

C3-063-00024-8.1
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A & M ENGINEERING & ENVIRONMENTAL SERVICES, INC.

10010 E. 16TH STREET
TULSA, OK 74128-4813

ENGINEERING • ENVIRONMENTAL • CONSTRUCTION
(918) 665-6575 • FAX (918) 665-6576
EMAIL: aandm@aandmengineering.com

June 17, 2005

RECEIVED

JUN 20 2005

**BUREAU OF
ENVIRONMENTAL REMEDIATION**

Mr. Robert Bixby
Environmental Scientist/Remedial Section
Bureau of Environmental Remediation (BER)
Kansas Department of Health & Environment
1000 Southwest Jackson, Suite 410
Topeka, KS. 66612-1367

Re: Sampling Results of Roadbed Samples Collected on May 20, 2005

Dear Mr. Bixby:

Enclosed are the sampling results, site map and discussion pertaining to the two roadbed samples on Martin Street requested by KDHE in a letter dated April 27, 2005.

If you have any questions or comments, please contact me at (918) 665 6575.

Sincerely,

A.M. Ertugrul, P.E.
President

Enclosures

Cc: Ellen O'Brien
William Anderson
David Smiga
Mark Rupnow
Rick Menozzi

BER SCANNED

FEB 06 2013

DISCUSSION

A and M Engineering and Environmental Services collected from Martin Street right of way two roadbed samples in May 2005 as requested by KDHE in a letter dated April 27, 2005 addressing comments from the public. The procedures followed were prepared by A and M Engineering and outlined in a letter to KDHE dated May 16, 2005 and subsequently approved by KDHE.

There were two sample points as shown on figure 1. The samples are listed as RS-1 and RS-2. RS-1 is the west sample and RS-2 is the east sample. Each sample location was sampled on the north and south side of the right of way. The respective points were sampled at 6 inch intervals to where the native soil was encountered. The native clay base was encountered no deeper than 12 inches at all sample points. The sample points are described on the chain of custody as plant side 0 to 6 inches (which is the north side) 6 to 11 inches, either east or west end, or south side of road east or west end, same depths and description. The west end sample points are located on an all dirt road, whereas the east end sample points were from the edge of the asphalt part of the road. Immediately west of the west end sample points, Martin Street is paved. The sampling results are attached. We can discuss these results at your convenience.

ROADBED SAMPLING RESULTS

NORTH SIDE

	ARSENIC	CADMIUM	LEAD	DEPTH
	mg/Kg.	mg/Kg.	mg/Kg.	mg/Kg.
RS-2 NORTH	45.9	31	940	0 to 6
RS-2 NORTH	103	23	1160	6 to 12
RS-1 NORTH	71.8	8	330	0 to 6
RS-1 NORTH	89.1	13.8	290	6 to 11

SOUTH SIDE

RS-2 SOUTH	38.5	12.4	432	0 to 6
RS-2 SOUTH	27	26.4	634	6 to 11
RS-1 SOUTH	39	7.47	222	0 to 6
RS-1 SOUTH	25.8	9.05	298	6 to 10

ROADBED SAMPLING RESULTS

NORTH SIDE

	ARSENIC	CADMIUM	LEAD	DEPTH
	mg/Kg.	mg/Kg.	mg/Kg.	mg/Kg.
RS-2 NORTH	45.9	31	940	0 to 6
RS-2 NORTH	103	23	1160	6 to 12
RS-1 NORTH	71.8	8	330	0 to 6
RS-1 NORTH	89.1	13.8	290	6 to 11

SOUTH SIDE

RS-2 SOUTH	38.5	12.4	432	0 to 6
RS-2 SOUTH	27	26.4	634	6 to 11
RS-1 SOUTH	39	7.47	222	0 to 6
RS-1 SOUTH	25.8	9.05	298	6 to 10

ANALYTICAL REPORT

6825 East 38th Street
Tulsa, Oklahoma 74145-1105
www.greencountrytesting.com



Telephone 918.828.9977
Telephone 800.324.5757
Facsimile 918.828.7756

Altay Ertugrul
A & M Engineering
10010 E. 16th St.
Tulsa, OK 74128-4813
TEL: (918) 665-6574
FAX (918) 665-6576

May 26, 2005
Order No.: T05050332

RE: Cherryvale

Dear Altay Ertugrul:


Green Country Testing, Inc. received 8 samples on 5/23/2005 for the analyses presented in the following report.

In accordance with your instructions, Green Country Testing conducted the analysis shown on the following pages on samples submitted by your company. The results related only to the items tested. Unless otherwise noted, all analysis was conducted using EPA approved methodologies. Test reports meet all the NELAC requirements. All relevant sampling information is on the attached chain-of-custody form. The initials SUB as the analyst designate any testing sub-contracted by Green Country Testing.

Certifications/Accreditation: OK - 7604
AR - ADEQ
KS - E-10232
LA - 4002

A scope of Certified/Accredited parameters is available upon request. If you have any questions regarding these tests results, please feel free to call.

Sincerely,
Brian Duzan

Approved By: 
Brian Duzan, Director
Environmental Services



Date: 26-May-05

CLIENT: A & M Engineering
Project: Cherryvale
Lab Order: T05050332

CASE NARRATIVE

Analytical Comments for METHOD MET_S_ICP, SAMPLE T05050332-04A: *POOR SPIKE RECOVERY DUE TO NONHOMOGENOUS SAMPLE FOR BATCH CONTAINING SAMPLES T05050332-01A THRU T05050332-08A



CLIENT: A & M Engineering
Lab Order: T05050332
Project: Cherryvale

Date Received: 5/23/2005
Date Reported: 26-May-05

Lab ID: T05050332-01 Collection Date: 5/20/2005 12:50:00 P Sample ID: 0-6" West End Side Plant

Matrix: SOLID

<u>Analyses</u>	<u>Result</u>	<u>Detection Limit</u>	<u>Units</u>	<u>Date Analyzed</u>	<u>Analyst</u>
METALS IN SOIL OR SLUDGE BY ICP	SW6010A				KR
Arsenic	*71.8	0.500	mg/Kg	5/25/2005	
Cadmium	8.00	0.250	mg/Kg	5/25/2005	
Lead	330	1.00	mg/Kg	5/25/2005	

Lab ID: T05050332-02 Collection Date: 5/20/2005 12:50:00 P Sample ID: 6-11" West End Side Plant

Matrix: SOLID

<u>Analyses</u>	<u>Result</u>	<u>Detection Limit</u>	<u>Units</u>	<u>Date Analyzed</u>	<u>Analyst</u>
METALS IN SOIL OR SLUDGE BY ICP	SW6010A				KR
Arsenic	*89.1	0.500	mg/Kg	5/25/2005	
Cadmium	13.8	0.250	mg/Kg	5/25/2005	
Lead	290	1.00	mg/Kg	5/25/2005	

Lab ID: T05050332-03 Collection Date: 5/20/2005 1:30:00 PM Sample ID: 0-6" East End Side Plant

Matrix: SOLID

<u>Analyses</u>	<u>Result</u>	<u>Detection Limit</u>	<u>Units</u>	<u>Date Analyzed</u>	<u>Analyst</u>
METALS IN SOIL OR SLUDGE BY ICP	SW6010A				KR
Arsenic	*45.9	0.500	mg/Kg	5/25/2005	
Cadmium	31.0	0.250	mg/Kg	5/25/2005	
Lead	940	1.10	mg/Kg	5/25/2005	

Lab ID: T05050332-04 Collection Date: 5/20/2005 1:30:00 PM Sample ID: 6-12" East End Side Plant

Matrix: SOLID

<u>Analyses</u>	<u>Result</u>	<u>Detection Limit</u>	<u>Units</u>	<u>Date Analyzed</u>	<u>Analyst</u>
METALS IN SOIL OR SLUDGE BY ICP	SW6010A				KR
Arsenic	*103	0.500	mg/Kg	5/25/2005	
Cadmium	23.0	0.250	mg/Kg	5/25/2005	
Lead	1,160	1.00	mg/Kg	5/25/2005	



CLIENT: A & M Engineering
Lab Order: T05050332
Project: Cherryvale

Date Received: 5/23/2005
Date Reported: 26-May-05

Lab ID: T05050332-05 Collection Date: 5/20/2005 1:10:00 PM Sample ID: 0-6 West End South Side

Matrix: SOLID

<u>Analyses</u>	<u>Result</u>	<u>Detection Limit</u>	<u>Units</u>	<u>Date Analyzed</u>	<u>Analyst</u>
METALS IN SOIL OR SLUDGE BY ICP		SW6010A			KR
Arsenic	*39	0.500	mg/Kg	5/25/2005	
Cadmium	7.47	0.250	mg/Kg	5/25/2005	
Lead	222	1.10	mg/Kg	5/25/2005	

Lab ID: T05050332-06 Collection Date: 5/20/2005 1:45:00 PM Sample ID: 0-6" East End South Side

Matrix: SOLID

<u>Analyses</u>	<u>Result</u>	<u>Detection Limit</u>	<u>Units</u>	<u>Date Analyzed</u>	<u>Analyst</u>
METALS IN SOIL OR SLUDGE BY ICP		SW6010A			KR
Aluminum	< 0.250	0.250	mg/Kg	5/25/2005	
Arsenic	*38.5	0.500	mg/Kg	5/25/2005	
Cadmium	12.4	0.250	mg/Kg	5/25/2005	
Lead	432	1.00	mg/Kg	5/25/2005	

Lab ID: T05050332-07 Collection Date: 5/20/2005 1:45:00 PM Sample ID: 6-11" East End South Side

Matrix: SOLID

<u>Analyses</u>	<u>Result</u>	<u>Detection Limit</u>	<u>Units</u>	<u>Date Analyzed</u>	<u>Analyst</u>
METALS IN SOIL OR SLUDGE BY ICP		SW6010A			KR
Arsenic	*27	0.500	mg/Kg	5/25/2005	
Cadmium	26.4	0.250	mg/Kg	5/25/2005	
Lead	634	1.10	mg/Kg	5/25/2005	

Lab ID: T05050332-08 Collection Date: 5/20/2005 1:10:00 PM Sample ID: 6-10" West End South Side

Matrix: SOLID

<u>Analyses</u>	<u>Result</u>	<u>Detection Limit</u>	<u>Units</u>	<u>Date Analyzed</u>	<u>Analyst</u>
METALS IN SOIL OR SLUDGE BY ICP		SW6010A			KR
Aluminum	< 0.250	0.250	mg/Kg	5/25/2005	
Arsenic	*25.8	0.500	mg/Kg	5/25/2005	
Cadmium	9.05	0.250	mg/Kg	5/25/2005	
Lead	298	1.10	mg/Kg	5/25/2005	

CLIENT: A & M Engineering
 Work Order: T05050332
 Project: Cherryvale

QC SUMMARY REPORT

TestCode	Analyte	BatchID	QCType	Result	PQL	Units	%Rec	%RPD
MET_S_ICP	Arsenic	2580	MBLK	< 0.50	0.5	mg/Kg		
	Cadmium	2580	MBLK	< 0.25	0.25	mg/Kg		
	Lead	2580	MBLK	< 0.12	0.125	mg/Kg		
	Arsenic	2580	LCS	54.12	0.5	mg/Kg	108	
	Cadmium	2580	LCS	55.77	0.25	mg/Kg	112	
	Lead	2580	LCS	55.27	0.125	mg/Kg	111	
	Arsenic	2580	MS	125	0.5	mg/Kg	44	
	Cadmium	2580	MS	70.8	0.25	mg/Kg	95.7	
	Lead	2580	MS	1208	0.125	mg/Kg	86	
	Arsenic	2580	MSD	115	0.5	mg/Kg	24	8.33
	Cadmium	2580	MSD	64.4	0.25	mg/Kg	82.9	9.47
	Lead	2580	MSD	1098	0.125	mg/Kg	-134	9.54

**A & M ENGINEERING
AND
ENVIRONMENTAL SERVICES, INC.**



TULSA, OKLAHOMA

ENGINEERING - ENVIRONMENTAL - CONSTRUCTION

10010 E. 16th Street - TULSA, OKLAHOMA 74128-4813

TEL: (918)665-6575 FAX: (918)665-8578 E-Mail: aandm@galstar.com

TO5050332

SAMPLING FIRM
AEM

CLIENT CONTACT
Altay Ent.

PHONE NUMBER

PROJECT NUMBER
1804-003-004

PROJECT NAME
Cherryvale.

SAMPLERS: (Signature)
Jon Rubin

STA. NO	DATE	TIME	COMP.	GRAB	STATION LOCATION	MATRIX	NO. OF CONTAINERS	RUSH ?		ANALYTICAL TESTS REQUIRED												REMARKS				
								YES	NO	Arsenic	Lead	Cadmium														
5/20/05	12:50		✓		6-6" plant West End side	Sol	1		X	X	X	X														
5/20/05	12:50		✓		6-11" plant West End side	Sol	1		X	X	X	X														
5/20/05	13:30		✓		0-6" plant East End side	Sol	1		X	X	X	X														
5/20/05	13:30		✓		6-12" plant East End side	Sol	1		X	X	X	X														
5/20/05	13:10		✓		0-6" South West End side	Sol	1		X	X	X	X														
5/20/05	13:10		✓		6-10" South West End side	Sol	1		X	X	X	X														
5/20/05	13:45		✓		0-6" South East End side	Sol	1		X	X	X	X														
5/20/05	13:45		✓		6-11" South East End side	Sol	1		X	X	X	X														

RELINQUISHED BY: (Signature) DATE TIME RECEIVED BY: (Signature)

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RELINQUISHED BY: (Signature) DATE TIME RECEIVED BY: (Signature)
Jon Rubin 5/25/05 10:12 *[Signature]*

RELINQUISHED BY: (Signature) DATE TIME RECEIVED BY: (Signature)

REMARKS:

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TIME : JUN-08-2005 03:59PM
TEL NUMBER : +918 665 6576
NAME : A and M Engineering

FILE NUMBER : 968
DATE : JUN-08 03:57PM
TO : 5915362
DOCUMENT PAGES : 011
START TIME : JUN-08 03:57PM
END TIME : JUN-08 03:59PM
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10010 E. 16th STREET
TULSA, OK 74128 - 4813
ENGINEERING - ENVIRONMENTAL - CONSTRUCTION
(918) 665-6375 FAX (918) 665-6576 E-MAIL: aandm@galstar.com

Fax

To: Bill Anderson **From:** Altay Ertugrul
Fax: 591-5362 **Pages:** 11
Company: Doerner, Saunders, et al **Date:** June 8, 2005
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MEMORY TRANSMISSION REPORT

TIME : JUN-08-2005 04:10PM
TEL NUMBER : +918 665 6576
NAME : A and M Engineering

FILE NUMBER : 969
DATE : JUN-08 04:08PM
TO : 12198885627
DOCUMENT PAGES : 011
START TIME : JUN-08 04:08PM
END TIME : JUN-08 04:10PM
SENT PAGES : 011
STATUS : OK

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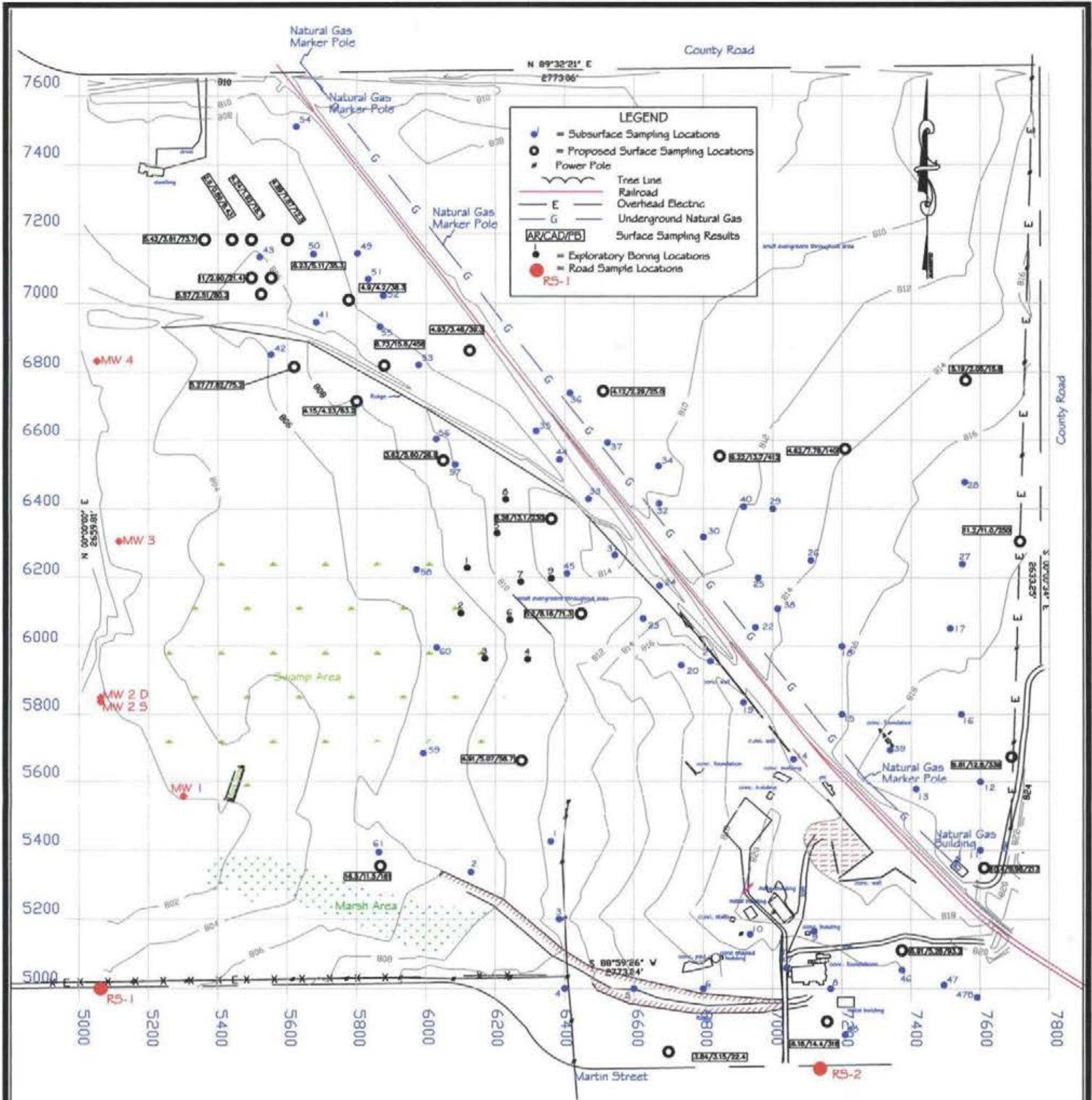
A & M ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
10010 E. 16th STREET
TULSA, OK 74128 - 4813
ENGINEERING - ENVIRONMENTAL - CONSTRUCTION
(918) 665-6573 FAX (918) 665-6576
E-MAIL: aamd@aandmengineering.com

Fax

To:	Mark Rupnow	From:	Altay Ertugrul
Fax:	219-888-5627	Pages:	11
Company:	U.S. Steel	Date:	June 8, 2005
Re:		CC:	
<input type="checkbox"/> Urgent <input type="checkbox"/> For Review <input type="checkbox"/> Please Comment <input type="checkbox"/> Please Reply <input type="checkbox"/> Please Recycle			

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• **Comments:**



ZONING LEGEND	
[Symbol]	= Zone 1 - Estimated Impacted Soil Depth 4.5 ft.
[Symbol]	= Zone 2 (EPA Repository Area)
[Symbol]	= Zone 3 - Estimated Impacted Soil Depth 5 ft.
[Symbol]	= Zone 4 - Estimated Impacted Soil Depth 3.5 ft.
[Symbol]	= Zone 5 - Estimated Impacted Soil Depth 6 to 18 Inches.
[Symbol]	= Zone 6 - Estimated Impacted Soil Depth 8 ft.

A & M ENGINEERING AND ENVIRONMENTAL SERVICES, INC.
 ENGINEERING - ENVIRONMENTAL - CONSTRUCTION

MARTIN STREET SAMPLING FORMER NATIONAL ZINC SITE, CHERRYVALE, KANSAS		
SCALE: 1" = 300'	DATE: 5-16-2005	FIGURE NO. 1
APPROVED BY: AME	DRAWN BY: OME	PROJECT NO.