




Mena Water and Sewer  
ATTN: Mr. Mike Spencer  
323 County Road 53  
Mena, AR 71953

This report contains the analytical results and supporting information for samples submitted on April 10, 2013. Attached please find a copy of the Chain of Custody and/or other documents received. Note that any remaining sample will be discarded two weeks from the original report date unless other arrangements are made.

This report is intended for the sole use of the client listed above. Assessment of the data requires access to the entire document.

This report has been reviewed by the Laboratory Director or a qualified designee.



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John Overbey  
Laboratory Director

This document has been distributed to the following:

PDF cc: Mena Water and Sewer  
ATTN: Mr. Mike Spencer  
menawwtp@gmail.com

Mena Water and Sewer  
323 County Road 53  
Mena, AR 71953

**SAMPLE INFORMATION**

**Project Description:**

One (1) water sample(s) received on April 10, 2013

**Receipt Details:**

A Chain of Custody was provided. The samples were delivered in one (1) ice chest. Ice chest #1 was delivered with shipping documentation.

Each sample container was checked for proper labeling, including date and time sampled. Sample containers were reviewed for proper type, adequate volume, integrity, temperature, preservation, and holding times. Any exceptions are noted below:

**Sample Identification:**

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Sampled Date/Time</u>	<u>Notes</u>
166429-1	S&P 001 09APR2013 1308.1323,1338,1353	09-Apr-2013 1353	
166429-2	S&P 002 09APR2013 1308.1323,1338,1353	09-Apr-2013 1353	

**Qualifiers:**

- D Result is from a secondary dilution factor
- Q Analyte is not within quality control limits

**Case Narrative:**

The matrix spike recovery for Total Recoverable Cyanide failed to meet acceptance criteria due to matrix interference. Elevated reporting limits for Metals are due to matrix interference.

**References:**

- "Methods for Chemical Analysis of Water and Wastes", EPA/600/4-79-020 (Mar 1983) with updates and supplements EPA/600/5-91-010 (Jun 1991), EPA/600/R-92-129 (Aug 1992) and EPA/600/R-93-100 (Aug 1993).
- "Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846)", Third Edition.
- "Standard Methods for the Examination of Water and Wastewaters", 21st edition.
- "American Society for Testing and Materials" (ASTM).
- "Association of Analytical Chemists" (AOAC).

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**ANALYTICAL RESULTS**

**AIC No.** 166429-1

**Sample Identification:** S&P 001 09APR2013 1308.1323,1338,1353

<u>Analyte</u>	<u>Result</u>	<u>RL</u>	<u>Units</u>	<u>Qualifier</u>
<b>Total Recoverable Cadmium</b> EPA 200.8 Prep: 10-Apr-2013 1131 by 271	<b>&lt; 0.001</b> Analyzed: 16-Apr-2013 1404 by 305	0.001	<b>mg/l</b> Batch: S34391	D Dil: 10
<b>Total Recoverable Chromium</b> EPA 200.8 Prep: 10-Apr-2013 1131 by 271	<b>0.20</b> Analyzed: 16-Apr-2013 1404 by 305	0.07	<b>mg/l</b> Batch: S34391	D Dil: 10
<b>Total Recoverable Copper</b> EPA 200.8 Prep: 10-Apr-2013 1131 by 271	<b>3.0</b> Analyzed: 16-Apr-2013 1404 by 305	0.01	<b>mg/l</b> Batch: S34391	D Dil: 10
<b>Total Recoverable Lead</b> EPA 200.8 Prep: 10-Apr-2013 1131 by 271	<b>&lt; 0.01</b> Analyzed: 16-Apr-2013 1404 by 305	0.01	<b>mg/l</b> Batch: S34391	D Dil: 10
<b>Total Recoverable Nickel</b> EPA 200.8 Prep: 10-Apr-2013 1131 by 271	<b>3.9</b> Analyzed: 16-Apr-2013 1404 by 305	0.1	<b>mg/l</b> Batch: S34391	D Dil: 10
<b>Total Recoverable Silver</b> EPA 200.8 Prep: 10-Apr-2013 1131 by 271	<b>&lt; 0.002</b> Analyzed: 16-Apr-2013 1404 by 305	0.002	<b>mg/l</b> Batch: S34391	D Dil: 10
<b>Total Recoverable Zinc</b> EPA 200.8 Prep: 10-Apr-2013 1131 by 271	<b>0.20</b> Analyzed: 16-Apr-2013 1404 by 305	0.02	<b>mg/l</b> Batch: S34391	D Dil: 10

**AIC No.** 166429-2

**Sample Identification:** S&P 002 09APR2013 1308.1323,1338,1353

<u>Analyte</u>	<u>Result</u>	<u>RL</u>	<u>Units</u>	<u>Qualifier</u>
<b>Total Cyanide</b> SM 4500-CN C,E Prep: 10-Apr-2013 1305 by 308	<b>&lt; 0.01</b> Analyzed: 11-Apr-2013 1419 by 308	0.01	<b>mg/l</b> Batch: W43176	

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**LABORATORY CONTROL SAMPLE RESULTS**

Analyte	Spike Amount	%	Limits	RPD	Limit	Batch	Preparation Date	Analysis Date	Dil	Qual
Total Cyanide	0.1 mg/l	103	85.0-115			W43176	10Apr13 1306 by 308	11Apr13 1444 by 308		
Total Recoverable Cadmium	0.05 mg/l	97.3	85.0-115			S34391	10Apr13 1132 by 271	10Apr13 1811 by 270		
Total Recoverable Chromium	0.05 mg/l	96.7	85.0-115			S34391	10Apr13 1132 by 271	10Apr13 1811 by 270		
Total Recoverable Copper	0.05 mg/l	101	85.0-115			S34391	10Apr13 1132 by 271	10Apr13 1811 by 270		
Total Recoverable Lead	0.05 mg/l	96.4	85.0-115			S34391	10Apr13 1132 by 271	10Apr13 1811 by 270		
Total Recoverable Nickel	0.05 mg/l	98.9	85.0-115			S34391	10Apr13 1132 by 271	10Apr13 1811 by 270		
Total Recoverable Silver	0.02 mg/l	95.2	85.0-115			S34391	10Apr13 1132 by 271	10Apr13 1811 by 270		
Total Recoverable Zinc	0.05 mg/l	99.8	85.0-115			S34391	10Apr13 1132 by 271	10Apr13 1811 by 270		

**MATRIX SPIKE SAMPLE RESULTS**

Analyte	Sample	Spike Amount	%	Limits	Batch	Preparation Date	Analysis Date	Dil	Qual
Total Cyanide	166429-2	0.1 mg/l	0.00	75.0-125	W43176	10Apr13 1306 by 308	11Apr13 1420 by 308		Q
	166429-2	0.1 mg/l	1.50	75.0-125	W43176	10Apr13 1306 by 308	11Apr13 1422 by 308		Q
	Relative Percent Difference:			73.7	20.0	W43176			
Total Recoverable Cadmium	166435-1	0.05 mg/l	112	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1816 by 270		
	166435-1	0.05 mg/l	111	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1822 by 270		
	Relative Percent Difference:			0.359	20.0	S34391			
Total Recoverable Chromium	166435-1	0.05 mg/l	104	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1816 by 270		
	166435-1	0.05 mg/l	104	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1822 by 270		
	Relative Percent Difference:			0.460	20.0	S34391			
Total Recoverable Copper	166435-1	0.05 mg/l	97.1	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1816 by 270		
	166435-1	0.05 mg/l	98.8	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1822 by 270		
	Relative Percent Difference:			1.62	20.0	S34391			
Total Recoverable Lead	166435-1	0.05 mg/l	96.2	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1816 by 270		
	166435-1	0.05 mg/l	96.5	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1822 by 270		
	Relative Percent Difference:			0.322	20.0	S34391			
Total Recoverable Nickel	166435-1	0.05 mg/l	94.8	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1816 by 270		
	166435-1	0.05 mg/l	97.1	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1822 by 270		
	Relative Percent Difference:			2.36	20.0	S34391			
Total Recoverable Silver	166435-1	0.02 mg/l	86.0	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1816 by 270		
	166435-1	0.02 mg/l	86.5	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1822 by 270		
	Relative Percent Difference:			0.580	20.0	S34391			
Total Recoverable Zinc	166435-1	0.05 mg/l	93.0	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1816 by 270		
	166435-1	0.05 mg/l	94.7	75.0-125	S34391	10Apr13 1132 by 271	10Apr13 1822 by 270		
	Relative Percent Difference:			1.29	20.0	S34391			

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**LABORATORY BLANK RESULTS**

<u>Analyte</u>	<u>Result</u>	<u>RL</u>	<u>PQL</u>	<u>QC Sample</u>	<u>Preparation Date</u>	<u>Analysis Date</u>	<u>Qual</u>
Total Cyanide	< 0.01 mg/l	0.01	0.01	W43176-1	10Apr13 1306 by 308	11Apr13 1415 by 308	
Total Recoverable Cadmium	< 0.0001 mg/l	0.0001	0.0001	S34391-1	10Apr13 1132 by 271	10Apr13 1806 by 270	
Total Recoverable Chromium	< 0.007 mg/l	0.007	0.007	S34391-1	10Apr13 1132 by 271	10Apr13 1806 by 270	
Total Recoverable Copper	< 0.001 mg/l	0.001	0.001	S34391-1	10Apr13 1132 by 271	10Apr13 1806 by 270	
Total Recoverable Lead	< 0.001 mg/l	0.001	0.001	S34391-1	10Apr13 1132 by 271	10Apr13 1806 by 270	
Total Recoverable Nickel	< 0.01 mg/l	0.01	0.01	S34391-1	10Apr13 1132 by 271	10Apr13 1806 by 270	
Total Recoverable Silver	< 0.0002 mg/l	0.0002	0.0002	S34391-1	10Apr13 1132 by 271	10Apr13 1806 by 270	
Total Recoverable Zinc	< 0.002 mg/l	0.002	0.002	S34391-1	10Apr13 1132 by 271	10Apr13 1806 by 270	

CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

Client: <b>MENA</b>		PO No.		No of BOTTLES		Analyses Requested		AIC Control No: <b>166429</b>	
Project Reference:		Sample Matrix		WATER		SOIL		AIC Proposal No:	
Project Manager:		GRA B		COM P		X		Carrier:	
Sampled By:		Date/Time Collected		09 APR 2013		SEE COMMENTS		Received Temperature °C	
AIC No.		1		S&P 001		X		Remarks	
AIC No.		2		S&P 002		X		1	
AIC No.		3		S&P 003		X		1	
AIC No.		4		S&P 004		X		1	
AIC No.		5		S&P 005		X		1	
AIC No.		6		S&P 006		X		1	
AIC No.		7		S&P 007		X		1	
AIC No.		8		S&P 008		X		1	
AIC No.		9		S&P 009		X		1	
AIC No.		10		S&P 010		X		1	
AIC No.		11		S&P 011		X		1	
AIC No.		12		S&P 012		X		1	
AIC No.		13		S&P 013		X		1	
AIC No.		14		S&P 014		X		1	
AIC No.		15		S&P 015		X		1	
AIC No.		16		S&P 016		X		1	
AIC No.		17		S&P 017		X		1	
AIC No.		18		S&P 018		X		1	
AIC No.		19		S&P 019		X		1	
AIC No.		20		S&P 020		X		1	
AIC No.		21		S&P 021		X		1	
AIC No.		22		S&P 022		X		1	
AIC No.		23		S&P 023		X		1	
AIC No.		24		S&P 024		X		1	
AIC No.		25		S&P 025		X		1	
AIC No.		26		S&P 026		X		1	
AIC No.		27		S&P 027		X		1	
AIC No.		28		S&P 028		X		1	
AIC No.		29		S&P 029		X		1	
AIC No.		30		S&P 030		X		1	
AIC No.		31		S&P 031		X		1	
AIC No.		32		S&P 032		X		1	
AIC No.		33		S&P 033		X		1	
AIC No.		34		S&P 034		X		1	
AIC No.		35		S&P 035		X		1	
AIC No.		36		S&P 036		X		1	
AIC No.		37		S&P 037		X		1	
AIC No.		38		S&P 038		X		1	
AIC No.		39		S&P 039		X		1	
AIC No.		40		S&P 040		X		1	
AIC No.		41		S&P 041		X		1	
AIC No.		42		S&P 042		X		1	
AIC No.		43		S&P 043		X		1	
AIC No.		44		S&P 044		X		1	
AIC No.		45		S&P 045		X		1	
AIC No.		46		S&P 046		X		1	
AIC No.		47		S&P 047		X		1	
AIC No.		48		S&P 048		X		1	
AIC No.		49		S&P 049		X		1	
AIC No.		50		S&P 050		X		1	
AIC No.		51		S&P 051		X		1	
AIC No.		52		S&P 052		X		1	
AIC No.		53		S&P 053		X		1	
AIC No.		54		S&P 054		X		1	
AIC No.		55		S&P 055		X		1	
AIC No.		56		S&P 056		X		1	
AIC No.		57		S&P 057		X		1	
AIC No.		58		S&P 058		X		1	
AIC No.		59		S&P 059		X		1	
AIC No.		60		S&P 060		X		1	
AIC No.		61		S&P 061		X		1	
AIC No.		62		S&P 062		X		1	
AIC No.		63		S&P 063		X		1	
AIC No.		64		S&P 064		X		1	
AIC No.		65		S&P 065		X		1	
AIC No.		66		S&P 066		X		1	
AIC No.		67		S&P 067		X		1	
AIC No.		68		S&P 068		X		1	
AIC No.		69		S&P 069		X		1	
AIC No.		70		S&P 070		X		1	
AIC No.		71		S&P 071		X		1	
AIC No.		72		S&P 072		X		1	
AIC No.		73		S&P 073		X		1	
AIC No.		74		S&P 074		X		1	
AIC No.		75		S&P 075		X		1	
AIC No.		76		S&P 076		X		1	
AIC No.		77		S&P 077		X		1	
AIC No.		78		S&P 078		X		1	
AIC No.		79		S&P 079		X		1	
AIC No.		80		S&P 080		X		1	
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AIC No.		85		S&P 085		X		1	
AIC No.		86		S&P 086		X		1	
AIC No.		87		S&P 087		X		1	
AIC No.		88		S&P 088		X		1	
AIC No.		89		S&P 089		X		1	
AIC No.		90		S&P 090		X		1	
AIC No.		91		S&P 091		X		1	
AIC No.		92		S&P 092		X		1	
AIC No.		93		S&P 093		X		1	
AIC No.		94		S&P 094		X		1	
AIC No.		95		S&P 095		X		1	
AIC No.		96		S&P 096		X		1	
AIC No.		97		S&P 097		X		1	
AIC No.		98		S&P 098		X		1	
AIC No.		99		S&P 099		X		1	
AIC No.		100		S&P 100		X		1	
AIC No.		101		S&P 101		X		1	
AIC No.		102		S&P 102		X		1	
AIC No.		103		S&P 103		X		1	
AIC No.		104		S&P 104		X		1	
AIC No.		105		S&P 105		X		1	
AIC No.		106		S&P 106		X		1	
AIC No.		107		S&P 107		X		1	
AIC No.		108		S&P 108		X		1	
AIC No.		109		S&P 109		X		1	
AIC No.		110		S&P 110		X		1	
AIC No.		111		S&P 111		X		1	
AIC No.		112		S&P 112		X		1	
AIC No.		113		S&P 113		X		1	
AIC No.		114		S&P 114		X		1	
AIC No.		115		S&P 115		X		1	
AIC No.		116		S&P 116		X		1	
AIC No.		117		S&P 117		X		1	
AIC No.		118		S&P 118		X		1	
AIC No.		119		S&P 119		X		1	
AIC No.		120		S&P 120		X		1	
AIC No.		121		S&P 121		X		1	
AIC No.		122		S&P 122		X		1	
AIC No.		123		S&P 123		X		1	
AIC No.		124		S&P 124		X		1	
AIC No.		125		S&P 125		X		1	
AIC No.		126		S&P 126		X		1	
AIC No.		127		S&P 127		X		1	
AIC No.		128		S&P 128		X		1	
AIC No.		129		S&P 129		X		1	
AIC No.		130		S&P 130		X		1	
AIC No.		131		S&P 131		X		1	
AIC No.		132		S&P 132		X		1	
AIC No.		133		S&P 133		X		1	
AIC No.		134		S&P 134		X		1	
AIC No.		135		S&P 135		X		1	
AIC No.		136		S&P 136		X		1	
AIC No.		137		S&P 137		X		1	
AIC No.		138		S&P 138		X		1	
AIC No.		139		S&P 139		X		1	
AIC No.		140		S&P 140		X		1	
AIC No.		141		S&P 141		X		1	
AIC No.		142		S&P 142		X		1	
AIC No.		143		S&P 143		X		1	
AIC No.		144		S&P 144		X		1	
AIC No.		145		S&P 145		X		1	
AIC No.		146		S&P 146		X		1	
AIC No.		147		S&P 147		X		1	
AIC No.		148		S&P 148		X		1	
AIC No.		149		S&P 149		X		1	
AIC No.		150		S&P 150		X		1	
AIC No.		151		S&P 151		X		1	
AIC No.		152		S&P 152		X		1	
AIC No.		153		S&P 153		X		1	
AIC No.		154		S&P 154		X		1	
AIC No.		155		S&P 155		X		1	
AIC No.		156		S&P 156		X		1	
AIC No.		157		S&P 157		X		1	
AIC No.		158		S&P 158		X		1	
AIC No.		159		S&P 159		X		1	
AIC No.		160		S&P 160		X		1	
AIC No.		161		S&P 161		X		1	
AIC No.		162		S&P 162		X		1	
AIC No.		163		S&P 163		X		1	
AIC No.		164		S&P 164		X		1	
AIC No.		165		S&P 165		X		1	
AIC No.		166		S&P 166		X		1	
AIC No.		167		S&P 167		X		1	
AIC No.		168		S&P 168		X		1	
AIC No.		169		S&P 169		X		1	
AIC No.		170		S&P 170		X		1	
AIC No.		171		S&P 171		X		1	
AIC No.		172		S&P 172		X		1	
AIC No.		173		S&P 173		X		1	
AIC No.		174		S&P 174		X		1	
AIC No.		175		S&P 175		X		1	
AIC No.		176		S&P 176		X		1	
AIC No.		177		S&P 177		X		1	
AIC No.		178							

**SECTION B. DISCHARGE LIMITATIONS & MONITORING REQUIREMENTS**

The following limitations and monitoring requirements shall apply to discharge from Location S&P002 except for cyanide and flow usage, which apply as specified in the Table I-1 footnotes. The Permittee shall monitor the discharge from Locations S&P001 and S&P002, and the incoming water usage, and shall be limited as specified below:

Table I-1

Parameter	LIMITATIONS <sup>1</sup>		Sample Type
	Daily Maximum (mg/l)	Monthly Average <sup>2</sup> (mg/l)	
Cadmium, total	0.11	0.07	Composite of 4 grabs
Chromium, total	2.77	1.71	Composite of 4 grabs
Copper, total	3.38	2.07	Composite of 4 grabs
Lead, total	0.69	0.43	Composite of 4 grabs
Nickel, total	3.98	2.38	Composite of 4 grabs
Silver, total	0.43	0.24	Composite of 4 grabs
Zinc, total	2.61	1.48	Composite of 4 grabs
Cyanide, total	1.20	0.65	Composite of 4 grabs
<del>TTG, 40 CFR 433</del>	2.13	-	Certification <sup>3</sup>
Flow, Usage	Report	Report	Continuous
Flow, Discharge	Report	Report	Continuous

<sup>1</sup> It is the Permittee's responsibility to ensure test detection levels are sufficiently low to demonstrate compliance with permit limitations. If an analytical result is below the laboratory detection limit, then the detection limit shall be used in the calculation of pounds unless permitted otherwise by the Control Authority. Use the following or lower detection limits in micrograms per liter (ug/l): 0.5 cadmium, copper, lead, nickel, and silver; 10 for chromium and cyanide; 0.005 for mercury; 20 for zinc.

<sup>2</sup> Monthly average is the average of all daily results in a calendar month regardless of the number of samples analyzed.

<sup>3</sup> Week means Sunday through Saturday. Quarter means calendar quarter, Jan-Mar, Apr-Jun, Jul-Sep, and Oct-Dec. For this permit, Quarterly samples shall be collected in March, June, September, and December. The date and time of an individual grab sample is the date and time at which the sample is collected. The date of a composite sample is the date on which sample collection for the composite sample is started and stopped. The composite sample date will be one day if the composite sample is collected on one day, e.g. April 14, 2007, or two days if the composite sample is collected over two days, e.g. April 14-15, 2007. Monitoring by the Control Authority is not a substitute for monitoring required to be conducted by the Permittee in this permit unless the Control Authority notifies the Permittee in writing that specific monitoring by the Control Authority can be used to meet permit frequency requirements.

<sup>4</sup> Cyanide samples must be collected from Location S&P002 unless no process water has flowed through Location S&P002 during the monitoring day, then samples will be from Location S&P001.

<sup>5</sup> The Permittee has a State-approved Toxic Organics Management Plan (TOMP) and must comply with the