

APPENDIX G

DMR Data Corresponding with Quarterly Toxicity Testing

Halliburton Energy Services, Inc.
DIM Former Mine Site
Effluent Discharge from Water Treatment System
2003 - 2012

Date ¹	Report ²	TDS	Chloride	Sulfate
		mg/L	mg/L	mg/L
06/18/2003	K306528	1,923	65.5	1,290
07/23/2003	K307457	2,200	62.3	1,320
09/17/2003	K309382	2,300	61.8	1,340
10/22/2003	K310555	2,200	67.6	1,380
11/12/2003	K311277	2,200	63.3	1,370
12/10/2003	K312262	2,300	67.8	1,390
03/17/2004	K403645	2,184	67.7	1,290
04/21/2004	K404332	2,048	70.8	1,370
05/20/2004	K405512	2,240	61.5	1,340
06/16/2004	K406409	2,200	60.6	1,300
08/18/2004	K408444	2,200	63.9	1,350
12/15/2004	K412449	2,000	16.9	1,270
03/23/2005	K503521	2,200	63.9	1,390
05/04/2005	K505064	2,100	52.0	1,180
06/08/2005	K506195	2,100	59.5	1,210
07/19/2005	K507514	2,100	48.1	1,070
08/16/2005	K508657	2,200	59.7	1,330
10/11/2005	K510351	2,200	58.7	1,360
12/13/2005	K512328	2,100	50.6	1,360
12/05/2007	0712047	2,100	60.7	1,330
02/19/2009	0902204	1,900	49.8	1,190
04/15/2009	0904155	1,900	47.6	1,090
06/04/2009	0906060	1,700	40.3	1,010
10/15/2009	0910232	1,700	39.2	938
04/15/2010	1005183	1,800	35.1	841
06/17/2010	1006222	1,800	39.1	899
01/13/2011	1101097	1,900	43.9	1,130
02/15/2011	1102150	1,900	53.4	1,120
04/14/2011	1104155	1,900	42.7	936
06/16/2011	1106213	1,800	45.7	1,200
12/07/2011	1112100	1,600	38.1	1,050
02/08/2012	1202080	1,800	43.5	874
04/12/2012	1204137	1,800	38.4	953
06/14/2012	1206194	1,800	40.4	740
95th Percentile:		2,261	67.735	1,384

¹ Date of concurrent toxicity and chemistry sample collection.

² Arkansas Analytical report number (attached).

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 6/19/03

ANALYTICAL RESULTS

Lab Number:		K306528	K306529	Date/Time Analyzed
Sample ID:		Facility Discharge	Cove Creek	
Field Number:		FD0618COMP	CC06180940	
Date/Time Collected:		6/18/03,Comp	6/18/03,0940	
TDS	mg/L	1923	66	6/26/03,1600
Anions				
Sulfate	mg/L	1290	32.8	6/30/03,1446
Chloride	mg/L	65.5	2.05	6/30/03,1446

QUALITY CONTROL RESULTS

		Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
TDS	mg/L < 1		2.04	NA	93.2	EPA 160.1
Anions						
Sulfate	mg/L < 0.5		0.00	102	103	EPA 300.0
Chloride	mg/L < 0.5		1.56	94.6	96.0	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Teresa Canfield

Anions analyzed by: _____
Mark Wilson

7/18/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 7/23/03

ANALYTICAL RESULTS

Lab Number:		K307457		Date/Time Analyzed
Sample ID:		Facility Discharge		
Field Number:		FD0723COMP		
Date/Time Collected:		7/23/03,1100		
TDS	mg/L	2200		7/24/03,1615
Anions				
Sulfate	mg/L	1320		7/24/03,0900
Chloride	mg/L	62.3		7/24/03,0900

Lab Number:		K307458		Date/Time Analyzed
Sample ID:		Cove Creek		
Field Number:		CC07230745		
Date/Time Collected:		7/23/03,1445		
TDS	mg/L	420		7/24/03,1615
Anions				
Sulfate	mg/L	279		7/24/03,0905
Chloride	mg/L	10.8		7/24/03,0905

7/18/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 7/23/03

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
	mg/L				
TDS	< 1	1.27	NA	78.7	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.294	102	102	EPA 300.0
Chloride	< 0.5	0.404	96.5	99.0	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Teresa Canfield

Anions analyzed by: _____
Mark Wilson

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 9/17/03

ANALYTICAL RESULTS

Lab Number:		K309382	
Sample ID:		Facility Discharge	
Field Number:		FD0917COMP	
Date/Time Collected:		9/17/03,0930	
		Date/Time Analyzed	
TDS	mg/L	2300	9/22/03,1145
Anions			
Sulfate	mg/L	1340	9/26/03,0241
Chloride	mg/L	61.8	9/26/03,0241

Lab Number:		K309383	
Sample ID:		Cove Creek	
Field Number:		CC09170700	
Date/Time Collected:		9/17/03,0700	
		Date/Time Analyzed	
TDS	mg/L	520	9/22/03,1145
Anions			
Sulfate	mg/L	321	9/26/03,0314
Chloride	mg/L	13.5	9/26/03,0314

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 9/17/03

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
	mg/L				
TDS	< 1	0.971	NA	103	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.102	102	97.8	EPA 300.0
Chloride	< 0.5	0.213	95.0	93.9	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Teresa Canfield

Anions analyzed by: _____
Mark Wilson

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 10/22/03

ANALYTICAL RESULTS

Lab Number:		K310555		Date/Time Analyzed
Sample ID:		Facility Discharge		
Field Number:		FD1022Comp		
Date/Time Collected:		10/22/03,0930		
TDS	mg/L	2200	10/24/03,1345	
Anions				
Sulfate	mg/L	1380	10/23/03,1056	
Chloride	mg/L	67.6	10/23/03,1113	

Lab Number:		K310556		Date/Time Analyzed
Sample ID:		Cove Creek		
Field Number:		CC10220830		
Date/Time Collected:		10/22/03,0830		
TDS	mg/L	700	10/24/03,1345	
Anions				
Sulfate	mg/L	392	10/23/03,1023	
Chloride	mg/L	21.0	10/23/03,1040	

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 10/22/03

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
	mg/L				
TDS	< 1.0	0.00	NA	98.2	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.402	102	99.6	EPA 300.0
Chloride	< 0.5	0.096	103	104	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Teresa Canfield

Anions analyzed by: _____
Tracy Bounds, Mark Wilson

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 11/12/03

ANALYTICAL RESULTS

Lab Number:		K311277		Date/Time Analyzed
Sample ID:		Facility Discharge		
Field Number:		FD1112Comp		
Date/Time Collected:		11/12/03,0915		
TDS	mg/L	2200		11/12/03,1600
Anions				
Sulfate	mg/L	1370		11/14/03,1104
Chloride	mg/L	63.3		11/13/03,1437

Lab Number:		K311278		Date/Time Analyzed
Sample ID:		Cove Creek		
Field Number:		CC11120800		
Date/Time Collected:		11/12/03,0800		
TDS	mg/L	900		11/12/03,1600
Anions				
Sulfate	mg/L	584		11/13/03,1422
Chloride	mg/L	30.2		11/13/03,1408

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 11/12/03

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
	mg/L				
TDS	< 1.0	5.68	NA	96.8	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.204	99.0	97.9	EPA 300.0
Chloride	< 0.5	0.104	98.6	95.8	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Teresa Canfield

Anions analyzed by: _____
Mark Wilson

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 12/10/03

ANALYTICAL RESULTS

Lab Number:		K312262		Date/Time Analyzed
Sample ID:		Facility Discharge		
Field Number:		FD1210Comp		
Date/Time Collected:		12/10/03,0915		
TDS	mg/L	2300		12/10/03,1645
Anions				
Sulfate	mg/L	1390		12/11/03,2053
Chloride	mg/L	67.8		12/11/03,2039

Lab Number:		K312263		Date/Time Analyzed
Sample ID:		Cove Creek		
Field Number:		CC12100730		
Date/Time Collected:		12/10/03,0730		
TDS	mg/L	630		12/10/03,1645
Anions				
Sulfate	mg/L	382		12/11/03,2123
Chloride	mg/L	18.9		12/11/03,2108

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 12/10/03

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
	mg/L				
TDS	< 1.0	4.25	NA	89.4	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.203	95.5	98.7	EPA 300.0
Chloride	< 0.5	0.514	97.1	97.4	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Teresa Canfield

Anions analyzed by: _____
Tracy Bounds, Mark Wilson

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 3/17/04

ANALYTICAL RESULTS

Lab Number:		K403645	
Sample ID:		Facility Discharge	
Field Number:		FD0317COMP	
Date/Time Collected:		3/17/04,1100	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	2184	3/22/04,1500
Anions			
Sulfate	mg/L	1290	3/19/04,0018
Chloride	mg/L	67.7	3/19/04,0002

Lab Number:		K403646	
Sample ID:		Cove Creek	
Field Number:		CC03170800	
Date/Time Collected:		3/17/04,0800	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	351	3/22/04,1500
Anions			
Sulfate	mg/L	160	3/19/04,0049
Chloride	mg/L	10.3	3/19/04,0033

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 3/17/04

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	3.31	NA	87.7	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.415	93.0	96.3	EPA 300.0
Chloride	< 0.5	0.00	90.6	101	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Amy Daniel

Anions analyzed by: _____
Tracy Bounds, Mark Wilson

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 4/21/04

ANALYTICAL RESULTS

Lab Number:		K404332	
Sample ID:		Facility Discharge	
Field Number:		FD0421COMP	
Date/Time Collected:		4/21/04,1015	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	2048	4/23/04,1600
Anions			
Sulfate	mg/L	1370	4/21/04,1825
Chloride	mg/L	70.8	4/21/04,1810

Lab Number:		K404333	
Sample ID:		Cove Creek	
Field Number:		CC04210730	
Date/Time Collected:		4/21/04,0730	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	448	4/23/04,1600
Anions			
Sulfate	mg/L	300	4/21/04,1904
Chloride	mg/L	15.9	4/21/04,1841

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 4/21/04

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	1.06	NA	84.6	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.661	106	99.2	EPA 300.0
Chloride	< 0.5	0.607	99.6	98.9	EPA 300.0

NA means not analyzed.

* Does not meet lab acceptability criteria.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Amy Daniel

Anions analyzed by: _____
Mark Wilson

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 5/20/04

ANALYTICAL RESULTS

Lab Number:		K405512		Date/Time Analyzed
Sample ID:		Facility Discharge		
Field Number:		FD0520COMP		
Date/Time Collected:		5/20/04,1030		
Wet Chemistry				
TDS	mg/L	2240	5/24/04,1530	
Anions				
Sulfate	mg/L	1340	5/22/04,0715	
Chloride	mg/L	61.5	5/22/04,0700	

Lab Number:		K405513		Date/Time Analyzed
Sample ID:		Cove Creek		
Field Number:		CC05200700		
Date/Time Collected:		5/20/04,0700		
Wet Chemistry				
TDS	mg/L	494	5/24/04,1530	
Anions				
Sulfate	mg/L	262	5/22/04,1408	
Chloride	mg/L	13.8	5/22/04,0616	

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 5/20/04

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	6.25	NA	96.0	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.00	104	100	EPA 300.0
Chloride	< 0.5	0.423	96.3	94.6	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Amy Daniel

Anions analyzed by: _____
Mark Wilson

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 6/16/04

ANALYTICAL RESULTS

Lab Number:		K406409	
Sample ID:		Facility Discharge	
Field Number:		FD0616COMP	
Date/Time Collected:		6/16/04,1030	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	2200	6/18/04,1030
Anions			
Sulfate	mg/L	1300	6/18/04,2106
Chloride	mg/L	60.6	6/18/04,2123

Lab Number:		K406410	
Sample ID:		Cove Creek	
Field Number:		CC06160730	
Date/Time Collected:		6/16/04,0730	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	420	6/18/04,1030
Anions			
Sulfate	mg/L	265	6/18/04,2140
Chloride	mg/L	13.1	6/18/04,2157

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 6/16/04

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	1.96	NA	102	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	1.29	100	96.9	EPA 300.0
Chloride	< 0.5	0.995	100	100	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Teresa Canfield

Anions analyzed by: _____
Mark Wilson

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 8/18/04

ANALYTICAL RESULTS

Lab Number:		K408444		
Sample ID:		Facility Discharge		
Field Number:		FD0818COMP		Date/Time
Date/Time Collected:		8/18/04,0945		Analyzed
Wet Chemistry				
TDS	mg/L	2200		8/24/04,1645
Anions				
Sulfate	mg/L	1350		8/20/04,0726
Chloride	mg/L	63.9		8/20/04,0709

Lab Number:		K408445		
Sample ID:		Cove Creek		
Field Number:		CC08180830		Date/Time
Date/Time Collected:		8/18/04,0830		Analyzed
Wet Chemistry				
TDS	mg/L	660		8/24/04,1645
Anions				
Sulfate	mg/L	402		8/20/04,0808
Chloride	mg/L	17.7		8/20/04,0744

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Alan Brown

Description: Two water samples received 8/18/04

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	0.923	NA	107	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.100	101	102	EPA 300.0
Chloride	< 0.5	0.392	98.8	99.6	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Teresa Canfield

Anions analyzed by: _____
Mark Wilson

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott / Kenneth Carter

Description: Two water samples received 12/15/04

ANALYTICAL RESULTS

Lab Number:		K412449	
Sample ID:		Facility Discharge	
Field Number:		FD1215COMP	
Date/Time Collected:		12/15/04,1000	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	2000	12/20/04,0935
Anions			
Sulfate	mg/L	1270	12/15/04,1808
Chloride	mg/L	16.9	12/15/04,1751

Lab Number:		K412450	
Sample ID:		Cove Creek	
Field Number:		CC12210700	
Date/Time Collected:		12/21/04,0700	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	380	12/20/04,0935
Anions			
Sulfate	mg/L	187	12/15/04,1903
Chloride	mg/L	9.30	12/15/04,1836

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott / Kenneth Carter

Description: Two water samples received 12/15/04

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	0.820	NA	114	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	2.87	88.0	95.9	EPA 300.0
Chloride	< 0.5	1.30	90.4	92.6	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Teresa Canfield

Anions analyzed by: _____
Tracy Bounds, Joel Ledbetter

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 3/23/05

ANALYTICAL RESULTS

Lab Number:		K503521	
Sample ID:		Facility Discharge	
Field Number:		FD323COMP	
Date/Time Collected:		3/23/05,1000	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	2200	3/30/05,1000
Anions			
Sulfate	mg/L	1390	3/24/05,1026
Chloride	mg/L	63.9	3/24/05,1011

Lab Number:		K503522	
Sample ID:		Cove Creek	
Field Number:		CC3230700	
Date/Time Collected:		3/23/05,0700	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	150	3/30/05,1000
Anions			
Sulfate	mg/L	85.0	3/24/05,1055
Chloride	mg/L	4.62	3/24/05,1040

7/17/2012

Weston Solutions, Inc.
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 3/23/05

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	0.496	NA	103	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.398	95.1	94.5	EPA 300.0
Chloride	< 0.5	0.216	95.0	92.8	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Teresa Thomas

Anions analyzed by: _____
Joel Ledbetter

7/17/2012

EEMA O & M Services Group
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 5/4/05

ANALYTICAL RESULTS

Lab Number:		K505064	
Sample ID:		Facility Discharge	
Field Number:		FD54COMP	
Date/Time Collected:		5/4/05,0930	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	2100	5/4/05,1600
Anions			
Sulfate	mg/L	1180	5/3/05,1531
Chloride	mg/L	52.0	5/3/05,1515

Lab Number:		K505065	
Sample ID:		Cove Creek	
Field Number:		CC540700	
Date/Time Collected:		5/4/05,0700	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	730	5/4/05,1600
Anions			
Sulfate	mg/L	427	5/3/05,1602
Chloride	mg/L	19.7	5/3/05,1546

7/17/2012

EEMA O & M Services Group
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 5/4/05

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	1.78	NA	102	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.534	93.8	93.6	EPA 300.0
Chloride	< 0.5	7.76	90.7	95.4	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Trip Tennison

Anions analyzed by: _____
Tracy Bounds, Joel Ledbetter

7/17/2012

EEMA O & M Services Group
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 6/8/05

ANALYTICAL RESULTS

Lab Number:		K506195		Date/Time Analyzed
Sample ID:		Facility Discharge		
Field Number:		FD68COMP		
Date/Time Collected:		6/8/05,0930		
Wet Chemistry				
TDS	mg/L	2100		6/10/05,1600
Anions				
Sulfate	mg/L	1210		6/9/05,1627
Chloride	mg/L	59.5		6/9/05,1612

Lab Number:		K506196		Date/Time Analyzed
Sample ID:		Cove Creek		
Field Number:		CC680700		
Date/Time Collected:		6/8/05,0700		
Wet Chemistry				
TDS	mg/L	250		6/10/05,1600
Anions				
Sulfate	mg/L	152		6/9/05,1658
Chloride	mg/L	6.45		6/9/05,1643

7/17/2012

EEMA O & M Services Group
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 6/8/05

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	1.28	NA	103	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	1.46	95.1	103	EPA 300.0
Chloride	< 0.5	0.391	97.8	102	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Trip Tennison

Anions analyzed by: _____
Joel Ledbetter

7/17/2012

EEMA O & M Services Group
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 7/19/05

ANALYTICAL RESULTS

Lab Number:		K507514	
Sample ID:		Facility Discharge	
Field Number:		FD719COMP	
Date/Time Collected:		7/19/05,0930	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	2100	7/25/05,0800
Anions			
Sulfate	mg/L	1070	7/28/05,2232
Chloride	mg/L	48.1	7/28/05,2217

Lab Number:		K507515	
Sample ID:		Cove Creek	
Field Number:		CC7190700	
Date/Time Collected:		7/19/05,0700	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	590	7/25/05,0800
Anions			
Sulfate	mg/L	334	7/28/05,2201
Chloride	mg/L	11.4	7/28/05,2131

7/17/2012

EEMA O & M Services Group
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 7/19/05

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	1.05	NA	83.5	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	1.11	90.0	95.6	EPA 300.0
Chloride	< 0.5	0.440	98.4	91.0	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Trip Tennison

Anions analyzed by: _____
Tracy Bounds, Joel Ledbetter

7/17/2012

EEMA O & M Services Group
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 8/16/05

ANALYTICAL RESULTS

Lab Number:		K508657		Date/Time Analyzed
Sample ID:		Facility Discharge		
Field Number:		FD816COMP		
Date/Time Collected:		8/16/05,0930		
Wet Chemistry				
TDS	mg/L	2200		8/16/05,1100
Anions				
Sulfate	mg/L	1330		8/18/05,1033
Chloride	mg/L	59.7		8/18/05,1013

Lab Number:		K508658		Date/Time Analyzed
Sample ID:		Cove Creek		
Field Number:		CC8160700		
Date/Time Collected:		8/16/05,0700		
Wet Chemistry				
TDS	mg/L	650		8/16/05,1100
Anions				
Sulfate	mg/L	366		8/18/05,1113
Chloride	mg/L	17.5		8/18/05,1053

7/17/2012

EEMA O & M Services Group
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 8/16/05

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	3.19	NA	99.8	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	2.56	107	100	EPA 300.0
Chloride	< 0.5	0.781	102	105	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Trip Tennison

Anions analyzed by: _____
Tracy Bounds, Joel Ledbetter

7/17/2012

EEMA O & M Services Group
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 10/11/05

ANALYTICAL RESULTS

Lab Number:		K510351	
Sample ID:		Facility Discharge	
Field Number:		FD1011Comp	
Date/Time Collected:		10/11/05,0930	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	2200	10/17/05,1645
Anions			
Sulfate	mg/L	1360	10/11/05,1438
Chloride	mg/L	58.7	10/11/05,1420

Lab Number:		K510352	
Sample ID:		Cove Creek	
Field Number:		CC10110600	
Date/Time Collected:		10/11/05,0600	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	230	10/17/05,1645
Anions			
Sulfate	mg/L	100	10/11/05,1402
Chloride	mg/L	5.19	10/11/05,1344

7/17/2012

EEMA O & M Services Group
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 10/11/05

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	6.33	NA	95.6	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.382	98.4	96.5	EPA 300.0
Chloride	< 0.5	0.324	103	96.6	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Teresa Thomas

Anions analyzed by: _____
Tracy Bounds, Joel Ledbetter

7/17/2012

EEMA O & M Services Group
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 12/13/05

ANALYTICAL RESULTS

Lab Number:		K512328	
Sample ID:		Facility Discharge	
Field Number:		FD1213Comp	
Date/Time Collected:		12/13/05,0930	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	2100	12/14/05,1615
Anions			
Sulfate	mg/L	1360	12/16/05,1240
Chloride	mg/L	50.6	12/16/05,1240

Lab Number:		K512329	
Sample ID:		Cove Creek	
Field Number:		CC12130630	
Date/Time Collected:		12/13/05,0630	Date/Time Analyzed
Wet Chemistry			
TDS	mg/L	750	12/14/05,1615
Anions			
Sulfate	mg/L	473	12/16/05,1258
Chloride	mg/L	18.0	12/16/05,1258

7/17/2012

EEMA O & M Services Group
Macgobar Mine Site
2000 Darby Lane
Malvern, AR 72104
Attn: Darrel Scott

Description: Two water samples received 12/13/05

QUALITY CONTROL RESULTS

	Blank	Percent Variance Duplicates	Percent Recovery Matrix Spike	Percent Recovery Control Spike	Method of Analysis
Wet Chemistry	mg/L				
TDS	< 1.0	2.28	NA	98.8	EPA 160.1
Anions	mg/L				
Sulfate	< 0.5	0.125	100	98.1	EPA 300.0
Chloride	< 0.5	0.039	102	101	EPA 300.0

NA means not analyzed.

Methods are from EPA 600/4-79-020, Revised March, 1983.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

TDS analyzed by: _____
Teresa Thomas

Anions analyzed by: _____
Tracy Bounds, Joel Ledbetter



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

07 December 2007

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site
SDG Number: 0712047

Enclosed are the results of analyses for samples received by the laboratory on
05-Dec-07 15:45. If you have any questions concerning this report, please feel free to
contact me.

Sincerely,

A handwritten signature in blue ink that reads "Norma James". The signature is written in a cursive style with a horizontal line underneath.

Norma James
President

07 December 2007

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 05-Dec-07 15:45

ANALYTICAL RESULTS

Lab Number:		0712047-01				
Sample Name:		FD Comp; Facility Discharge				
Date/Time Collected:		12/5/07 7:28				
Sample Matrix:		Water				
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>	
Chloride	mg/L	60.7	12/5/07 16:27	A712040	300.0/9056	
Sulfate as SO4	mg/L	1330	12/5/07 16:48	A712040	300.0/9056	
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>	
TDS	mg/L	2100	12/6/07 8:30	A712035	2540 C	

ANALYTICAL RESULTS

Lab Number:		0712047-02				
Sample Name:		CC; Cove Creek				
Date/Time Collected:		12/5/07 10:25				
Sample Matrix:		Water				
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>	
Chloride	mg/L	2.53	12/5/07 17:09	A712040	300.0/9056	
Sulfate as SO4	mg/L	17.5	12/5/07 17:30	A712040	300.0/9056	
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>	
TDS	mg/L	91	12/6/07 8:30	A712035	2540 C	

QUALITY CONTROL RESULTS

Wet Chemistry

Batch: A712035 (Water); Prepared: 05-Dec-07 09:39

	<u>Blank</u>	<u>LCS</u>	<u>LCSD/RPD</u>
TDS	< 1.0 mg/L	108 %	103 % / 4.74

Anions

Batch: A712040 (Water); Prepared: 05-Dec-07 11:00

	<u>Blank</u>	<u>LCS</u>	<u>MS</u>	<u>MSD/RPD</u>
Chloride	< 0.500 mg/L	95.6 %	94.0 %	93.0 % / 1.06
Sulfate as SO4	< 0.500 mg/L	97.5 %	94.2 %	95.2 % / 1.01

07 December 2007

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 05-Dec-07 15:45

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink that reads "Norma James". The signature is written in a cursive, flowing style.

Reviewed by: _____

Norma James
President

07 December 2007

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 05-Dec-07 15:45

CHAIN OF CUSTODY FORM(S)



11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION				Project Description		Turnaround Time		Preservation Codes:			
EEMA O & M Services Group		EEMA O & M Services Group		Magcobar Mine Site		24 Hour		1. Cool, 4 Degrees Centigrade		4. Thimble for Ducthermination	
Magcobar Mine Site		P.O. Box 699		Reporting Information		48 Hour		2. Sulfuric Acid (H ₂ SO ₄), pH < 2		5. Hydrochloric Acid(HCl)	
2000 Darry Lane		Malvern, AR 72104		Telephone: 501-487-4335		72 Hour		3. Nitric Acid (HNO ₃), pH < 2		6. Sodium Hydroxide (NaOH), pH > 12	
Malvern, AR 72104		FAX: 501-487-4867		Bill to P.O. #:		Routine (5 Day)		TEST PARAMETERS			
Attn: BILL MCALLISTER		Bill to P.O. #:		Preservative Code		Bottle Type		Base Type Code			
Sampler(s) Signature <i>Bill McAlister</i>		Sampler(s) Printed <i>Bill McAlister</i>		SAMPLE		TDS, Cl, SO ₄		Arkansas Analytical Work Order Number: 0712047-			
Field Number	SAMPLE COLLECTION Date/Time	Qus Comp	Number of Sample Bottles Mark	IDENTIFICATION/ DESCRIPTION							
FD Comp	12/5/2007 7:28	X	1	W	Composite Facility Discharge	X		01			
CC	12/5/2007 10:25 AM	X	1	W	Cove Creek	X		02			
1. Relinquished by: (Signature) <i>Bill McAlister</i>		Date/Time 12-5-07 15:45		2. Received by: (Signature) <i>Sidney Adams</i>		SAMPLE CONDITION UPON RECEIPT IN LAB		REMARKS / SAMPLE COMMENTS			
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature)		1. CUSTODY SEALS: Yes ___ No ___					
						2. CONTAINERS CORRECT: Yes ___ No ___					
						3. COC LABELS AGREE: Yes ___ No ___					
						4. PRESERVATION CONFIRMED: Yes ___ No ___					
						5. RECEIVED ON ICE: Yes ___ No ___					
						6. TEMPERATURE ON RECEIPT: Yes ___ No ___					
						FOR COMPLETION BY LAB ONLY					



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

24 February 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site
SDG Number: 0902204

Enclosed are the results of analyses for samples received by the laboratory on 19-Feb-09 14:57. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President

24 February 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 19-Feb-09 14:57

ANALYTICAL RESULTS

Lab Number:		0902204-01			
Sample Name:		Facility Discharge 1 & 2 (Comp)			
Date/Time Collected:		2/19/09 12:10			
Sample Matrix:		Water			
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	49.8	2/23/09 11:38	A902216	300.0/9056
Sulfate as SO4	mg/L	1190	2/23/09 12:00	A902216	300.0/9056
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1900	2/20/09 11:45	A902191	2540C

ANALYTICAL RESULTS

Lab Number:		0902204-02			
Sample Name:		Cove Creek (Grab)			
Date/Time Collected:		2/19/09 8:30			
Sample Matrix:		Water			
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	7.23	2/23/09 12:22	A902216	300.0/9056
Sulfate as SO4	mg/L	147	2/23/09 12:44	A902216	300.0/9056
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	230	2/20/09 11:45	A902191	2540C

QUALITY CONTROL RESULTS

Wet Chemistry -- Batch: A902191 (Water)

Prepared: 19-Feb-09 12:52 By: AP -- Analyzed: 20-Feb-09 10:59 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	97.0% / 99.5%	NA / NA		2.54%	

Anions -- Batch: A902216 (Water)

Prepared: 23-Feb-09 10:22 By: MG -- Analyzed: 23-Feb-09 16:05 By: MELIS

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	95.9% / NA	94.2% / 96.3%		2.10%	
Sulfate as SO4	<0.500 mg/L	93.6% / NA	95.1% / 96.2%		1.03%	

24 February 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 19-Feb-09 14:57

All Analysis performed according to EPA approved methodology when available:

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by:

Norma James
President

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



CHAIN OF CUSTODY FORM(S)

[illegible]

Arkansas Analytical
Inc.

11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

22 April 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site
SDG Number: 0904155

Enclosed are the results of analyses for samples received by the laboratory on 15-Apr-09 14:46. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President

This document is intended only for the use of the person(s) to whom it is expressly addressed. This document may contain information that is confidential and legally privileged. If you are not the intended recipient, you are notified that any disclosure, distribution, or copying of this document is strictly prohibited. If you have received this document in error, please destroy.

22 April 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 15-Apr-09 14:46

ANALYTICAL RESULTS

Lab Number:		0904155-01			
Sample Name:		Facility Discharge 1 & 2 (Comp)			
Date/Time Collected:		4/15/09 11:42			
Sample Matrix:		Water			
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	47.6	4/20/09 16:42	A904180	300.0/9056
Sulfate as SO4	mg/L	1090	4/20/09 17:04	A904180	300.0/9056
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1900	4/20/09 15:20	A904181	2540C

ANALYTICAL RESULTS

Lab Number:		0904155-02			
Sample Name:		Cove Creek (Grab)			
Date/Time Collected:		4/15/09 11:00			
Sample Matrix:		Water			
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	2.63	4/20/09 17:26	A904180	300.0/9056
Sulfate as SO4	mg/L	42.0	4/20/09 17:48	A904180	300.0/9056
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	100	4/20/09 15:20	A904181	2540C

QUALITY CONTROL RESULTS

Anions -- Batch: A904180 (Water)

Prepared: 20-Apr-09 10:00 By: MG -- Analyzed: 20-Apr-09 20:04 By: MEL

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	92.0% / NA	93.6% / 93.1%		0.499%	
Sulfate as SO4	<0.500 mg/L	98.8% / NA	103% / 101%		2.02%	

Wet Chemistry -- Batch: A904181 (Water)

Prepared: 20-Apr-09 15:20 By: AP -- Analyzed: 20-Apr-09 15:20 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	96.0% / 96.0%	NA / NA		0.00%	

22 April 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 15-Apr-09 14:46

All Analysis performed according to EPA approved methodology when available:

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by:

Norma James
President

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 15-Apr-09 14:46

CHAIN OF CUSTODY FORM(S)

[illegible]



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

11 June 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site
SDG Number: 0906060

Enclosed are the results of analyses for samples received by the laboratory on 04-Jun-09 13:44. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Intact	✓
COC/Labels Agree	✓
Preservation Confirmed	✓
Received On Ice	✓
Temperature on Receipt	4.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President

11 June 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 04-Jun-09 13:44

ANALYTICAL RESULTS

Lab Number:		0906060-01			
Sample Name:		Facility Discharge 1 & 2 (Comp)			
Date/Time Collected:		6/4/09 10:10			
Sample Matrix:		Water			
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	40.3	6/5/09 11:36	A906075	300.0/9056
Sulfate as SO4	mg/L	1010	6/5/09 11:59	A906075	300.0/9056
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1700	6/9/09 15:49	A906129	2540C

ANALYTICAL RESULTS

Lab Number:		0906060-02			
Sample Name:		Cove Creek (Grab)			
Date/Time Collected:		6/4/09 11:05			
Sample Matrix:		Water			
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	8.87	6/5/09 12:21	A906075	300.0/9056
Sulfate as SO4	mg/L	242	6/5/09 12:44	A906075	300.0/9056
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	370	6/9/09 15:49	A906129	2540C

QUALITY CONTROL RESULTS

Anions -- Batch: A906075 (Water)

Prepared: 05-Jun-09 10:00 By: MG -- Analyzed: 05-Jun-09 16:07 By: MEL

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	97.7% / NA	94.4% / 95.8%		1.50%	
Sulfate as SO4	<0.500 mg/L	97.9% / NA	96.0% / 97.4%		1.27%	

Wet Chemistry -- Batch: A906129 (Water)

Prepared: 09-Jun-09 15:49 By: AP -- Analyzed: 09-Jun-09 15:49 By: SB

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	92.0% / 93.0%	NA / NA		1.08%	

11 June 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 04-Jun-09 13:44

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by:

Norma James
President

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



CHAIN OF CUSTODY FORM(S)

[illegible]

Arkansas Analytical
Inc.

11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

22 October 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site
SDG Number: 0910232

Enclosed are the results of analyses for samples received by the laboratory on 15-Oct-09 13:27. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Intact	✓
COC/Labels Agree	✓
Preservation Confirmed	✓
Received On Ice	✓
Temperature on Receipt	4.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President

22 October 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 15-Oct-09 13:27

ANALYTICAL RESULTS

Lab Number:		0910232-01			
Sample Name:		Facility Discharge 1 & 2 (Comp)			
Date/Time Collected:		10/15/09 11:15			
Sample Matrix:		Water			
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	39.2	10/19/09 16:43	A910268	300.0/9056A
Sulfate as SO4	mg/L	938	10/19/09 17:05	A910268	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1700	10/20/09 21:29	A910291	2540C

ANALYTICAL RESULTS

Lab Number:		0910232-02			
Sample Name:		Cove Creek (Grab)			
Date/Time Collected:		10/15/09 9:24			
Sample Matrix:		Water			
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	1.76	10/19/09 17:28	A910268	300.0/9056A
Sulfate as SO4	mg/L	25.8	10/19/09 17:50	A910268	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	89	10/20/09 21:29	A910291	2540C

QUALITY CONTROL RESULTS

Anions -- Batch: A910268 (Water)

Prepared: 19-Oct-09 13:47 By: MG -- Analyzed: 20-Oct-09 14:09 By: MG

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	97.0% / NA	85.3% / 85.4%		0.0938%	
Sulfate as SO4	<0.500 mg/L	105% / NA	102% / 103%		0.901%	

Wet Chemistry -- Batch: A910291 (Water)

Prepared: 20-Oct-09 21:29 By: AP -- Analyzed: 20-Oct-09 21:29 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	110% / 110%	NA / NA		0.00%	

22 October 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 15-Oct-09 13:27

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by:

Norma James
President

22 October 2009

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 15-Oct-09 13:27

CHAIN OF CUSTODY FORM(S)



11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:			
EEMA O & M Services Group	EEMA O & M Services Group	P.O. Box 732	Magcobar Mine Site	Weekly Water Samples	48 Hour	1. Cool & Dryers Centrifuge	4. Thawed for Bioassay				
Magcobar Mine Site		Kulpsville, PA 19443	Reporting Information	Telephone: 501-457-8195	72 Hour	2. Sulfuric Acid (H ₂ SO ₄), pH < 2	5. Hydrochloric Acid (HCl)				
P.O. Box 699				Fax: 501-457-8197		3. Nitric Acid (HNO ₃), pH < 2	6. Sodium Hydroxide (NaOH), pH > 12				
Malvern, AR 72104						TEST PARAMETERS					
Attn: Bill McAlister	Attn: Amber Rich					Back Type Code					
Signature: <i>Bill McAlister</i>		Signature: <i>Bill McAlister</i>		Date: 10-15-09		Bottle Type					
Field Number	SAMPLE COLLECTION	Grab	Composite	Number of Samples	IDENTIFICATION/ DESCRIPTION	TDS, Cl, SO ₄					
FD-1	10/14/2009			3:52 PM						01	
FD-2	10/15/2009			11:15 AM	X	1	W	Facility Discharge 1 & 2 (Comp)		02	
CC	10/15/2009			9:24 AM	X	1	W	Cove Creek (Grab)			
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB		REMARKS / SAMPLE COMMENTS			
<i>Bill McAlister</i>		10-15-09		<i>Amber Rich</i>		1. CUSTODY SEALS: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<i>Bill McAlister</i>		10-15-09		<i>Amber Rich</i>		2. CONTAINERS CORRECT: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<i>Bill McAlister</i>		10-15-09		<i>Amber Rich</i>		3. COOL LABELS AGREE: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<i>Bill McAlister</i>		10-15-09		<i>Amber Rich</i>		4. PRESERVATION CONFIRMED: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<i>Bill McAlister</i>		10-15-09		<i>Amber Rich</i>		5. RECEIVED ON ICE: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<i>Bill McAlister</i>		10-15-09		<i>Amber Rich</i>		6. TEMPERATURE ON RECEIPT: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
<i>Bill McAlister</i>		10-15-09		<i>Amber Rich</i>		FOR COMPLETION BY LAB ONLY					



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

22 April 2010

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site

SDG Number: 1004183

Enclosed are the results of analyses for samples received by the laboratory on 15-Apr-10 15:21. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Intact	✓
COC/Labels Agree	✓
Preservation Confirmed	✓
Received On Ice	✓
Temperature on Receipt	4.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President

22 April 2010

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 15-Apr-10 15:21

ANALYTICAL RESULTS

Lab Number: 1004183-01
Sample Name: Facility Discharge 1&2 (Comp)
Date/Time Collected: 4/15/10 11:34
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	35.1		4/20/10 14:36	A004213	300.0/9056A
Sulfate as SO4	mg/L	841		4/20/10 14:58	A004213	300.0/9056A

<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1800		4/16/10 12:00	A004170	2540C

ANALYTICAL RESULTS

Lab Number: 1004183-02
Sample Name: Cove Creek (Grab)
Date/Time Collected: 4/15/10 11:00
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	5.21		4/20/10 15:20	A004213	300.0/9056A
Sulfate as SO4	mg/L	92.5		4/20/10 15:43	A004213	300.0/9056A

<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	220		4/16/10 12:00	A004170	2540C

QUALITY CONTROL RESULTS

Wet Chemistry -- Batch: A004170 (Water)
Prepared: 16-Apr-10 12:00 By: AP -- Analyzed: 16-Apr-10 12:00 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	114% / 100%	NA / NA		13.5%	

Anions -- Batch: A004213 (Water)
Prepared: 20-Apr-10 12:42 By: MG -- Analyzed: 21-Apr-10 11:11 By: MEL

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	98.4% / NA	92.7% / 91.9%		0.921%	
Sulfate as SO4	<0.500 mg/L	101% / NA	93.7% / 93.4%		0.308%	

22 April 2010

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 15-Apr-10 15:21

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by:

Norma James
President

22 April 2010

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site



Date Received: 15-Apr-10 15:21

CHAIN OF CUSTODY FORM(S)



11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:			
EEMA O & M Services Group	EEMA O & M Services Group	Magcobar Mine Site	Weekly Water Samples	24 Hour	1. Cool & Degree Centigrade	4. Thimble for Decontamination					
Magcobar Mine Site	P.O. Box 732	Reporting Information	48 Hour	2. Sulfuric Acid (H ₂ SO ₄) pH < 2	5. Hydrochloric Acid (HCl)						
P.O. Box 699	Kulpville, PA 19443	Telephone: 501-467-4365	72 Hour	3. Nitric Acid (HNO ₃) pH < 2	6. Sodium Hydroxide (NaOH) pH > 12						
Malvern, AR 72104	Attn: Amber Rich	Fax: 501-467-4687	Routine (5 Day)								
Attn: Bill McAlister	Attn: Amber Rich	Fax: 501-467-4687	Preservative Code								
		Bottle Type	P								
Samples(s) Signature: <i>Bill McAlister</i> Samples(s) Printed: <i>Bill McAlister</i>		SAMPLE COLLECTION		SAMPLE IDENTIFICATION/DESCRIPTION		TDS, Cl, SO ₄		Arkansas Analytical Work Order Number: <i>1004183</i>			
Field Number	Date	Time	Grab	Comp	Batch	Sample					
FD-1	4/14/2010	1:42 PM				W	Facility Discharge 1 & 2 (Comp)	X			-01
FD-2	4/15/2010	11:34 AM				W	Cove Creek (Grab)	X			-02
CC	4/15/2010	11:00 AM	X			W					
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB		REMARKS / SAMPLE COMMENTS			
<i>Bill McAlister</i>		4-15-10 1521				1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 2. CONTAINERS CORRECT: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 3. COCLABELS AGREE: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 4. PRESERVATION CONFIRMED: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 5. RECEIVED ON ICE: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 6. TEMPERATURE ON RECEIPT: <i>40°C</i>					
3. Relinquished by: (Signature)		Date/Time		4. Received by: (Signature)		FOR COMPLETION BY LAB ONLY					
				<i>Sydney Davis</i>							



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

21 June 2010

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site
SDG Number: 1006222

Enclosed are the results of analyses for samples received by the laboratory on 17-Jun-10 14:00. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Intact	✓
COC/Labels Agree	✓
Preservation Confirmed	✓
Received On Ice	✓
Temperature on Receipt	5.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President

21 June 2010



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site

Date Received: 17-Jun-10 14:00

ANALYTICAL RESULTS

Lab Number: 1006222-01
Sample Name: Facility Discharge 1&2 (Comp)
Date/Time Collected: 6/17/10 12:12
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	39.1		6/18/10 10:03	A006212	300.0/9056A
Sulfate as SO4	mg/L	899		6/18/10 10:25	A006212	300.0/9056A

<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1800		6/18/10 16:46	A006225	2540C

ANALYTICAL RESULTS

Lab Number: 1006222-02
Sample Name: Cove Creek (Grab)
Date/Time Collected: 6/17/10 10:35
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	7.31		6/18/10 10:48	A006212	300.0/9056A
Sulfate as SO4	mg/L	132		6/18/10 11:10	A006212	300.0/9056A

<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	320		6/18/10 16:46	A006225	2540C

QUALITY CONTROL RESULTS

Anions -- Batch: A006212 (Water)
Prepared: 17-Jun-10 09:30 By: MG -- Analyzed: 17-Jun-10 11:45 By: MELIS

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	90.2% / NA	86.8% / 85.2%		1.82%	
Sulfate as SO4	<0.500 mg/L	94.3% / NA	90.3% / 88.2%		2.32%	

Wet Chemistry -- Batch: A006225 (Water)
Prepared: 17-Jun-10 16:49 By: AP -- Analyzed: 17-Jun-10 16:49 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	108% / 106%	NA / NA		0.935%	

21 June 2010



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site

Date Received: 17-Jun-10 14:00

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by:

Norma James
President



Arkansas Analytical
Inc.

CHAIN OF CUSTODY FORM(S)

11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

[illegible]



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

19 January 2011

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site; Weekly Water Samples

SDG Number: 1101097

Enclosed are the results of analyses for samples received by the laboratory on 13-Jan-11 14:41. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Intact	✓
COC/Labels Agree	✓
Preservation Confirmed	✓
Received On Ice	✓
Temperature on Receipt	4.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President

19 January 2011



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 13-Jan-11 14:41

ANALYTICAL RESULTS

Lab Number: 1101097-01
Sample Name: Facility Discharge 1&2 (Comp)
Date/Time Collected: 1/13/11 10:50
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	43.9		1/18/11 18:21	A101148	300.0/9056A
Sulfate as SO4	mg/L	1130		1/18/11 18:46	A101148	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1900		1/17/11 13:46	A101117	2540C

ANALYTICAL RESULTS

Lab Number: 1101097-02
Sample Name: Cove Creek (Grab)
Date/Time Collected: 1/13/11 8:55
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	4.31		1/18/11 19:10	A101148	300.0/9056A
Sulfate as SO4	mg/L	53.1		1/18/11 19:34	A101148	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	130		1/17/11 13:46	A101117	2540C

QUALITY CONTROL RESULTS

Wet Chemistry -- Batch: A101117 (Water)

Prepared: 17-Jan-11 13:46 By: AP -- Analyzed: 17-Jan-11 13:46 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	93.5% / 90.5%	NA / NA		3.26%	

Anions -- Batch: A101148 (Water)

Prepared: 19-Jan-11 08:08 By: MG -- Analyzed: 19-Jan-11 11:32 By: MEL

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	92.6% / NA	97.6% / 97.2%		0.178%	
Sulfate as SO4	<0.500 mg/L	90.8% / NA	103% / 103%		0.129%	

19 January 2011



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 13-Jan-11 14:41

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by: _____

Norma James
President

19 January 2011

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples



Date Received: 13-Jan-11 14:41

CHAIN OF CUSTODY FORM(S)



11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time	Preservation Codes:	
EEMA O & M Services Group	EEMA O & M Services Group	Magcobar Mine Site	Weekly Water Samples	48 Hour	1. Cool & Dry Ice Contingency	4. Thaw/Freeze for Determination		
Magcobar Mine Site	P.O. Box 732	Kidpsville, PA 19443	Reporting Information	72 Hour	2. Sulfuric Acid (H ₂ SO ₄), pH < 2	5. Hydrobromic Acid (HBr)		
P.O. Box 699			Telephone: 501-457-4335		3. Nitric Acid (HNO ₃), pH < 2	6. Sodium Hydroxide (NaOH), pH > 12		
Malvern, AR 72104			Fax: 501-487-8887		TEST PARAMETERS			
Attn: Bill McAlister	Attn: Amber Rich		For: 501-487-8887		Base Type Code			
Sampler(s) Signature: <i>Bill McAlister</i>				Sampler(s) Printed: <i>Bill McAlister</i>				
Field Number	SAMPLE COLLECTION Date	Time	Grp	Comp	Number of Sample Matrix	IDENTIFICATION/ DESCRIPTION	TDS, Cl, SO ₄	
FD-2	1/12/2011	1:45 PM						
FD-1	1/13/2011	10:50 AM		X	1	Facility Discharge 1 & 2 (Comp)	X	
CC	1/13/2011	8:55 AM		X	1	Cove Creek (Grab)	X	
1. Relinquished by: (Signature) <i>Bill McAlister</i> Date/Time: <i>1-13-11</i>								
2. Received by: (Signature) <i>Amber Rich</i> Date/Time: <i>1-13-11</i>								
3. Relinquished by: (Signature) <i>Amber Rich</i> Date/Time: <i>1-13-11</i>								
4. Received by: (Signature) <i>Amber Rich</i> Date/Time: <i>1-13-11</i>								
5. RECEIVED ON ICE: <i>4°C</i>								
6. TEMPERATURE ON RECEIPT: <i>4°C</i>								
FOR COMPLETION BY LAB ONLY								
SAMPLE CONDITION UPON RECEIPT IN LAB								
1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
2. CONTAINERS CORRECT: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
3. COC/LABELS AGREE: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
4. PRESERVATION CONFIRMED: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								
REMARKS / SAMPLE COMMENTS								



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

21 February 2011

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site; Weekly Water Samples
SDG Number: 1102150

Enclosed are the results of analyses for samples received by the laboratory on 15-Feb-11 12:26. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Intact	✓
COC/Labels Agree	✓
Preservation Confirmed	✓
Received On Ice	✓
Temperature on Receipt	4.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President

21 February 2011



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 15-Feb-11 12:26

ANALYTICAL RESULTS

Lab Number: 1102150-01
Sample Name: Facility Discharge 1 & 2 (Comp)
Date/Time Collected: 2/15/11 11:45
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	53.4		2/16/11 12:13	A102163	300.0/9056A
Sulfate as SO4	mg/L	1120		2/16/11 12:37	A102163	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1900		2/17/11 11:15	A102203	2540C

ANALYTICAL RESULTS

Lab Number: 1102150-02
Sample Name: Cove Creek (Grab)
Date/Time Collected: 2/15/11 10:12
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	5.76		2/16/11 13:02	A102163	300.0/9056A
Sulfate as SO4	mg/L	92.7		2/16/11 13:26	A102163	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	180		2/17/11 11:15	A102203	2540C

QUALITY CONTROL RESULTS

Anions -- Batch: A102163 (Water)

Prepared: 16-Feb-11 10:15 By: MG -- Analyzed: 16-Feb-11 17:51 By: MEL

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	96.1% / NA	90.7% / 91.5%		0.346%	
Sulfate as SO4	<0.500 mg/L	91.6% / NA	91.4% / 89.2%		1.18%	%D1

Wet Chemistry -- Batch: A102203 (Water)

Prepared: 17-Feb-11 11:15 By: AP -- Analyzed: 17-Feb-11 11:15 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	96.5% / 95.5%	NA / NA		1.04%	

QUALIFIER(S)

*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria

21 February 2011



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 15-Feb-11 12:26

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by:

Norma James
President

21 February 2011

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples



Date Received: 15-Feb-11 12:26

CHAIN OF CUSTODY FORM(S)



11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:							
EEMA O & M Services Group		EEMA O & M Services Group		Magcobar Mine Site		24 Hour		1. Cool & 4 Degrees Centigrade							
Magcobar Mine Site		P.O. Box 732		Weekly Water Samples		48 Hour		2. Sulfuric Acid (H ₂ SO ₄), pH < 2							
P.O. Box 699		Kulpsville, PA 19443		Reporting Information		72 Hour		3. Nitric Acid (HNO ₃), pH < 2							
Malvern, AR 72104				Telephone: 501-461-4355		Routine (5 Day)		4. Thiosulfate for Dechlorination							
Attn: Bill McAlister		Attn: Amber Rich		Fax: 501-461-4357		Preservative Code		5. Hydrochloric Acid (HCl)							
				Email: amrich@eema.com		Bottle Type		6. Sodium Hydroxide (NaOH), pH > 12							
						1		TEST PARAMETERS							
						P		O - Ours, F - Future							
								V - Separate, N - Nether							
Samplers' Signature		Samplers' Printed		SAMPLE		TDS, Cl, SO ₄		Arkansas Analytical Work Order Number: 1102450							
Field Number	SAMPLE COLLECTION	Date	Time	One	Number of Sample	Sample of Bottle	Ways	IDENTIFICATION DESCRIPTION							
FD-1	2/14/2011	2:00 PM													
FD-2	2/15/2011	11:45 AM		X	1	W		Facility Discharge 1 & 2 (Comp)	X	01					
CC	2/15/2011	10:12 AM		X	1	W		Cove Creek (Grab)	X	02					
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)				SAMPLE CONDITION UPON RECEIPT IN LAB		REMARKS / SAMPLE COMMENTS					
Bill McAlister		2-15-11						1. CUSTODY SEALS: Yes ___ No ___							
								2. CONTAINERS CORRECT: Yes ___ No ___							
								3. COC LABELS AGREE: Yes ___ No ___							
								4. PRESERVATION CONFIRMED: Yes ___ No ___							
								5. RECEIVED ON ICE: Yes ___ No ___							
								6. TEMPERATURE ON RECEIPT: 4°C							
3. Relinquished by: (Signature)		Date/Time		4. Received by: (Signature)				FOR COMPLETION BY LAB ONLY							
		1228		Amber Rich											



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

26 April 2011

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site; Weekly Water Samples
SDG Number: 1104155

Enclosed are the results of analyses for samples received by the laboratory on 14-Apr-11 13:51. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Correct	✓
COC/Labels Agree	✓
Preservation Confirmed	✓
Received On Ice	✓
Temperature on Receipt	3.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President

26 April 2011



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 14-Apr-11 13:51

ANALYTICAL RESULTS

Lab Number: 1104155-01
Sample Name: Facility Discharge 2 & 1 (Comp)
Date/Time Collected: 4/14/11 10:30
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	42.7		4/21/11 11:07	A104252	300.0/9056A
Sulfate as SO4	mg/L	936		4/21/11 11:30	A104252	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1900		4/18/11 16:15	A104250	2540C

ANALYTICAL RESULTS

Lab Number: 1104155-02
Sample Name: Cove Creek (Grab)
Date/Time Collected: 4/14/11 11:00
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	8.96	E20	4/21/11 11:52	A104252	300.0/9056A
Sulfate as SO4	mg/L	170		4/21/11 12:15	A104252	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	340		4/18/11 16:15	A104250	2540C

QUALITY CONTROL RESULTS

Wet Chemistry -- Batch: A104250 (Water)

Prepared: 18-Apr-11 16:15 By: AP -- Analyzed: 18-Apr-11 16:15 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	102% / 95.0%	NA / NA		7.11%	

Anions -- Batch: A104252 (Water)

Prepared: 21-Apr-11 08:09 By: MG -- Analyzed: 21-Apr-11 14:30 By: MG

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	90.0% / NA	87.4% / 87.8%		0.303%	%D1
Sulfate as SO4	<0.500 mg/L	98.4% / NA	99.1% / 97.5%		0.483%	

QUALIFIER(S)

*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria

*E20: Estimated Result Due to Matrix Spike and/or Matrix Spike Duplicate Failure; This sample was used as "parent sample" in MS/MSD prep.

26 April 2011



Bill McAlister

EEMA O & M Services Group

P.O. Box 699

Malvern, AR 72104

Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 14-Apr-11 13:51

All Analysis performed according to EPA approved methodology when available:

SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.

Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by:

Norma James

President

26 April 2011

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples



Date Received: 14-Apr-11 13:51

CHAIN OF CUSTODY FORM(S)



11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:						
EEMA O & M Services Group		EEMA O & M Services Group		Maggobar Mine Site		24 Hour		1. Cool, 4 Degree Centigrade						
Maggobar Mine Site		P.O. Box 732		Weekly Water Samples		48 Hour		2. Sulfuric Acid (H ₂ SO ₄), pH < 2						
P.O. Box 699		Kulpsville, PA 19443		Reporting Information		72 Hour		3. Nitric Acid (HNO ₃), pH < 2						
Malvern, AR 72104		Attn: Amber Rich		Telephone: 501-467-4355		Rollup (5 Day)		4. Thiosulfate for Dechlorination						
Attn: Bill McAlister		Fax: 501-467-4687		Total Water Volume: 1000 L		Preservative Code		5. Hydrochloric Acid (HCl)						
						Bottle Type		6. Sodium Hydroxide (NaOH), pH > 12						
						1		TEST PARAMETERS						
						P		TDS, Cl, SO ₄						
Sample(s) Signature: <i>Bill McAlister</i>		Sample(s) Printed: <i>Bill McAlister</i>		SAMPLE IDENTIFICATION DESCRIPTION				Arkansas Analytical Work Order Number: 110445-						
Field Number	SAMPLE COLLECTION Date	Time	Lab	Comp	W	Sample Matrix								
FD-1	4/13/2011	1:30 PM												
FD-2	4/14/2011	10:30 AM		X	1	W	Facility Discharge 2 & 1 (Comp)	X	01					
CC	4/14/2011	11:30 AM		X	1	W	Cove Creek (Grab)	X	02					
1. Relinquished by: (Signature) <i>Bill McAlister</i>		Date/Time: 4-14-11 1351		2. Received by: (Signature)				SAMPLE CONDITION UPON RECEIPT IN LAB						
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature) <i>Sydney J. Davis</i>				1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
								2. CONTAINERS CORRECT: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
								3. COOL/HEAT AGREE: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
								4. PRESERVATION CONFIRMED: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
								5. RECEIVED ON ICE: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
								6. TEMPERATURE ON RECEIPT: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
								FOR COMPLETION BY LAB ONLY						
								REMARKS / SAMPLE COMMENTS						



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

23 June 2011

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site; Weekly Water Samples
SDG Number: 1106213

Enclosed are the results of analyses for samples received by the laboratory on 16-Jun-11 12:57. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Correct	✓
COC/Labels Agree	✓
Preservation Confirmed	✓
Received On Ice	✓
Temperature on Receipt	4.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President

23 June 2011



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 16-Jun-11 12:57

ANALYTICAL RESULTS

Lab Number: 1106213-01
Sample Name: Facility Discharge 1 & 2 (Comp)
Date/Time Collected: 6/16/11 11:05
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	45.7		6/22/11 10:10	A106255	300.0/9056A
Sulfate as SO4	mg/L	1200		6/22/11 10:32	A106255	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1800		6/21/11 10:30	A106238	2540C

ANALYTICAL RESULTS

Lab Number: 1106213-02
Sample Name: Cove Creek (Grab)
Date/Time Collected: 6/16/11 10:20
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	8.09		6/22/11 10:55	A106255	300.0/9056A
Sulfate as SO4	mg/L	190		6/22/11 11:18	A106255	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	340		6/21/11 10:30	A106238	2540C

QUALITY CONTROL RESULTS

Wet Chemistry -- Batch: A106238 (Water)

Prepared: 21-Jun-11 10:30 By: AP -- Analyzed: 21-Jun-11 10:30 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	97.0% / 96.5%	NA / NA		0.517%	

Anions -- Batch: A106255 (Water)

Prepared: 22-Jun-11 09:58 By: MG -- Analyzed: 22-Jun-11 12:48 By: MG

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	94.0% / NA	90.8% / 92.7%		1.92%	
Sulfate as SO4	<0.500 mg/L	95.8% / NA	92.4% / 93.1%		0.343%	

23 June 2011



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 16-Jun-11 12:57

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by:

Norma James
President



CHAIN OF CUSTODY FORM(S)

[illegible]

Arkansas Analytical
INC.

11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

12 December 2011

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site; Weekly Water Samples
SDG Number: 1112100

Enclosed are the results of analyses for samples received by the laboratory on 07-Dec-11 14:04. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Correct	✓
COC/Labels Agree	✓
Preservation Confirmed	✓
Received On Ice	✓
Temperature on Receipt	4.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President

12 December 2011



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 07-Dec-11 14:04

ANALYTICAL RESULTS

Lab Number: 1112100-01
Sample Name: Facility Discharge 1 & 2 (Comp)
Date/Time Collected: 12/7/11 11:05
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	38.1		12/7/11 16:43	A112071	300.0/9056A
Sulfate as SO4	mg/L	1050		12/7/11 16:43	A112071	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1600		12/8/11 10:25	A112113	2540C

ANALYTICAL RESULTS

Lab Number: 1112100-02
Sample Name: Cove Creek (Grab)
Date/Time Collected: 12/7/11 9:12
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	3.18		12/7/11 17:28	A112071	300.0/9056A
Sulfate as SO4	mg/L	54.4		12/7/11 17:51	A112071	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	88		12/8/11 10:25	A112113	2540C

QUALITY CONTROL RESULTS

Anions -- Batch: A112071 (Water)

Prepared: 07-Dec-11 10:40 By: MG -- Analyzed: 07-Dec-11 15:58 By: Mel

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	101% / NA	97.3% / 98.5%		0.662%	
Sulfate as SO4	<0.500 mg/L	108% / NA	119% / 120%		0.655%	%D1

Wet Chemistry -- Batch: A112113 (Water)

Prepared: 07-Dec-11 10:30 By: AP -- Analyzed: 07-Dec-11 10:30 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	95.5% / 94.0%	NA / NA		1.58%	

QUALIFIER(S)

*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria

12 December 2011



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 07-Dec-11 14:04

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by:

Norma James
President

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples



Arkansas Analytical
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FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

[illegible]



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

13 February 2012

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site; Weekly Water Samples
SDG Number: 1202080

Enclosed are the results of analyses for samples received by the laboratory on 08-Feb-12 15:07. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Correct	✓
COC/Labels Agree	✓
Preservation Confirmed	✓
Received On Ice	✓
Temperature on Receipt	4.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President

13 February 2012



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 08-Feb-12 15:07

ANALYTICAL RESULTS

Lab Number: 1202080-01
Sample Name: Facility Discharge 1 & 2 (Comp)
Date/Time Collected: 2/8/12 10:55
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	43.5		2/8/12 19:03	A202104	300.0/9056A
Sulfate as SO4	mg/L	874		2/8/12 19:29	A202104	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1800		2/8/12 17:15	A202105	2540C

ANALYTICAL RESULTS

Lab Number: 1202080-02
Sample Name: Cove Creek (Grab)
Date/Time Collected: 2/8/12 8:45
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	3.13		2/8/12 19:54	A202104	300.0/9056A
Sulfate as SO4	mg/L	44.4		2/8/12 20:20	A202104	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	120		2/8/12 17:15	A202105	2540C

QUALITY CONTROL RESULTS

Anions -- Batch: A202104 (Water)

Prepared: 08-Feb-12 16:50 By: MG -- Analyzed: 08-Feb-12 18:38 By: MG

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	94.4% / NA	90.6% / 90.4%		0.0931%	
Sulfate as SO4	<0.500 mg/L	109% / NA	107% / 108%		0.743%	

Wet Chemistry -- Batch: A202105 (Water)

Prepared: 07-Feb-12 17:30 By: AP -- Analyzed: 07-Feb-12 17:30 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	92.5% / 90.0%	NA / NA		2.74%	

13 February 2012



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 08-Feb-12 15:07

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by: _____

Norma James
President

13 February 2012

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples



Date Received: 08-Feb-12 15:07

CHAIN OF CUSTODY FORM(S)



11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time	Preservation Codes:	
EEMA O & M Services Group	EEMA O & M Services Group	Magcobar Mine Site	Weekly Water Samples	24 Hour	1. Cool 4 Degrees Centigrade	4. Thiosulfate for Dechlorination		
Magcobar Mine Site	P.O. Box 732	Weekly Water Samples	Reporting Information	48 Hour	2. Sulfuric Acid (H ₂ SO ₄), pH < 2	5. Hydrochloric Acid (HCl)		
P.O. Box 699	Kilpsville, PA 15443	Telephone: 501-487-4355	72 Hour	72 Hour	3. Nitric Acid (HNO ₃), pH < 2	6. Sodium Hydroxide (NaOH), pH > 12		
Malvern, AR 72104	Attn: Amber Rich	Fax: 501-487-4887	Preservative Code	1	TEST PARAMETERS			
Attn: Bill McAlister			Bottle Type	P	Beaker Type Code			
Sampler(s) Signature: <i>Bill McAlister</i>		Sampler(s) Printed: <i>Bill McAlister</i>		TDS, Cl, SO ₄		Arkansas Analytical Work Order Number: 1202080		
Field Number	SAMPLE COLLECTION Dates	Time(s)	Qute Comp Boxes	Number of Sample Matrix	IDENTIFICATION DESCRIPTION			
FD-2	2/7/2012	1:40 PM						
FD-1	2/8/2012	10:55 AM	X	1	Facility Discharge 1 & 2 (Comp)	X	D1	
CC	2/8/2012	8:45 AM	X	1	Cove Creek (Grab)	X	02	
1. Relinquished by: (Signature) <i>Bill McAlister</i>		Date/Time	2. Received by: (Signature) <i>Amber Rich</i>		SAMPLE CONDITION UPON RECEIPT IN LAB			
3. Relinquished by: (Signature)		Date/Time	4. Received by: (Signature)		REMARKS / SAMPLE COMMENTS			
1. CUSTODY SEALS: Yes ___ No ___		2. CONTAINERS CORRECT: Yes ___ No ___		3. COOLERS AGREE: Yes ___ No ___		4. PRESERVATION CONFIRMED: Yes ___ No ___		
5. RECEIVED ON ICE: Yes ___ No ___		6. TEMPERATURE ON RECEIPT: 4°C		FOR COMPLETION BY LAB ONLY				



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

19 April 2012

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site; Weekly Water Samples
SDG Number: 1204137

Enclosed are the results of analyses for samples received by the laboratory on 12-Apr-12 13:33. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Correct	✓
COC/Labels Agree	✓
Preservation Confirmed	✓
Received On Ice	✓
Temperature on Receipt	4.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President



19 April 2012

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 12-Apr-12 13:33

CASE NARRATIVE

SAMPLE DELIVERY GROUP - 1204137

Qualified Analytical and Quality Control Results Discussed Below:

Anions:

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Failure: Sulfate failed to recover within acceptance criteria in the MS/MSD sample. The recovery was qualified by "%D1" in the quality control section of the final report. Sulfate was qualified as "estimated" (E20) in the parent sample, 1204137-02 (Cove Creek).

19 April 2012

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples



Date Received: 12-Apr-12 13:33

ANALYTICAL RESULTS

Lab Number: 1204137-01
Sample Name: Facility Discharge 1 & 2 (Comp)
Date/Time Collected: 4/12/12 9:40
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	38.4		4/16/12 15:57	A204193	300.0/9056A
Sulfate as SO4	mg/L	953		4/16/12 16:23	A204193	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1800		4/17/12 15:35	A204215	2540C

ANALYTICAL RESULTS

Lab Number: 1204137-02
Sample Name: Cove Creek (Grab)
Date/Time Collected: 4/12/12 10:40
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	8.06		4/16/12 18:05	A204193	300.0/9056A
Sulfate as SO4	mg/L	207	E20	4/17/12 8:11	A204193	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	450		4/17/12 15:35	A204215	2540C

QUALITY CONTROL RESULTS

Anions -- Batch: A204193 (Water)

Prepared: 16-Apr-12 12:50 By: MG -- Analyzed: 16-Apr-12 19:47 By: Mel

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	90.4% / NA	97.6% / 98.8%		1.08%	
Sulfate as SO4	<0.500 mg/L	91.3% / NA	154% / 153%		0.207%	%D1

Wet Chemistry -- Batch: A204215 (Water)

Prepared: 17-Apr-12 15:35 By: AP -- Analyzed: 17-Apr-12 15:35 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	88.0% / 85.5%	NA / NA		2.88%	

QUALIFIER(S)

*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria

*E20: Estimated Result Due to Matrix Spike and/or Matrix Spike Duplicate Failure; This sample was used as the "parent sample" in MS/MSD prep.

19 April 2012



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 12-Apr-12 13:33

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by:

Norma James
President

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples



Arkansas Analytical
Inc.

11701 Interstate 30, Bldg. 1, Ste. 115
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CHAIN OF CUSTODY RECORD

[illegible]



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

19 June 2012

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104

RE: Magcobar Mine Site; Weekly Water Samples
SDG Number: 1206194

Enclosed are the results of analyses for samples received by the laboratory on 14-Jun-12 13:47. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Correct	✓
COC/Labels Agree	✓
Preservation Confirmed	✓
Received On Ice	✓
Temperature on Receipt	4.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James".

Norma James
President



19 June 2012

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 14-Jun-12 13:47

CASE NARRATIVE

Sample Delivery Group - 1206194

Qualified Analytical and/or Quality Control Results are Discussed Below:

Anions Analysis:

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Failure: Chloride failed to recover within acceptance criteria in the MS/MSD sample. The recoveries were qualified by "%D1" in the quality control section of the final report. Chloride was qualified as "estimated" in the parent sample which was NOT a member of this sample delivery group.

19 June 2012



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 14-Jun-12 13:47

ANALYTICAL RESULTS

Lab Number: 1206194-01
Sample Name: Facility Discharge 1 & 2 (Comp)
Date/Time Collected: 6/14/12 11:21
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	40.4		6/15/12 14:34	A206193	300.0/9056A
Sulfate as SO4	mg/L	740		6/15/12 14:59	A206193	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	1800		6/14/12 18:22	A206203	2540C

ANALYTICAL RESULTS

Lab Number: 1206194-02
Sample Name: Cove Creek (Grab)
Date/Time Collected: 6/14/12 8:35
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chloride	mg/L	16.5		6/15/12 14:08	A206193	300.0/9056A
Sulfate as SO4	mg/L	275		6/15/12 15:25	A206193	300.0/9056A
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
TDS	mg/L	750		6/14/12 18:22	A206203	2540C

QUALITY CONTROL RESULTS

Anions -- Batch: A206193 (Water)

Prepared: 15-Jun-12 12:15 By: MG -- Analyzed: 15-Jun-12 13:39 By: Melis

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chloride	<0.500 mg/L	103% / NA	74.2% / 73.0%		0.492%	%D1
Sulfate as SO4	<0.500 mg/L	94.1% / NA	95.2% / 96.4%		1.08%	

Wet Chemistry -- Batch: A206203 (Water)

Prepared: 14-Jun-12 18:22 By: AP -- Analyzed: 14-Jun-12 18:22 By: AP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
TDS	<1.0 mg/L	108% / 98.0%	NA / NA		9.25%	

QUALIFIER(S)

*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria

19 June 2012



Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples

Date Received: 14-Jun-12 13:47

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

A handwritten signature in blue ink, reading "Norma James", is positioned above a horizontal line.

Reviewed by:

Norma James
President

Bill McAlister
EEMA O & M Services Group
P.O. Box 699
Malvern, AR 72104
Project: Magcobar Mine Site; Weekly Water Samples



Arkansas Analytical
Inc.

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CHAIN OF CUSTODY RECORD

[illegible]