
ICP Metals-Solid				04/13/2005				
Lead, (ICP)	80	mg/kg dw		04/13/2005	04/14/2005		neh	SW 6010B
860383 B-7 West 2-3'								
Solids, Total	79.06	%		04/13/2005	04/14/2005		gas	SM 2540 G
ICP Metals Prep (Solid)	1.063	g		04/13/2005	04/14/2005		neh	SW 3050 B
ICP Metals-Solid				04/13/2005				
Lead, (ICP)	304	mg/kg dw		04/13/2005	04/14/2005		neh	SW 6010B
860384 B-7 South 2-3'								
Solids, Total	82.50	%		04/13/2005	04/14/2005		gas	SM 2540 G
ICP Metals Prep (Solid)	1.053	g		04/13/2005	04/14/2005		neh	SW 3050 B
ICP Metals-Solid				04/13/2005				
Lead, (ICP)	170	mg/kg dw		04/13/2005	04/14/2005		neh	SW 6010B

Key to Flags:

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TestAmerica Job Number: 05.04544

ATTACHMENTS

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Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) and are sampled in accordance with TA-CF SOP CF09-01.

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For questions regarding this report, please contact the individual who signed the analytical report.

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To assist us in using the proper analytical methods,
is this work being conducted for regulatory purposes?
Compliance Monitoring

Quote #: PO#:

06/21/05 TUE 10:06 [TX/RX NO 6785] 0.14

TestAmerica

ANALYTICAL TESTING CORPORATION

704 ENTERPRISE DRIVE • CEDAR FALLS, IA 50613 • 800-750-2401 • 319-277-2425 FAX

Sample Receipt and Temperature Log Form

Client: Terracon Project: Wat Site RCity: CFDate: 4/13/05 Receiver's Initials AW Time (Delivered): 16:30

Temperature Record

Cooler ID# (If Applicable)

° C / On Ice

☐ Temp Blank☐ Temperature out of compliance

Custody seals present?

☐ Yes

Custody seals intact?

☐ Yes ☐ No☐ Non-Conformance report startedPack250h1 - total1 recap

Thermometer:

☐ IR - 905085 "A"☐ IR - 809065 "B"☐ CF07-03-T2☐ 22126775

Courier:

☐ Airborne☐ Speedy☐ UPS☐ TA Courier☐ Velocity☐ TA Field Svs☐ FedEx☒ Client☐ DHL☐ US Postal☐ Other

Exceptions Noted

☐ Sample(s) not received in a cooler.☒ Sample(s) received same day of sampling.☐ Evidence of a chilling process☒ Temperature not taken:

Log-In by:

CW MF EM

OT _____

*Refer to SOP CF01-01 for Temperature Criteria

C:\QA Folder\QA Forms & Log Book pgs\Cooler Receipt rev7.doc