

Exhibit 75

EXCELCHEM
Environmental Labs

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ELAP Certificate No. : 2119

23 November 2011

Jeff Huggins

RWQC Central Valley

11020 Sun Center Dr. #200

Rancho Cordova, CA 95670

RE: Walker Mine

Work order number:1111071

Enclosed are the results of analyses for samples received by the laboratory on 11/03/11 08:48. All Quality Control results are within acceptable limits except where noted as a case narrative. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

John Somers, Lab Director

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins,

Date Reported:
11/23/11 10:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WM-1	1111071-01	Water	11/01/11 10:15	11/03/11 08:48
WM-2	1111071-02	Water	11/01/11 10:20	11/03/11 08:48
WM-3	1111071-03	Water	11/01/11 13:15	11/03/11 08:48
WM-7c	1111071-04	Water	11/01/11 13:45	11/03/11 08:48
WM-7b	1111071-05	Water	11/01/11 13:40	11/03/11 08:48
WM-6	1111071-06	Water	11/01/11 14:00	11/03/11 08:48
WM-7a	1111071-07	Water	11/01/11 14:30	11/03/11 08:48
WM-2	1111071-08	Water	11/01/11 14:45	11/03/11 08:48
WM-4	1111071-09	Water	11/02/11 08:30	11/03/11 08:48
WM-9	1111071-10	Water	11/02/11 08:40	11/03/11 08:48
WM-20	1111071-11	Water	11/02/11 08:50	11/03/11 08:48
WM-11	1111071-12	Water	11/02/11 09:15	11/03/11 08:48
WM-12	1111071-13	Water	11/02/11 09:30	11/03/11 08:48
WM-13	1111071-14	Water	11/02/11 09:35	11/03/11 08:48
WM-17	1111071-15	Water	11/02/11 09:45	11/03/11 08:48
WM-19	1111071-16	Water	11/01/11 13:20	11/03/11 08:48

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Laboratory Representative

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: 10-026-150 Project Manager: Jeff Huggins	Date Reported: 11/23/11 10:59
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**WM-1
1111071-01 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
METALS BY 6000/7000 SERIES									
Dissolved Aluminum	74.5	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	108	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	13.2	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	13.2	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	13100	100	79.0	"	"	"	"	"	
Dissolved Copper	79.4	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	80.3	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	240	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	267	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	5250	50.0	13.0	"	"	"	"	"	
Potassium	964	100	57.0	"	"	"	"	"	
Sodium	4700	200	120	"	"	"	"	"	
Dissolved Zinc	25.5	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	29.1	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	
Wet Chemistry									
Total Alkalinity	64.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	64.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	121	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	7.44	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	86.0	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	54.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

Excelchem Environmental Lab.



Laboratory Representative

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

**WM-1
1111071-01 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.6	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	1.4	0.5	0.03	"	"	"	"	"	

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11/23/11 10:59

**WM-2
1111071-02 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
METALS BY 6000/7000 SERIES									
Dissolved Aluminum	78.7	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	114	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	15900	100	79.0	"	"	"	"	"	
Dissolved Copper	ND	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	ND	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	108	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	118	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	7840	50.0	13.0	"	"	"	"	"	
Potassium	958	100	57.0	"	"	"	"	"	
Sodium	2970	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	
Wet Chemistry									
Total Alkalinity	78.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	78.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	144	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	7.81	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	84.0	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	68.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

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WM-2
1111071-02 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.9	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	0.5	0.5	0.03	"	"	"	"	"	

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**WM-3
1111071-03 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
METALS BY 6000/7000 SERIES									
Dissolved Aluminum	66.5	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	119	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	14900	100	79.0	"	"	"	"	"	
Dissolved Copper	6.1	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	ND	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	652	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	656	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	7180	50.0	13.0	"	"	"	"	"	
Potassium	897	100	57.0	"	"	"	"	"	
Sodium	2920	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	
Wet Chemistry									
Total Alkalinity	72.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	72.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	136	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	7.76	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	81.0	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	66.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

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 Rancho Cordova, CA 95670

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 Project Number: 10-026-150
 Project Manager: Jeff Huggins

Date Reported:
 11/23/11 10:59

**WM-3
 1111071-03 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.8	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	1.6	0.5	0.03	"	"	"	"	"	

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Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

**WM-7c
1111071-04 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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METALS BY 6000/7000 SERIES

Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	ND	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	15100	100	79.0	"	"	"	"	"	
Dissolved Copper	12.8	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	10.9	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	330	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	312	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	6950	50.0	13.0	"	"	"	"	"	
Potassium	891	100	57.0	"	"	"	"	"	
Sodium	3590	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	

Wet Chemistry

Total Alkalinity	70.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	70.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	135	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	8.14	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	84.0	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	64.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

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WM-7c
1111071-04 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	1.5	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	2.4	0.5	0.03	"	"	"	"	"	

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**WM-7b
1111071-05 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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METALS BY 6000/7000 SERIES

Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	ND	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	17900	100	79.0	"	"	"	"	"	
Dissolved Copper	ND	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	ND	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	880	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	900	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	5070	50.0	13.0	"	"	"	"	"	
Potassium	1720	100	57.0	"	"	"	"	"	
Sodium	4670	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	

Wet Chemistry

Total Alkalinity	66.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	66.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	148	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	7.32	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	79.0	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	64.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

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Rancho Cordova, CA 95670

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Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

WM-7b
1111071-05 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.8	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	9.9	0.5	0.03	"	"	"	"	"	

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Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

**WM-6
1111071-06 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
METALS BY 6000/7000 SERIES									
Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	ND	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	26800	100	79.0	"	"	"	"	"	
Dissolved Copper	69.5	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	69.5	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	390	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	466	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	3630	50.0	13.0	"	"	"	"	"	
Potassium	2620	100	57.0	"	"	"	"	"	
Sodium	5480	200	120	"	"	"	"	"	
Dissolved Zinc	39.8	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	40.5	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	
Wet Chemistry									
Total Alkalinity	72.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	72.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	193	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	8.00	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	147	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	82.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

Excelchem Environmental Lab.



Laboratory Representative

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

WM-6
1111071-06 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.8	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
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Excelchem Environmental Lab.



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Excelchem Environmental Labs

RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: 10-026-150 Project Manager: Jeff Huggins	Date Reported: 11/23/11 10:59
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WM-6
1111071-06RE1 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Sulfate as SO4	26.2	2.5	0.1	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: 10-026-150 Project Manager: Jeff Huggins	Date Reported: 11/23/11 10:59
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**WM-7a
1111071-07 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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METALS BY 6000/7000 SERIES

Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	ND	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	15200	100	79.0	"	"	"	"	"	
Dissolved Copper	14.4	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	12.2	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	368	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	374	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	6990	50.0	13.0	"	"	"	"	"	
Potassium	933	100	57.0	"	"	"	"	"	
Sodium	3280	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	

Wet Chemistry

Total Alkalinity	72.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	72.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	138	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	8.02	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	112	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	64.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

Excelchem Environmental Lab.



Laboratory Representative

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

WM-7a
1111071-07 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.9	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	2.2	0.5	0.03	"	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

**WM-2
1111071-08 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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METALS BY 6000/7000 SERIES

Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	ND	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	12900	100	79.0	"	"	"	"	"	
Dissolved Copper	ND	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	ND	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	361	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	366	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	4960	50.0	13.0	"	"	"	"	"	
Potassium	1390	100	57.0	"	"	"	"	"	
Sodium	3970	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	

Wet Chemistry

Total Alkalinity	62.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	62.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	118	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	7.56	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	94.0	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	50.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

WM-2
1111071-08 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.8	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	1.0	0.5	0.03	"	"	"	"	"	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: 10-026-150 Project Manager: Jeff Huggins	Date Reported: 11/23/11 10:59
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**WM-4
1111071-09 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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METALS BY 6000/7000 SERIES

Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	ND	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	14900	100	79.0	"	"	"	"	"	
Dissolved Copper	14.1	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	11.9	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	242	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	248	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	7100	50.0	13.0	"	"	"	"	"	
Potassium	946	100	57.0	"	"	"	"	"	
Sodium	3170	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	

Wet Chemistry

Total Alkalinity	72.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	72.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	138	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	7.86	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	121	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	66.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

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Laboratory Representative

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

WM-4
1111071-09 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.8	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	2.0	0.5	0.03	"	"	"	"	"	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: 10-026-150 Project Manager: Jeff Huggins	Date Reported: 11/23/11 10:59
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**WM-9
1111071-10 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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METALS BY 6000/7000 SERIES

Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	ND	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	18200	100	79.0	"	"	"	"	"	
Dissolved Copper	ND	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	ND	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	541	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	560	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	6100	50.0	13.0	"	"	"	"	"	
Potassium	1460	100	57.0	"	"	"	"	"	
Sodium	4190	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	

Wet Chemistry

Total Alkalinity	72.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	72.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	153	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	7.88	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	122	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	68.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

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Laboratory Representative

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

**WM-9
1111071-10 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	1.1	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	8.3	0.5	0.03	"	"	"	"	"	

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**WM-20
1111071-11 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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METALS BY 6000/7000 SERIES

Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	ND	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	19200	100	79.0	"	"	"	"	"	
Dissolved Copper	ND	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	ND	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	142	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	150	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	5160	50.0	13.0	"	"	"	"	"	
Potassium	1630	100	57.0	"	"	"	"	"	
Sodium	7160	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	

Wet Chemistry

Total Alkalinity	76.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	76.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	163	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	7.95	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	114	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	66.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

Excelchem Environmental Lab.



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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: 10-026-150 Project Manager: Jeff Huggins	Date Reported: 11/23/11 10:59
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**WM-20
1111071-11 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	1.4	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	10.9	0.5	0.03	"	"	"	"	"	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: 10-026-150 Project Manager: Jeff Huggins	Date Reported: 11/23/11 10:59
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**WM-11
1111071-12 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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METALS BY 6000/7000 SERIES

Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	ND	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	5360	100	79.0	"	"	"	"	"	
Dissolved Copper	ND	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	ND	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	37.8	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	37.5	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	1610	50.0	13.0	"	"	"	"	"	
Potassium	479	100	57.0	"	"	"	"	"	
Sodium	2330	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	

Wet Chemistry

Total Alkalinity	26.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	26.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	46.8	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	7.47	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	60.0	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	26.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

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Laboratory Representative

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WM-11
1111071-12 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.8	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	1.0	0.5	0.03	"	"	"	"	"	

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**WM-12
1111071-13 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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METALS BY 6000/7000 SERIES

Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	77.6	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	2080	100	79.0	"	"	"	"	"	
Dissolved Copper	ND	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	ND	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	31.0	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	37.2	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	917	50.0	13.0	"	"	"	"	"	
Potassium	382	100	57.0	"	"	"	"	"	
Sodium	1100	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	

Wet Chemistry

Total Alkalinity	14.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	14.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	20.2	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	6.38	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	42.0	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	18.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

Excelchem Environmental Lab.



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WM-12
1111071-13 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.5	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	0.7	0.5	0.03	"	"	"	"	"	

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**WM-13
1111071-14 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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METALS BY 6000/7000 SERIES

Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	ND	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	10.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	10100	100	79.0	"	"	"	"	"	
Dissolved Copper	ND	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	ND	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	ND	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	ND	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	4300	50.0	13.0	"	"	"	"	"	
Potassium	384	100	57.0	"	"	"	"	"	
Sodium	2580	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	

Wet Chemistry

Total Alkalinity	58.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	58.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	88.7	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	6.98	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	ND	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	42.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

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WM-13
1111071-14 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	1.0	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	1.4	0.5	0.03	"	"	"	"	"	

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**WM-17
1111071-15 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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METALS BY 6000/7000 SERIES

Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	ND	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	17900	100	79.0	"	"	"	"	"	
Dissolved Copper	ND	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	ND	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	ND	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	ND	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	7210	50.0	13.0	"	"	"	"	"	
Potassium	1560	100	57.0	"	"	"	"	"	
Sodium	3540	200	120	"	"	"	"	"	
Dissolved Zinc	ND	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	ND	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	

Wet Chemistry

Total Alkalinity	74.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	74.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	157	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	7.99	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	113	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	72.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

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WM-17
1111071-15 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.9	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	1.3	0.5	0.03	"	"	"	"	"	

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**WM-19
1111071-16 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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METALS BY 6000/7000 SERIES

Dissolved Aluminum	ND	50.0	19.0	ug/l	AUK0218	11/17/11	11/18/11	EPA 6010B	
Aluminum	ND	50.0	19.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Arsenic	ND	5.0	0.9	"	AUK0218	11/17/11	11/18/11	"	
Arsenic	ND	5.0	0.9	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Cadmium	ND	5.0	0.4	"	AUK0218	11/17/11	11/18/11	"	
Cadmium	ND	5.0	0.4	"	AUK0182	11/15/11	11/16/11	"	
Calcium	14500	100	79.0	"	"	"	"	"	
Dissolved Copper	327	5.0	1.0	"	AUK0218	11/17/11	11/18/11	"	
Copper	328	5.0	1.0	"	AUK0182	11/15/11	11/16/11	"	
Dissolved Iron	177	20.0	11.0	"	AUK0218	11/17/11	11/18/11	"	
Iron	190	20.0	11.0	"	AUK0182	11/15/11	11/16/11	"	
Magnesium	4760	50.0	13.0	"	"	"	"	"	
Potassium	1340	100	57.0	"	"	"	"	"	
Sodium	4580	200	120	"	"	"	"	"	
Dissolved Zinc	35.9	20.0	4.5	"	AUK0218	11/17/11	11/18/11	"	
Zinc	35.9	20.0	4.5	"	AUK0182	11/15/11	11/16/11	"	

Wet Chemistry

Total Alkalinity	48.0	5.00	2.37	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
Bicarbonate Alkalinity	48.0	5.00	0.410	"	"	"	"	"	
Carbonate Alkalinity	ND	5.00	0.410	"	"	"	"	"	
Specific Conductance (EC)	133	5.00	1.00	uS/cm	AUK0072	11/04/11	11/04/11	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	0.410	mg/L	AUK0129	11/09/11	11/09/11	SM2320B	
pH	7.70	0.100	0.100	pH Units	AUK0071	11/04/11	11/04/11	SM 4500-H+ B	Field
Total Dissolved Solids	114	15.0	5.00	mg/L	AUK0128	11/04/11	11/10/11	SM 2540C	
Total Hardness	56.0	5.00	2.86	"	AUK0117	11/04/11	11/04/11	SM2340B	

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WM-19
1111071-16 (Water)

Analyte	Result	Reporting Limit	MDL	Units	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.8	0.5	0.02	mg/L	AUK0152	11/04/11	11/04/11	EPA 300.0	
Sulfate as SO4	19.1	0.5	0.03	"	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

METALS BY 6000/7000 SERIES - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AUK0182 - EPA 6010B

Blank (AUK0182-BLK1)				Prepared: 11/15/11 Analyzed: 11/16/11							
Aluminum	ND	50.0		ug/l							
Arsenic	ND	5.0		"							
Cadmium	ND	5.0		"							
Calcium	ND	100		"							
Copper	ND	5.0		"							
Iron	ND	20.0		"							
Magnesium	ND	50.0		"							
Potassium	ND	100		"							
Sodium	ND	200		"							
Zinc	ND	20.0		"							

LCS (AUK0182-BS1)				Prepared: 11/15/11 Analyzed: 11/16/11							
Aluminum	989	50.0		ug/l	1000		98.9	80-120			
Arsenic	910	5.0		"	1000		91.0	80-120			
Cadmium	920	5.0		"	1000		92.0	80-120			
Calcium	951	100		"	1000		95.1	80-120			
Copper	939	5.0		"	1000		93.9	80-120			
Iron	945	20.0		"	1000		94.5	80-120			
Magnesium	940	50.0		"	1000		94.0	80-120			
Potassium	9390	100		"	10000		93.9	80-120			
Sodium	955	200		"	1000		95.5	80-120			
Zinc	911	20.0		"	1000		91.1	80-120			

LCS Dup (AUK0182-BSD1)				Prepared: 11/15/11 Analyzed: 11/16/11							
Aluminum	962	50.0		ug/l	1000		96.2	80-120	2.69	25	
Arsenic	924	5.0		"	1000		92.4	80-120	1.60	25	
Cadmium	934	5.0		"	1000		93.4	80-120	1.51	25	
Calcium	975	100		"	1000		97.5	80-120	2.54	25	
Copper	956	5.0		"	1000		95.6	80-120	1.81	25	
Iron	967	20.0		"	1000		96.7	80-120	2.31	25	
Magnesium	961	50.0		"	1000		96.1	80-120	2.17	25	
Potassium	9490	100		"	10000		94.9	80-120	1.09	25	
Sodium	961	200		"	1000		96.1	80-120	0.647	25	
Zinc	927	20.0		"	1000		92.7	80-120	1.71	25	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

METALS BY 6000/7000 SERIES - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AUK0182 - EPA 6010B

Matrix Spike (AUK0182-MS1)		Source: 1111071-01			Prepared: 11/15/11		Analyzed: 11/16/11	
Aluminum	1140	50.0		ug/l	1000	108	103	75-125
Arsenic	926	5.0		"	1000	13.2	91.3	75-125
Cadmium	921	5.0		"	1000	ND	92.1	75-125
Calcium	14000	100		"	1000	13100	87.0	75-125
Copper	1020	5.0		"	1000	80.3	94.0	75-125
Iron	1230	20.0		"	1000	267	96.3	75-125
Magnesium	6140	50.0		"	1000	5250	89.4	75-125
Potassium	10800	100		"	10000	964	98.5	75-125
Sodium	5650	200		"	1000	4700	95.4	75-125
Zinc	927	20.0		"	1000	29.1	89.8	75-125

Matrix Spike Dup (AUK0182-MSD1)		Source: 1111071-01			Prepared: 11/15/11		Analyzed: 11/16/11			
Aluminum	1100	50.0		ug/l	1000	108	99.3	75-125	3.13	25
Arsenic	924	5.0		"	1000	13.2	91.1	75-125	0.216	25
Cadmium	922	5.0		"	1000	ND	92.2	75-125	0.0977	25
Calcium	14000	100		"	1000	13100	85.0	75-125	0.143	25
Copper	1010	5.0		"	1000	80.3	92.9	75-125	1.08	25
Iron	1230	20.0		"	1000	267	96.4	75-125	0.0813	25
Magnesium	6150	50.0		"	1000	5250	89.9	75-125	0.0813	25
Potassium	10400	100		"	10000	964	94.5	75-125	3.77	25
Sodium	5630	200		"	1000	4700	93.1	75-125	0.408	25
Zinc	924	20.0		"	1000	29.1	89.5	75-125	0.367	25

Batch AUK0218 - EPA 6010B

Blank (AUK0218-BLK1)				Prepared: 11/17/11		Analyzed: 11/18/11	
Dissolved Aluminum	ND	50.0		ug/l			
Dissolved Arsenic	ND	5.0		"			
Dissolved Cadmium	ND	5.0		"			
Dissolved Copper	ND	5.0		"			
Dissolved Iron	ND	20.0		"			
Dissolved Zinc	ND	20.0		"			

Excelchem Environmental Lab.



Laboratory Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

METALS BY 6000/7000 SERIES - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AUK0218 - EPA 6010B

LCS (AUK0218-BS1)

Prepared: 11/17/11 Analyzed: 11/18/11

Dissolved Aluminum	968	50.0		ug/l	1000		96.8	80-120			
Dissolved Arsenic	958	5.0		"	1000		95.8	80-120			
Dissolved Cadmium	972	5.0		"	1000		97.2	80-120			
Dissolved Copper	995	5.0		"	1000		99.5	80-120			
Dissolved Iron	1010	20.0		"	1000		101	80-120			
Dissolved Zinc	950	20.0		"	1000		95.0	80-120			

LCS Dup (AUK0218-BS1)

Prepared: 11/17/11 Analyzed: 11/18/11

Dissolved Aluminum	964	50.0		ug/l	1000		96.4	80-120	0.383	25	
Dissolved Arsenic	928	5.0		"	1000		92.8	80-120	3.25	25	
Dissolved Cadmium	948	5.0		"	1000		94.8	80-120	2.51	25	
Dissolved Copper	964	5.0		"	1000		96.4	80-120	3.17	25	
Dissolved Iron	986	20.0		"	1000		98.6	80-120	2.04	25	
Dissolved Zinc	921	20.0		"	1000		92.1	80-120	3.10	25	

Matrix Spike (AUK0218-MS1)

Source: 1111071-08

Prepared: 11/17/11 Analyzed: 11/18/11

Dissolved Aluminum	992	50.0		ug/l	1000	ND	99.2	75-125			
Dissolved Arsenic	912	5.0		"	1000	ND	91.2	75-125			
Dissolved Cadmium	928	5.0		"	1000	ND	92.8	75-125			
Dissolved Copper	928	5.0		"	1000	ND	92.8	75-125			
Dissolved Iron	1330	20.0		"	1000	361	96.8	75-125			
Dissolved Zinc	901	20.0		"	1000	ND	90.1	75-125			

Matrix Spike Dup (AUK0218-MSD1)

Source: 1111071-08

Prepared: 11/17/11 Analyzed: 11/18/11

Dissolved Aluminum	1010	50.0		ug/l	1000	ND	101	75-125	1.67	25	
Dissolved Arsenic	935	5.0		"	1000	ND	93.5	75-125	2.56	25	
Dissolved Cadmium	951	5.0		"	1000	ND	95.1	75-125	2.42	25	
Dissolved Copper	957	5.0		"	1000	ND	95.7	75-125	3.02	25	
Dissolved Iron	1360	20.0		"	1000	361	99.5	75-125	2.01	25	
Dissolved Zinc	920	20.0		"	1000	ND	92.0	75-125	2.10	25	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: 10-026-150 Project Manager: Jeff Huggins	Date Reported: 11/23/11 10:59
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Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AUK0071 - SM 4500-H+ B

Duplicate (AUK0071-DUP1)		Source: 1111071-08		Prepared & Analyzed: 11/04/11							
pH	7.55	0.100		pH Units		7.56			0.132	20	
Duplicate (AUK0071-DUP2)		Source: 1111071-16		Prepared & Analyzed: 11/04/11							
pH	7.68	0.100		pH Units		7.70			0.260	20	

Batch AUK0072 - EPA 120.1

Duplicate (AUK0072-DUP1)		Source: 1111071-08		Prepared & Analyzed: 11/04/11							
Specific Conductance (EC)	117	5.00		uS/cm		118			0.768	20	
Duplicate (AUK0072-DUP2)		Source: 1111071-16		Prepared & Analyzed: 11/04/11							
Specific Conductance (EC)	133	5.00		uS/cm		133			0.0753	20	

Batch AUK0117 - SM2340B

Blank (AUK0117-BLK1)				Prepared & Analyzed: 11/04/11							
Total Hardness	ND	5.00		mg/L							
LCS (AUK0117-BS1)				Prepared & Analyzed: 11/04/11							
Total Hardness	52.0	5.00		mg/L	50.0	104	80-120				
LCS Dup (AUK0117-BSD1)				Prepared & Analyzed: 11/04/11							
Total Hardness	52.0	5.00		mg/L	50.0	104	80-120	0.00		20	
Duplicate (AUK0117-DUP1)		Source: 1111071-08		Prepared & Analyzed: 11/04/11							
Total Hardness	50.0	5.00		mg/L		50.0			0.00	20	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AUK0117 - SM2340B

Matrix Spike (AUK0117-MS1) Source: 1111071-02 Prepared & Analyzed: 11/04/11

Total Hardness	118	5.00		mg/L	50.0	68.0	100	75-125			
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Matrix Spike Dup (AUK0117-MSD1) Source: 1111071-02 Prepared & Analyzed: 11/04/11

Total Hardness	118	5.00		mg/L	50.0	68.0	100	75-125	0.00	20	
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Batch AUK0128 - SM 2540C

Blank (AUK0128-BLK1) Prepared: 11/04/11 Analyzed: 11/10/11

Total Dissolved Solids	ND	15.0		mg/L							
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Duplicate (AUK0128-DUP1) Source: 1111071-01 Prepared: 11/04/11 Analyzed: 11/10/11

Total Dissolved Solids	92.0	15.0		mg/L		86.0			6.74	20	
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Batch AUK0129 - SM2320B

Blank (AUK0129-BLK1) Prepared & Analyzed: 11/09/11

Bicarbonate Alkalinity	ND	5.00		mg/L							
Carbonate Alkalinity	ND	5.00		"							
Hydroxide Alkalinity	ND	5.00		"							
Total Alkalinity	ND	5.00		"							

LCS (AUK0129-BS1) Prepared & Analyzed: 11/09/11

Bicarbonate Alkalinity	108	5.00		mg/L	100		108	80-120			
Total Alkalinity	108	5.00		"	100		108	80-120			

LCS Dup (AUK0129-BSD1) Prepared & Analyzed: 11/09/11

Bicarbonate Alkalinity	106	5.00		mg/L	100		106	80-120	1.87	20	
Total Alkalinity	106	5.00		"	100		106	80-120	1.87	20	

Excelchem Environmental Lab.

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Laboratory Representative

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AUK0129 - SM2320B

Duplicate (AUK0129-DUP1)		Source: 1111071-11			Prepared & Analyzed: 11/09/11						
Bicarbonate Alkalinity	76.0	5.00		mg/L		76.0			0.00	20	
Carbonate Alkalinity	ND	5.00		"		ND				20	
Hydroxide Alkalinity	ND	5.00		"		ND				20	
Total Alkalinity	76.0	5.00		"		76.0			0.00	20	
Matrix Spike (AUK0129-MS1)		Source: 1111071-05			Prepared & Analyzed: 11/09/11						
Total Alkalinity	168	5.00		mg/L	100	66.0	102	80-120			
Matrix Spike Dup (AUK0129-MSD1)		Source: 1111071-05			Prepared & Analyzed: 11/09/11						
Total Alkalinity	168	5.00		mg/L	100	66.0	102	80-120	0.00	20	

Excelchem Environmental Lab.

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Laboratory Representative

Excelchem Environmental Labs

RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: 10-026-150 Project Manager: Jeff Huggins	Date Reported: 11/23/11 10:59
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Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AUK0152 - EPA 300.0

Blank (AUK0152-BLK1) Prepared & Analyzed: 11/04/11

Chloride	ND	0.5		mg/L							
Sulfate as SO4	ND	0.5		"							

Blank (AUK0152-BLK2) Prepared & Analyzed: 11/04/11

Chloride	ND	0.5		mg/L							
Sulfate as SO4	ND	0.5		"							

LCS (AUK0152-BS1) Prepared & Analyzed: 11/04/11

Chloride	9.5	0.5		mg/L	10.0		95.4	80-120			
Sulfate as SO4	10.0	0.5		"	10.0		100	80-120			

LCS (AUK0152-BS2) Prepared & Analyzed: 11/04/11

Chloride	9.4	0.5		mg/L	10.0		94.5	80-120			
Sulfate as SO4	9.9	0.5		"	10.0		99.0	80-120			

LCS Dup (AUK0152-BSD1) Prepared & Analyzed: 11/04/11

Chloride	9.6	0.5		mg/L	10.0		95.6	80-120	0.188	20	
Sulfate as SO4	10.1	0.5		"	10.0		101	80-120	1.19	20	

LCS Dup (AUK0152-BSD2) Prepared & Analyzed: 11/04/11

Chloride	9.6	0.5		mg/L	10.0		95.6	80-120	1.19	20	
Sulfate as SO4	10.1	0.5		"	10.0		101	80-120	1.59	20	

Duplicate (AUK0152-DUP1) Source: 1111071-01 Prepared & Analyzed: 11/04/11

Chloride	0.5	0.5		mg/L		0.6			18.7	20	
Sulfate as SO4	1.2	0.5		"		1.4			11.6	20	

Duplicate (AUK0152-DUP2) Source: 1111071-02 Prepared & Analyzed: 11/04/11

Chloride	0.8	0.5		mg/L		0.9			17.6	20	
Sulfate as SO4	0.5	0.5		"		0.5			0.987	20	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
 11020 Sun Center Dr. #200
 Rancho Cordova, CA 95670

Project: Walker Mine
 Project Number: 10-026-150
 Project Manager: Jeff Huggins

Date Reported:
 11/23/11 10:59

Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AUK0152 - EPA 300.0

Matrix Spike (AUK0152-MS1)		Source: 1111071-02			Prepared & Analyzed: 11/04/11						
Chloride	9.9	0.5		mg/L	10.0	0.9	89.9	75-125			
Sulfate as SO4	11.4	0.5		"	10.0	0.5	109	75-125			
Matrix Spike (AUK0152-MS2)		Source: 1111071-02			Prepared & Analyzed: 11/04/11						
Chloride	10.1	0.5		mg/L	10.0	0.9	91.9	75-125			
Sulfate as SO4	10.8	0.5		"	10.0	0.5	103	75-125			
Matrix Spike Dup (AUK0152-MSD1)		Source: 1111071-02			Prepared & Analyzed: 11/04/11						
Chloride	9.5	0.5		mg/L	10.0	0.9	85.7	75-125	4.31	20	
Sulfate as SO4	10.7	0.5		"	10.0	0.5	102	75-125	6.25	20	
Matrix Spike Dup (AUK0152-MSD2)		Source: 1111071-02			Prepared & Analyzed: 11/04/11						
Chloride	9.4	0.5		mg/L	10.0	0.9	85.5	75-125	6.58	20	
Sulfate as SO4	10.2	0.5		"	10.0	0.5	97.1	75-125	5.35	20	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

Notes and Definitions

- Field This analyte was analyzed outside of the EPA recommended hold time of ASAP and should be analyzed in the field.
- ND Analyte not detected at reporting limit.
- NR Not reported

Analysis Method

EPA 8260, EPA 8021/8015M
EPA 8270, EPA 8081, EPA 8082, EPA 8141, EPA 8015M (extractable)
Metals
TCLP
Not Specified

Prep Method

EPA 5030B
Water - EPA 3510C, Soil- EPA 3550B
Water- 3005A, Soil- 3050B
EPA 1311
Same as Analysis Method

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: 10-026-150
Project Manager: Jeff Huggins

Date Reported:
11/23/11 10:59

Date Received: 11/13/11

Section 1 - Sample Analysis Info

Sample Transport: ONTRAC UPS USPS Walk-In EXCELCHEM Courier Fed-Ex Other: _____

Transported In: Ice Chest Box Hand _____

Ice Chest Temperature(s) (C): 32

Section 2 - Bottle/Analysis Info.

	Yes	No	N/A	Comments
Did all bottles arrive unbroken and intact?	<input checked="" type="checkbox"/>			
Did all bottle labels agree with COC?		<input checked="" type="checkbox"/>		→ received extra bottle not marked on COC
Were correct containers used for the tests requested?	<input checked="" type="checkbox"/>			"WM-19"
Were correct preservations used for the tests requested?	<input checked="" type="checkbox"/>			
Was a sufficient amount of sample sent for tests indicated?	<input checked="" type="checkbox"/>			
Were bubbles present in VOA Vials? (Volatile Methods Only)			<input checked="" type="checkbox"/>	Date of collection 11/11 time of collection 13:20

Section 3 - COC Info.

	Completed		Info From Container	Completed		Comments
	Yes	No		Yes	No	
Was COC Received	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Date Sampled	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Time Sampled	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Sample ID	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		
Rush TAT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
Analysis Requested				<input checked="" type="checkbox"/>		
Sample arrived within holding time				<input checked="" type="checkbox"/>		
Any hold times less than 72 hrs					<input checked="" type="checkbox"/>	
Client Name				<input checked="" type="checkbox"/>		
Address/Telephone #				<input checked="" type="checkbox"/>		

Section 4 - Comments / Discrepancies

Was Client notified of discrepancies: Yes No N/A Notified by: _____

Explanations / Comments: _____

Samples Labeled by: MG
Labels Reviewed by: _____
Bin #: Att 91
COC Scanned/Attached by: MG

Form completed by: Mameca Date: 11/13/11
Time: 8:48



Exhibit 76

EXCELCHEM
Environmental Labs

1135 W Sunset Boulevard
Suite A
Rocklin, CA 95765
Phone# 916-543-4445
Fax# 916-543-4449



ELAP Certificate No. : 2119

29 June 2012

Jeff Huggins

RWQC Central Valley

11020 Sun Center Dr. #200

Rancho Cordova, CA 95670

RE: Walker Mine

Work order number:1206150

Enclosed are the results of analyses for samples received by the laboratory on 06/14/12 08:41. All Quality Control results are within acceptable limits except where noted as a case narrative. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

John Somers, Lab Director

Excelchem Environmental Labs

RWQC Central Valley
 11020 Sun Center Dr. #200
 Rancho Cordova, CA 95670

Project: Walker Mine
 Project Number: [none]
 Project Manager: Jeff Huggins

Date Reported:
 06/29/12 15:18

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WM-30	1206150-01	Water	06/12/12 10:45	06/14/12 08:41
WM-7a	1206150-02	Water	06/12/12 14:30	06/14/12 08:41
WM-6	1206150-03	Water	06/12/12 14:45	06/14/12 08:41
WM-7b	1206150-04	Water	06/12/12 14:54	06/14/12 08:41
WM-7c	1206150-05	Water	06/12/12 14:57	06/14/12 08:41
WM-1	1206150-06	Water	06/12/12 15:25	06/14/12 08:41
WM-2	1206150-07	Water	06/12/12 15:30	06/14/12 08:41
WM-19	1206150-08	Water	06/12/12 15:40	06/14/12 08:41
WM-3	1206150-09	Water	06/12/12 15:45	06/14/12 08:41
WM-5	1206150-10	Water	06/12/12 16:00	06/14/12 08:41
WM-4	1206150-11	Water	06/13/12 08:50	06/14/12 08:41
WM-9	1206150-12	Water	06/13/12 09:00	06/14/12 08:41
WM-11	1206150-13	Water	06/13/12 09:15	06/14/12 08:41
WM-12	1206150-14	Water	06/13/12 09:20	06/14/12 08:41
WM-13	1206150-15	Water	06/13/12 09:25	06/14/12 08:41
WM-17	1206150-16	Water	06/13/12 09:35	06/14/12 08:41
WM-14	1206150-17	Water	06/13/12 11:30	06/14/12 08:41
WM-15	1206150-18	Water	06/13/12 11:35	06/14/12 08:41
WM-16	1206150-19	Water	06/13/12 11:45	06/14/12 08:41
WM-18	1206150-20	Water	06/13/12 12:00	06/14/12 08:41
WM-20	1206150-21	Water	06/13/12 13:00	06/14/12 08:41

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-30
1206150-01 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Wet Chemistry										
Total Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	453	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	3.66	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	296	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	254	5.00	2.86	"	1	AVF0279	06/27/12	06/27/12	SM2340B	
Total Recoverable Metals										
Aluminum	5320	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	11.3	5.0	0.1	"	1	"	"	"	"	
Calcium	41600	100	79.0	"	1	"	"	"	"	
Copper	16900	5.0	0.8	"	1	"	"	"	"	
Iron	6720	20.0	11.5	"	1	"	"	"	"	
Magnesium	7210	50.0	15.6	"	1	"	"	"	"	
Potassium	2290	100	46.8	"	1	"	"	"	"	
Sodium	6000	200	120	"	1	"	"	"	"	
Zinc	860	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	4710	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	10.6	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	16600	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	222	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	907	10.0	0.3	"	1	"	"	"	"	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

WM-30
1206150-01RE1 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Sulfate as SO4	228	5.0	0.3	mg/L	10	AVF0155	06/14/12	06/14/12	EPA 300.0	
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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-7a
1206150-02 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	2.1	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	66.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	66.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	123	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.54	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	47.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	62.0	5.00	2.86	"	1	AVF0279	06/27/12	06/27/12	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	13500	100	79.0	"	1	"	"	"	"	
Copper	29.2	5.0	0.8	"	1	"	"	"	"	
Iron	601	20.0	11.5	"	1	"	"	"	"	
Magnesium	6160	50.0	15.6	"	1	"	"	"	"	
Potassium	803	100	46.8	"	1	"	"	"	"	
Sodium	6930	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-7a
1206150-02 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	21.8	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	407	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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**WM-6
1206150-03 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	26.1	0.5	0.03	"	1	"	"	"	"	

Wet Chemistry

Total Alkalinity	62.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	62.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	166	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.52	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	102	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	72.0	5.00	2.86	"	1	AVF0279	06/27/12	06/27/12	SM2340B	

Total Recoverable Metals

Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	21600	100	79.0	"	1	"	"	"	"	
Copper	54.7	5.0	0.8	"	1	"	"	"	"	
Iron	238	20.0	11.5	"	1	"	"	"	"	
Magnesium	3560	50.0	15.6	"	1	"	"	"	"	
Potassium	1740	100	46.8	"	1	"	"	"	"	
Sodium	10600	200	120	"	1	"	"	"	"	
Zinc	12.8	10.0	0.3	"	1	"	"	"	"	

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 11020 Sun Center Dr. #200
 Rancho Cordova, CA 95670

Project: Walker Mine
 Project Number: [none]
 Project Manager: Jeff Huggins

Date Reported:
 06/29/12 15:18

**WM-6
 1206150-03 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	30.7	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	43.5	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	17.5	10.0	0.3	"	1	"	"	"	"	

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**WM-7b
1206150-04 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	2.2	0.5	0.03	"	1	"	"	"	"	

Wet Chemistry

Total Alkalinity	66.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	66.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	123	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	8.06	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	74.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	58.0	5.00	2.86	"	1	AVF0279	06/27/12	06/27/12	SM2340B	

Total Recoverable Metals

Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	13100	100	79.0	"	1	"	"	"	"	
Copper	24.2	5.0	0.8	"	1	"	"	"	"	
Iron	424	20.0	11.5	"	1	"	"	"	"	
Magnesium	5960	50.0	15.6	"	1	"	"	"	"	
Potassium	894	100	46.8	"	1	"	"	"	"	
Sodium	6970	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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**WM-7b
1206150-04 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	19.0	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	265	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-7c
1206150-05 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	3.4	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	48.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	48.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	91.7	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.11	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	44.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	40.0	5.00	2.86	"	1	AVF0279	06/27/12	06/27/12	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	10500	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	585	20.0	11.5	"	1	"	"	"	"	
Magnesium	3240	50.0	15.6	"	1	"	"	"	"	
Potassium	940	100	46.8	"	1	"	"	"	"	
Sodium	7730	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

WM-7c
1206150-05 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/22/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	10.2	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	424	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	20.7	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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**WM-1
1206150-06 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	0.9	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	64.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	64.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	116	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.13	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	67.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	50.0	5.00	2.86	"	1	AVF0279	06/27/12	06/27/12	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	14.7	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	11800	100	79.0	"	1	"	"	"	"	
Copper	85.0	5.0	0.8	"	1	"	"	"	"	
Iron	104	20.0	11.5	"	1	"	"	"	"	
Magnesium	4740	50.0	15.6	"	1	"	"	"	"	
Potassium	797	100	46.8	"	1	"	"	"	"	
Sodium	10100	200	120	"	1	"	"	"	"	
Zinc	26.6	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-1
1206150-06 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	11.4	5.0	1.0	"	1	"	"	"	"	"
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	"
Dissolved Copper	61.1	5.0	0.8	"	1	"	"	"	"	"
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	"
Dissolved Zinc	27.6	10.0	0.3	"	1	"	"	"	"	"

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-2
1206150-07 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	ND	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	78.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	78.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	140	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.47	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	78.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	70.0	5.00	2.86	"	1	AVF0279	06/27/12	06/27/12	SM2340B	
Total Recoverable Metals										
Aluminum	80.1	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	14700	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	107	20.0	11.5	"	1	"	"	"	"	
Magnesium	7410	50.0	15.6	"	1	"	"	"	"	
Potassium	709	100	46.8	"	1	"	"	"	"	
Sodium	6100	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-2
1206150-07 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	5.0	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-19
1206150-08 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Wet Chemistry										
Total Alkalinity	42.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	42.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	147	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.39	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	85.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	70.0	5.00	2.86	"	1	AVF0279	06/27/12	06/27/12	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	15800	100	79.0	"	1	"	"	"	"	
Copper	552	5.0	0.8	"	1	"	"	"	"	
Iron	451	20.0	11.5	"	1	"	"	"	"	
Magnesium	4980	50.0	15.6	"	1	"	"	"	"	
Potassium	1480	100	46.8	"	1	"	"	"	"	
Sodium	10100	200	120	"	1	"	"	"	"	
Zinc	49.0	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	217	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	101	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	35.7	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

WM-19
1206150-08RE1 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Sulfate as SO4	28.8	1.0	0.05	mg/L	2	AVF0155	06/14/12	06/14/12	EPA 300.0	
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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-3
1206150-09 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	0.6	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	68.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	68.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	126	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.34	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	68.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	64.0	5.00	2.86	"	1	AVF0279	06/27/12	06/27/12	SM2340B	
Total Recoverable Metals										
Aluminum	101	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	13500	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	1050	20.0	11.5	"	1	"	"	"	"	
Magnesium	6680	50.0	15.6	"	1	"	"	"	"	
Potassium	710	100	46.8	"	1	"	"	"	"	
Sodium	6130	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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 11020 Sun Center Dr. #200
 Rancho Cordova, CA 95670

Project: Walker Mine
 Project Number: [none]
 Project Manager: Jeff Huggins

Date Reported:
 06/29/12 15:18

**WM-3
 1206150-09 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	ND	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	260	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-5
1206150-10 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	ND	0.5	0.03	"	1	"	"	"	"	

Wet Chemistry

Total Alkalinity	44.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	44.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	74.8	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.05	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	26.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	34.0	5.00	2.86	"	1	AVF0279	06/27/12	06/27/12	SM2340B	

Total Recoverable Metals

Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	8160	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	483	20.0	11.5	"	1	"	"	"	"	
Magnesium	2860	50.0	15.6	"	1	"	"	"	"	
Potassium	742	100	46.8	"	1	"	"	"	"	
Sodium	7060	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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**WM-5
1206150-10 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	6.6	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	298	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-4
1206150-11 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	1.8	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	70.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	70.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	128	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.38	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	70.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	64.0	5.00	2.86	"	1	AVF0226	06/21/12	06/21/12	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	13300	100	79.0	"	1	"	"	"	"	
Copper	40.8	5.0	0.8	"	1	"	"	"	"	
Iron	400	20.0	11.5	"	1	"	"	"	"	
Magnesium	6450	50.0	15.6	"	1	"	"	"	"	
Potassium	660	100	46.8	"	1	"	"	"	"	
Sodium	6440	200	120	"	1	"	"	"	"	
Zinc	13.3	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-4
1206150-11 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	19.4	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	178	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-9
1206150-12 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	3.9	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	54.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	54.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	101	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.40	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	63.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	46.0	5.00	2.86	"	1	AVF0226	06/21/12	06/21/12	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	11300	100	79.0	"	1	"	"	"	"	
Copper	5.8	5.0	0.8	"	1	"	"	"	"	
Iron	576	20.0	11.5	"	1	"	"	"	"	
Magnesium	3700	50.0	15.6	"	1	"	"	"	"	
Potassium	926	100	46.8	"	1	"	"	"	"	
Sodium	7460	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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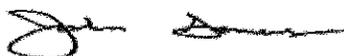
**WM-9
1206150-12 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	6.6	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	331	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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**WM-11
1206150-13 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	0.9	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	22.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	22.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	37.4	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	6.78	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	24.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	18.0	5.00	2.86	"	1	AVF0226	06/21/12	06/21/12	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	3930	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	ND	20.0	11.5	"	1	"	"	"	"	
Magnesium	1360	50.0	15.6	"	1	"	"	"	"	
Potassium	401	100	46.8	"	1	"	"	"	"	
Sodium	4330	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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**WM-11
1206150-13 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Dissolved Metals										
Dissolved Aluminum	56.5	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	ND	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	21.7	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	21.9	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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**WM-12
1206150-14 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	0.6	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	22.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	22.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	35.0	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	5.93	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	16.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	16.0	5.00	2.86	"	1	AVF0226	06/21/12	06/21/12	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/19/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	3520	100	79.0	"	1	"	"	"	"	
Copper	5.7	5.0	0.8	"	1	"	"	"	"	
Iron	31.3	20.0	11.5	"	1	"	"	"	"	
Magnesium	1740	50.0	15.6	"	1	"	"	"	"	
Potassium	313	100	46.8	"	1	"	"	"	"	
Sodium	2650	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
 11020 Sun Center Dr. #200
 Rancho Cordova, CA 95670

Project: Walker Mine
 Project Number: [none]
 Project Manager: Jeff Huggins

Date Reported:
 06/29/12 15:18

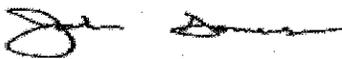
**WM-12
 1206150-14 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/22/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	9.6	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	20.2	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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Excelchem Environmental Labs

RWQC Central Valley, 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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**WM-13
1206150-15 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	ND	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	46.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	46.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	79.8	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	6.97	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	62.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	40.0	5.00	2.86	"	1	AVF0226	06/21/12	06/21/12	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/20/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	9030	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	ND	20.0	11.5	"	1	"	"	"	"	
Magnesium	3860	50.0	15.6	"	1	"	"	"	"	
Potassium	388	100	46.8	"	1	"	"	"	"	
Sodium	4780	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-13
1206150-15 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	60.3	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/22/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	7.4	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-17
1206150-16 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	0.7	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	84.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	84.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	155	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.63	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	92.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	72.0	5.00	2.86	"	1	AVF0226	06/21/12	06/21/12	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/20/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	17200	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	ND	20.0	11.5	"	1	"	"	"	"	
Magnesium	6930	50.0	15.6	"	1	"	"	"	"	
Potassium	1480	100	46.8	"	1	"	"	"	"	
Sodium	7670	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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**WM-17
1206150-16 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/22/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	ND	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-14
1206150-17 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.05	mg/L	1	AVF0154	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	3.5	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	82.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	82.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	158	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.47	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	83.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	76.0	5.00	2.86	"	1	AVF0226	06/21/12	06/21/12	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/20/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	26000	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	ND	20.0	11.5	"	1	"	"	"	"	
Magnesium	2390	50.0	15.6	"	1	"	"	"	"	
Potassium	845	100	46.8	"	1	"	"	"	"	
Sodium	5950	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-14
1206150-17 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/22/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	ND	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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**WM-15
1206150-18 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	0.5	0.5	0.03	"	1	"	"	"	"	

Wet Chemistry

Total Alkalinity	66.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	66.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	121	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.53	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	68.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	58.0	5.00	2.86	"	1	AVF0226	06/21/12	06/21/12	SM2340B	

Total Recoverable Metals

Aluminum	57.4	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/20/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	14000	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	28.1	20.0	11.5	"	1	"	"	"	"	
Magnesium	5420	50.0	15.6	"	1	"	"	"	"	
Potassium	968	100	46.8	"	1	"	"	"	"	
Sodium	6190	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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**WM-15
1206150-18 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/22/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	ND	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-16
1206150-19 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	ND	0.5	0.03	"	1	"	"	"	"	

Wet Chemistry

Total Alkalinity	74.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	74.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	135	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.51	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	77.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	64.0	5.00	2.86	"	1	AVF0226	06/21/12	06/21/12	SM2340B	

Total Recoverable Metals

Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/20/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	15700	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	ND	20.0	11.5	"	1	"	"	"	"	
Magnesium	6030	50.0	15.6	"	1	"	"	"	"	
Potassium	1080	100	46.8	"	1	"	"	"	"	
Sodium	6640	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine. Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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**WM-16
1206150-19 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/22/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	ND	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	19.5	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

**WM-18
1206150-20 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	0.9	0.5	0.03	"	1	"	"	"	"	
Wet Chemistry										
Total Alkalinity	80.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	80.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	150	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.70	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	85.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	70.0	5.00	2.86	"	1	AVF0226	06/21/12	06/21/12	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AVF0166	06/18/12	06/20/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	16800	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	27.4	20.0	11.5	"	1	"	"	"	"	
Magnesium	6620	50.0	15.6	"	1	"	"	"	"	
Potassium	1640	100	46.8	"	1	"	"	"	"	
Sodium	8210	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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Laboratory Representative

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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**WM-18
1206150-20 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0173	06/19/12	06/22/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	76.4	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	23.5	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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**WM-20
1206150-21 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	ND	0.5	0.05	mg/L	1	AVF0155	06/14/12	06/14/12	EPA 300.0	
Sulfate as SO4	4.8	0.5	0.03	"	1	"	"	"	"	

Wet Chemistry

Total Alkalinity	54.0	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
Bicarbonate Alkalinity	54.0	5.00	2.37	"	1	"	"	"	"	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	106	5.00	1.09	uS/cm	1	AVF0144	06/14/12	06/14/12	EPA 120.1	
Hydroxide Alkalinity	ND	5.00	2.37	mg/L	1	AVF0196	06/20/12	06/20/12	SM2320B	
pH	7.55	0.100	0.100	pH Units	1	AVF0142	06/14/12	06/15/12	SM 4500-H+ B	
Total Dissolved Solids	57.0	15.0	7.68	mg/L	1	AVF0241	06/19/12	06/24/12	SM 2540C	
Total Hardness	44.0	5.00	2.86	"	1	AVF0226	06/21/12	06/21/12	SM2340B	

Total Recoverable Metals

Aluminum	ND	50.0	24.5	ug/l	1	AVF0175	06/19/12	06/20/12	EPA 6010B	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	12300	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	181	20.0	11.5	"	1	"	"	"	"	
Magnesium	3320	50.0	15.6	"	1	"	"	"	"	
Potassium	1330	100	46.8	"	1	"	"	"	"	
Sodium	10900	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported: 06/29/12 15:18

WM-20
1206150-21 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AVF0178	06/19/12	06/21/12	EPA 6010B	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	ND	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	108	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	ND	10.0	0.3	"	1	"	"	"	"	

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Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0154 - EPA 300.0

Blank (AVF0154-BLK1)				Prepared & Analyzed: 06/14/12							
Chloride	ND	0.5		mg/L							
Sulfate as SO4	ND	0.5		"							

LCS (AVF0154-BS1)				Prepared & Analyzed: 06/14/12							
Chloride	9.9	0.5		mg/L	10.0		99.0	80-120			
Sulfate as SO4	9.8	0.5		"	10.0		98.0	80-120			

LCS Dup (AVF0154-BSD1)				Prepared & Analyzed: 06/14/12							
Chloride	9.9	0.5		mg/L	10.0		98.7	80-120	0.253	20	
Sulfate as SO4	9.9	0.5		"	10.0		98.9	80-120	0.945	20	

Duplicate (AVF0154-DUP1)			Source: 1206141-03			Prepared & Analyzed: 06/14/12					
Chloride	8.6	0.5		mg/L		8.8			1.39	20	
Sulfate as SO4	8.5	0.5		"		8.4			1.79	20	

Matrix Spike (AVF0154-MS1)			Source: 1206150-17			Prepared & Analyzed: 06/14/12					
Chloride	11.3	0.5		mg/L	10.0	0.5	109	75-125			
Sulfate as SO4	14.8	0.5		"	10.0	3.5	113	75-125			

Matrix Spike Dup (AVF0154-MSD1)			Source: 1206150-17			Prepared & Analyzed: 06/14/12					
Chloride	11.4	0.5		mg/L	10.0	0.5	109	75-125	0.132	20	
Sulfate as SO4	14.6	0.5		"	10.0	3.5	111	75-125	0.965	20	

Batch AVF0155 - EPA 300.0

Blank (AVF0155-BLK1)				Prepared & Analyzed: 06/14/12							
Chloride	ND	0.5		mg/L							
Sulfate as SO4	ND	0.5		"							

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0155 - EPA 300.0

LCS (AVF0155-BS1)		Prepared & Analyzed: 06/14/12									
Chloride	10.0	0.5		mg/L	10.0		100	80-120			
Sulfate as SO4	9.8	0.5		"	10.0		98.5	80-120			
LCS Dup (AVF0155-BSD1)		Prepared & Analyzed: 06/14/12									
Chloride	9.9	0.5		mg/L	10.0		98.8	80-120	1.43	20	
Sulfate as SO4	9.9	0.5		"	10.0		98.8	80-120	0.324	20	
Duplicate (AVF0155-DUP1)		Source: 1206150-02		Prepared & Analyzed: 06/14/12							
Chloride	0.3	0.5		mg/L		0.3			0.303	20	
Sulfate as SO4	1.7	0.5		"		2.1			19.3	20	
Matrix Spike (AVF0155-MS1)		Source: 1206150-06		Prepared & Analyzed: 06/14/12							
Chloride	11.1	0.5		mg/L	10.0	0.4	106	75-125			
Sulfate as SO4	11.5	0.5		"	10.0	0.9	106	75-125			
Matrix Spike Dup (AVF0155-MSD1)		Source: 1206150-06		Prepared & Analyzed: 06/14/12							
Chloride	11.3	0.5		mg/L	10.0	0.4	109	75-125	2.17	20	
Sulfate as SO4	11.7	0.5		"	10.0	0.9	108	75-125	1.49	20	

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Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0142 - SM 4500-H+ B

Duplicate (AVF0142-DUP1)		Source: 1206150-01		Prepared: 06/14/12 Analyzed: 06/15/12						Field	
pH	3.66	0.100		pH Units		3.66			0.00	20	
Duplicate (AVF0142-DUP2)		Source: 1206150-14		Prepared: 06/14/12 Analyzed: 06/15/12						Field	
pH	5.98	0.100		pH Units		5.93			0.840	20	

Batch AVF0144 - EPA 120.1

Duplicate (AVF0144-DUP1)		Source: 1206150-12		Prepared & Analyzed: 06/14/12							
Specific Conductance (EC)	101	5.00		uS/cm		101			0.00	20	
Duplicate (AVF0144-DUP2)		Source: 1206150-21		Prepared & Analyzed: 06/14/12							
Specific Conductance (EC)	106	5.00		uS/cm		106			0.189	20	

Batch AVF0196 - SM2320B

Blank (AVF0196-BLK1)				Prepared & Analyzed: 06/20/12							
Bicarbonate Alkalinity	ND	5.00		mg/L							
Carbonate Alkalinity	ND	5.00		"							
Hydroxide Alkalinity	ND	5.00		"							
Total Alkalinity	ND	5.00		"							
Blank (AVF0196-BLK2)				Prepared & Analyzed: 06/20/12							
Bicarbonate Alkalinity	ND	5.00		mg/L							
Carbonate Alkalinity	ND	5.00		"							
Hydroxide Alkalinity	ND	5.00		"							
Total Alkalinity	ND	5.00		"							

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Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0196 - SM2320B

LCS (AVF0196-BS1)					Prepared & Analyzed: 06/20/12						
Bicarbonate Alkalinity	102	5.00		mg/L	100		102	80-120			
Total Alkalinity	102	5.00		"	100		102	80-120			

LCS (AVF0196-BS2)					Prepared & Analyzed: 06/20/12						
Bicarbonate Alkalinity	104	5.00		mg/L	100		104	80-120			
Total Alkalinity	104	5.00		"	100		104	80-120			

LCS Dup (AVF0196-BSD1)					Prepared & Analyzed: 06/20/12						
Bicarbonate Alkalinity	92.0	5.00		mg/L	100		92.0	80-120	10.3	20	
Total Alkalinity	92.0	5.00		"	100		92.0	80-120	10.3	20	

LCS Dup (AVF0196-BSD2)					Prepared & Analyzed: 06/20/12						
Bicarbonate Alkalinity	103	5.00		mg/L	100		103	80-120	0.966	20	
Total Alkalinity	103	5.00		"	100		103	80-120	0.966	20	

Duplicate (AVF0196-DUP1)					Source: 1206150-20		Prepared & Analyzed: 06/20/12				
Bicarbonate Alkalinity	80.0	5.00		mg/L		80.0			0.00	20	
Carbonate Alkalinity	ND	5.00		"		ND				20	
Hydroxide Alkalinity	ND	5.00		"		ND				20	
Total Alkalinity	80.0	5.00		"		80.0			0.00	20	

Duplicate (AVF0196-DUP2)					Source: 1206164-02		Prepared & Analyzed: 06/20/12				
Bicarbonate Alkalinity	366	5.00		mg/L		364			0.548	20	
Carbonate Alkalinity	ND	5.00		"		ND				20	
Hydroxide Alkalinity	ND	5.00		"		ND				20	
Total Alkalinity	366	5.00		"		364			0.548	20	

Matrix Spike (AVF0196-MS1)					Source: 1206150-06		Prepared & Analyzed: 06/20/12				
Total Alkalinity	166	5.00		mg/L	100	64.0	102	80-120			

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0196 - SM2320B

Matrix Spike (AVF0196-MS2)		Source: 1206170-01			Prepared & Analyzed: 06/20/12						
Total Alkalinity	509	5.00		mg/L	100	420	89.0	80-120			
Matrix Spike Dup (AVF0196-MSD1)		Source: 1206150-06			Prepared & Analyzed: 06/20/12						
Total Alkalinity	162	5.00		mg/L	100	64.0	98.0	80-120	2.44	20	
Matrix Spike Dup (AVF0196-MSD2)		Source: 1206170-01			Prepared & Analyzed: 06/20/12						
Total Alkalinity	501	5.00		mg/L	100	420	81.0	80-120	1.58	20	

Batch AVF0226 - SM2340B

Blank (AVF0226-BLK1)		Prepared & Analyzed: 06/21/12									
Total Hardness	ND	5.00		mg/L							
LCS (AVF0226-BS1)		Prepared & Analyzed: 06/21/12									
Total Hardness	50.0	5.00		mg/L	50.0		100	80-120			
LCS Dup (AVF0226-BSD1)		Prepared & Analyzed: 06/21/12									
Total Hardness	50.0	5.00		mg/L	50.0		100	80-120	0.00	20	
Duplicate (AVF0226-DUP1)		Source: 1206150-20			Prepared & Analyzed: 06/21/12						
Total Hardness	72.0	5.00		mg/L		70.0			2.82	20	
Matrix Spike (AVF0226-MS1)		Source: 1206189-03			Prepared & Analyzed: 06/21/12						
Total Hardness	84.0	5.00		mg/L	50.0	40.0	88.0	75-125			
Matrix Spike Dup (AVF0226-MSD1)		Source: 1206189-03			Prepared & Analyzed: 06/21/12						
Total Hardness	80.0	5.00		mg/L	50.0	40.0	80.0	75-125	4.88	20	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0241 - SM 2540C

Blank (AVF0241-BLK1)					Prepared: 06/19/12 Analyzed: 06/24/12						
Total Dissolved Solids	ND	15.0		mg/L							
Blank (AVF0241-BLK2)					Prepared: 06/19/12 Analyzed: 06/24/12						
Total Dissolved Solids	ND	15.0		mg/L							
Duplicate (AVF0241-DUP1)					Source: 1206150-10		Prepared: 06/26/12 Analyzed: 06/28/12				
Total Dissolved Solids	25.0	15.0		mg/L		26.0			3.92	20	
Duplicate (AVF0241-DUP2)					Source: 1206150-21		Prepared: 06/19/12 Analyzed: 06/24/12				
Total Dissolved Solids	55.0	15.0		mg/L		57.0			3.57	20	

Batch AVF0279 - SM2340B

Blank (AVF0279-BLK1)					Prepared & Analyzed: 06/27/12						
Total Hardness	ND	5.00		mg/L							
LCS (AVF0279-BS1)					Prepared & Analyzed: 06/27/12						
Total Hardness	46.0	5.00		mg/L	50.0		92.0	80-120			
LCS Dup (AVF0279-BSD1)					Prepared & Analyzed: 06/27/12						
Total Hardness	50.0	5.00		mg/L	50.0		100	80-120	8.33	20	
Duplicate (AVF0279-DUP1)					Source: 1206150-07		Prepared & Analyzed: 06/27/12				
Total Hardness	68.0	5.00		mg/L		70.0			2.90	20	
Matrix Spike (AVF0279-MS1)					Source: 1206150-07		Prepared & Analyzed: 06/27/12				
Total Hardness	120	5.00		mg/L	50.0	70.0	100	75-125			

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0279 - SM2340B

Matrix Spike Dup (AVF0279-MSD1) Source: 1206150-07 Prepared & Analyzed: 06/27/12

Total Hardness	120	5.00		mg/L	50.0	70.0	100	75-125	0.00	20	
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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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Total Recoverable Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0166 - EPA 6010B

Blank (AVF0166-BLK1) Prepared: 06/18/12 Analyzed: 06/19/12

Aluminum	ND	50.0		ug/l							
Arsenic	ND	5.0		"							
Cadmium	ND	5.0		"							
Calcium	ND	100		"							
Copper	ND	5.0		"							
Iron	ND	20.0		"							
Magnesium	ND	50.0		"							
Potassium	ND	100		"							
Sodium	ND	200		"							
Zinc	ND	10.0		"							

LCS (AVF0166-BS1) Prepared: 06/18/12 Analyzed: 06/19/12

Aluminum	923	50.0		ug/l	1000		92.3	80-120			
Arsenic	883	5.0		"	1000		88.3	80-120			
Cadmium	865	5.0		"	1000		86.5	80-120			
Calcium	852	100		"	1000		85.2	80-120			
Copper	869	5.0		"	1000		86.9	80-120			
Iron	882	20.0		"	1000		88.2	80-120			
Magnesium	872	50.0		"	1000		87.2	80-120			
Potassium	9290	100		"	10000		92.9	80-120			
Sodium	1040	200		"	1000		104	80-120			
Zinc	847	10.0		"	1000		84.7	80-120			

LCS Dup (AVF0166-BSD1) Prepared: 06/18/12 Analyzed: 06/19/12

Aluminum	978	50.0		ug/l	1000		97.8	80-120	5.82	25	
Arsenic	988	5.0		"	1000		98.8	80-120	11.3	25	
Cadmium	964	5.0		"	1000		96.4	80-120	10.8	25	
Calcium	950	100		"	1000		95.0	80-120	10.9	25	
Copper	969	5.0		"	1000		96.9	80-120	10.9	25	
Iron	973	20.0		"	1000		97.3	80-120	9.85	25	
Magnesium	974	50.0		"	1000		97.4	80-120	11.0	25	
Potassium	9410	100		"	10000		94.1	80-120	1.26	25	
Sodium	900	200		"	1000		90.0	80-120	14.0	25	
Zinc	945	10.0		"	1000		94.5	80-120	11.0	25	

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Total Recoverable Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0166 - EPA 6010B

Matrix Spike (AVF0166-MS1)		Source: 1206150-10			Prepared: 06/18/12 Analyzed: 06/19/12					
Aluminum	1000	50.0		ug/l	1000	27.9	97.7	75-125		
Arsenic	988	5.0		"	1000	ND	98.8	75-125		
Cadmium	963	5.0		"	1000	ND	96.3	75-125		
Calcium	9090	100		"	1000	8160	93.3	75-125		
Copper	955	5.0		"	1000	0.900	95.4	75-125		
Iron	1440	20.0		"	1000	483	95.2	75-125		
Magnesium	3820	50.0		"	1000	2860	95.3	75-125		
Potassium	10400	100		"	10000	742	96.6	75-125		
Sodium	8110	200		"	1000	7060	105	75-125		
Zinc	942	10.0		"	1000	2.10	94.0	75-125		

Matrix Spike Dup (AVF0166-MSD1)		Source: 1206150-10			Prepared: 06/18/12 Analyzed: 06/19/12					
Aluminum	975	50.0		ug/l	1000	27.9	94.7	75-125	3.01	25
Arsenic	987	5.0		"	1000	ND	98.7	75-125	0.0506	25
Cadmium	964	5.0		"	1000	ND	96.4	75-125	0.104	25
Calcium	9180	100		"	1000	8160	102	75-125	0.953	25
Copper	960	5.0		"	1000	0.900	95.9	75-125	0.512	25
Iron	1450	20.0		"	1000	483	96.7	75-125	1.04	25
Magnesium	3860	50.0		"	1000	2860	99.4	75-125	1.07	25
Potassium	10300	100		"	10000	742	95.8	75-125	0.772	25
Sodium	8180	200		"	1000	7060	112	75-125	0.847	25
Zinc	942	10.0		"	1000	2.10	94.0	75-125	0.00	25

Batch AVF0175 - EPA 6010B

Blank (AVF0175-BLK1)		Prepared: 06/19/12 Analyzed: 06/20/12		
Aluminum	ND	50.0		ug/l
Arsenic	ND	5.0		"
Cadmium	ND	5.0		"
Calcium	ND	100		"
Copper	ND	5.0		"
Iron	ND	20.0		"
Magnesium	ND	50.0		"
Potassium	ND	100		"
Sodium	ND	200		"
Zinc	ND	10.0		"

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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Total Recoverable Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0175 - EPA 6010B

LCS (AVF0175-BS1)				Prepared: 06/19/12 Analyzed: 06/20/12							
Aluminum	951	50.0		ug/l	1000		95.1	80-120			
Arsenic	987	5.0		"	1000		98.7	80-120			
Cadmium	965	5.0		"	1000		96.5	80-120			
Calcium	988	100		"	1000		98.8	80-120			
Copper	978	5.0		"	1000		97.8	80-120			
Iron	978	20.0		"	1000		97.8	80-120			
Magnesium	975	50.0		"	1000		97.5	80-120			
Potassium	9670	100		"	10000		96.7	80-120			
Sodium	987	200		"	1000		98.7	80-120			
Zinc	961	10.0		"	1000		96.1	80-120			

LCS Dup (AVF0175-BSD1)				Prepared: 06/19/12 Analyzed: 06/20/12							
Aluminum	917	50.0		ug/l	1000		91.7	80-120	3.66	25	
Arsenic	988	5.0		"	1000		98.8	80-120	0.0810	25	
Cadmium	968	5.0		"	1000		96.8	80-120	0.383	25	
Calcium	1000	100		"	1000		100	80-120	1.57	25	
Copper	996	5.0		"	1000		99.6	80-120	1.84	25	
Iron	990	20.0		"	1000		99.0	80-120	1.17	25	
Magnesium	989	50.0		"	1000		98.9	80-120	1.39	25	
Potassium	9650	100		"	10000		96.5	80-120	0.197	25	
Sodium	965	200		"	1000		96.5	80-120	2.27	25	
Zinc	970	10.0		"	1000		97.0	80-120	0.933	25	

Matrix Spike (AVF0175-MS1)				Source: 1206142-02 Prepared: 06/19/12 Analyzed: 06/20/12							
Aluminum	955	50.0		ug/l	1000	58.8	89.6	75-125			
Arsenic	1020	5.0		"	1000	ND	102	75-125			
Cadmium	977	5.0		"	1000	ND	97.7	75-125			
Calcium	10900	100		"	1000	9660	121	75-125			
Copper	947	5.0		"	1000	2.80	94.4	75-125			
Iron	1040	20.0		"	1000	40.0	99.6	75-125			
Magnesium	2800	50.0		"	1000	1790	101	75-125			
Potassium	23300	100		"	10000	12500	108	75-125			
Zinc	1150	10.0		"	1000	148	100	75-125			

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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Total Recoverable Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0175 - EPA 6010B

Matrix Spike (AVF0175-MS2)		Source: 1206142-02RE1		Prepared: 06/19/12 Analyzed: 06/20/12							
Arsenic	995	5.0		ug/l	1000	ND	99.5	75-125			
Sodium	246000	200		"	1000	238000	720	75-125			QL-01

Matrix Spike Dup (AVF0175-MSD1)		Source: 1206142-02		Prepared: 06/19/12 Analyzed: 06/20/12							
Aluminum	945	50.0		ug/l	1000	58.8	88.6	75-125	1.12	25	
Arsenic	1010	5.0		"	1000	ND	101	75-125	0.0986	25	
Cadmium	972	5.0		"	1000	ND	97.2	75-125	0.482	25	
Calcium	10700	100		"	1000	9660	104	75-125	1.58	25	
Copper	944	5.0		"	1000	2.80	94.1	75-125	0.328	25	
Iron	1030	20.0		"	1000	40.0	98.8	75-125	0.775	25	
Magnesium	2760	50.0		"	1000	1790	97.5	75-125	1.19	25	
Potassium	23100	100		"	10000	12500	106	75-125	0.950	25	
Zinc	1140	10.0		"	1000	148	99.2	75-125	0.959	25	

Matrix Spike Dup (AVF0175-MSD2)		Source: 1206142-02RE1		Prepared: 06/19/12 Analyzed: 06/20/12							
Arsenic	990	5.0		ug/l	1000	ND	99.0	75-125	0.453	25	
Sodium	240000	200		"	1000	238000	120	75-125	2.47	25	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

Dissolved Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0173 - EPA 6010B

Blank (AVF0173-BLK1)

Prepared: 06/19/12 Analyzed: 06/22/12

Dissolved Aluminum	ND	50.0		ug/l							
Dissolved Arsenic	ND	5.0		"							
Dissolved Cadmium	ND	5.0		"							
Dissolved Copper	ND	5.0		"							
Dissolved Iron	ND	20.0		"							
Dissolved Zinc	ND	10.0		"							

LCS (AVF0173-BS1)

Prepared: 06/19/12 Analyzed: 06/21/12

Dissolved Aluminum	998	50.0		ug/l	1000		99.8	80-120			
Dissolved Arsenic	938	5.0		"	1000		93.8	80-120			
Dissolved Cadmium	984	5.0		"	1000		98.4	80-120			
Dissolved Copper	1030	5.0		"	1000		103	80-120			
Dissolved Iron	1010	20.0		"	1000		101	80-120			
Dissolved Zinc	983	10.0		"	1000		98.3	80-120			

LCS Dup (AVF0173-BSDJ)

Prepared: 06/19/12 Analyzed: 06/21/12

Dissolved Aluminum	1050	50.0		ug/l	1000		105	80-120	5.12	25	
Dissolved Arsenic	938	5.0		"	1000		93.8	80-120	0.00	25	
Dissolved Cadmium	981	5.0		"	1000		98.1	80-120	0.305	25	
Dissolved Copper	1020	5.0		"	1000		102	80-120	0.293	25	
Dissolved Iron	1000	20.0		"	1000		100	80-120	1.09	25	
Dissolved Zinc	980	10.0		"	1000		98.0	80-120	0.377	25	

Matrix Spike (AVF0173-MS1)

Source: 1206150-13

Prepared: 06/19/12 Analyzed: 06/21/12

Dissolved Aluminum	1020	50.0		ug/l	1000	56.5	95.8	75-125			
Dissolved Arsenic	941	5.0		"	1000	ND	94.1	75-125			
Dissolved Cadmium	983	5.0		"	1000	ND	98.3	75-125			
Dissolved Copper	1020	5.0		"	1000	4.30	102	75-125			
Dissolved Iron	1020	20.0		"	1000	21.7	100	75-125			
Dissolved Zinc	1000	10.0		"	1000	21.9	98.0	75-125			

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 06/29/12 15:18
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Dissolved Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0173 - EPA 6010B

Matrix Spike Dup (AVF0173-MSD1)		Source: 1206150-13			Prepared: 06/19/12 Analyzed: 06/21/12						
Dissolved Aluminum	1050	50.0		ug/l	1000	56.5	99.2	75-125	3.20	25	
Dissolved Arsenic	946	5.0		"	1000	ND	94.6	75-125	0.530	25	
Dissolved Cadmium	988	5.0		"	1000	ND	98.8	75-125	0.497	25	
Dissolved Copper	1040	5.0		"	1000	4.30	104	75-125	1.74	25	
Dissolved Iron	1040	20.0		"	1000	21.7	101	75-125	1.07	25	
Dissolved Zinc	1010	10.0		"	1000	21.9	99.1	75-125	1.09	25	

Batch AVF0178 - EPA 6010B

Blank (AVF0178-BLK1)		Prepared: 06/19/12 Analyzed: 06/20/12									
Dissolved Aluminum	ND	50.0		ug/l							
Dissolved Arsenic	ND	5.0		"							
Dissolved Cadmium	ND	5.0		"							
Dissolved Copper	ND	5.0		"							
Dissolved Iron	ND	20.0		"							
Dissolved Zinc	ND	10.0		"							

LCS (AVF0178-BS1)		Prepared: 06/19/12 Analyzed: 06/20/12									
Dissolved Aluminum	972	50.0		ug/l	1000		97.2	80-120			
Dissolved Arsenic	968	5.0		"	1000		96.8	80-120			
Dissolved Cadmium	975	5.0		"	1000		97.5	80-120			
Dissolved Copper	988	5.0		"	1000		98.8	80-120			
Dissolved Iron	982	20.0		"	1000		98.2	80-120			
Dissolved Zinc	976	10.0		"	1000		97.6	80-120			

LCS Dup (AVF0178-BSD1)		Prepared: 06/19/12 Analyzed: 06/20/12									
Dissolved Aluminum	962	50.0		ug/l	1000		96.2	80-120	1.03	25	
Dissolved Arsenic	963	5.0		"	1000		96.3	80-120	0.570	25	
Dissolved Cadmium	974	5.0		"	1000		97.4	80-120	0.103	25	
Dissolved Copper	992	5.0		"	1000		99.2	80-120	0.454	25	
Dissolved Iron	990	20.0		"	1000		99.0	80-120	0.903	25	
Dissolved Zinc	976	10.0		"	1000		97.6	80-120	0.0307	25	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

Dissolved Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AVF0178 - EPA 6010B

Matrix Spike (AVF0178-MS1)		Source: 1206150-21			Prepared: 06/19/12 Analyzed: 06/20/12						
Dissolved Aluminum	946	50.0		ug/l	1000	26.9	91.9	75-125			
Dissolved Arsenic	964	5.0		"	1000	ND	96.4	75-125			
Dissolved Cadmium	968	5.0		"	1000	ND	96.8	75-125			
Dissolved Copper	972	5.0		"	1000	4.90	96.7	75-125			
Dissolved Iron	1100	20.0		"	1000	108	99.8	75-125			
Dissolved Zinc	972	10.0		"	1000	1.00	97.1	75-125			
Matrix Spike Dup (AVF0178-MSD1)		Source: 1206150-21			Prepared: 06/19/12 Analyzed: 06/20/12						
Dissolved Aluminum	929	50.0		ug/l	1000	26.9	90.2	75-125	1.81	25	
Dissolved Arsenic	963	5.0		"	1000	ND	96.3	75-125	0.125	25	
Dissolved Cadmium	967	5.0		"	1000	ND	96.7	75-125	0.0723	25	
Dissolved Copper	978	5.0		"	1000	4.90	97.4	75-125	0.697	25	
Dissolved Iron	1100	20.0		"	1000	108	98.8	75-125	0.818	25	
Dissolved Zinc	972	10.0		"	1000	1.00	97.0	75-125	0.0412	25	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

Notes and Definitions

- QL-01 Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values.
- Field This analyte was analyzed outside of the EPA recommended hold time of ASAP and should be analyzed in the field.
- ND Analyte not detected at reporting limit.
- NR Not reported

Analysis Method

EPA 8260, EPA 8021/8015M
EPA 8270, EPA 8081, EPA 8082, EPA 8141, EPA 8015M (extractable)
Metals
TCLP
Not Specified

Prep Method

EPA 5030B
Water - EPA 3510C, Soil- EPA 3550B
Water- 3005A, Soil- 3050B
EPA 1311
Same as Analysis Method

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

CHAIN OF CUSTODY		REPORTING REQUIREMENTS BELOW:	
Excelchem Environmental Labs 1135 W. Sunset Blvd., Suite A Rocklin, CA 95765 PH: 916-543-4465 FX: 916-543-4468 Project Manager: Jeff Huggins Email Address for Reporting: jhuggins@waterboards.ca.gov Email Address for Reporting: Same Company Address: RWQC Central Valley Water Board 11020 Sun Center Drive Rancho Cordova, CA 95670 Billing Address: Same		PDF / Standard Format Geotracker / EDF / Provide Global ID EDD / Expts / Data Table MDL Format Data to be reported to States Database? Yes <input type="checkbox"/> No <input type="checkbox"/> EDT / CDPH - Provide Source Codes / PWS ID:	
Project Name: Walker Mine Project Location: Nevada County Sampler Name: Jeff Huggins Sampler Signature: Jeff Huggins		page 2 of 2	
ANALYSIS REQUEST			
Matrix Table: S = Soil / Sludge / Solid (circle one) A = Air CW = Drinking Water MW = Monitoring Wells GW = Groundwater TW = Treated Water WW = Waste Waters		LAB USES: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	
Matrix (See Matrix Table) Preserved? (Mark yes and/or both analyzed) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Meats Silt / Total 1 Liter Amber 500ml Amber 250ml Amber 40ml Voa - Amber 40ml Voa - Clear 1 Liter Amber 1 Gallon plastic 1000ml plastic 500ml plastic 250ml plastic California Tube Tedlar / Summa	
Sample ID: WM-4 WM-9 WM-11 WM-12 WM-13 WM-17 WM-14 WM-15 WM-16 WM-18 WM-20		Sampling Date / Time: 6/18/12 8:52 9:20 9:15 9:20 9:25 9:35 11:50 11:55 11:45 12:00	
Retinquished by: Jeff Huggins Retinquished by:		DATE TIME Received by: 6/14/12 8:35 6/19/12 8:41	
Remarks: General Mine Dissolved Metals Heavy Metals Lead Metals		Remarks: General Mine	

Excelchem Environmental Lab.

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Laboratory Representative

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

Page 1 of 1

*Monica - please attach to
COC when
it comes in*

Front Desk

From: Jeff Huggins (jhuggins@waterboards.ca.gov)
Sent: Tuesday, June 05, 2012 1:27 PM
To: Front Desk
Cc: Leticia Valadez

Subject: Request for Sample Bottles and Analytical Services - Walker Mine Project

We are planning on doing some water sampling (no soils) next week at an old abandoned copper mine (Walker Mine) in Plumas County. In October of last year Excelchem provided bottles and analytical services for this same site. Excelchem's Work Order number for the 23 November 2011 analytical report is: 1111071.

We would like Excelchem to analyze and report for the same constituents as last year. Those were:

1. Total Metals - Aluminum, Arsenic, Copper, Iron, Zinc, and Cadmium. All with HNO3 (or equal) preservative.
2. Dissolved Metals - Aluminum, Arsenic, Copper, Iron, Zinc, and Cadmium.
3. General Minerals - Total Alkalinity, Bicarbonate as CaCO3, Carbonate as CaCO3, Hydroxide as CaCO3, Chloride, Specific Conductance (EC), Calcium, Magnesium, Potassium, Sodium, Hardness as CaCO3, pH, Sulfate as SO4 and Total Dissolved Solids.

Items 1 and 2 above should be analyzed on an individual basis (not as a Bid Group) to reduce costs. Item 3 should be run as Bid Group 20 (Title 22 General Minerals) in accordance with the Regional Water Boards contract if that is most effective cost-wise.

Reporting limits for metals should be sufficiently low to meet the following criteria:

- Al 50 ug/L
- As 5 ug/L
- Cd 5 ug/L
- Cu 5 ug/L
- Fe 150 ug/L
- Zn 20 ug/L

For this sampling event we have 25 sample locations. I believe that we used 1L ml plastic bottles for the total, dissolved, and general minerals analysis and that Excelchem preserved the samples upon receipt at the lab the day following sample collection. If this protocol has changed, please contact me and let me know what to expect.

We need the sample bottles delivered to our Rancho Cordova office no later than 12:00pm on Monday June 11th and we will drop off the sample bottles at your Roseville facility on the morning of Thursday June 14th.

Please contact me should you have any questions.

Regards,

Jeff S Huggins
Water Resources Control Engineer
Title 27 Permitting and Mining
Regional Water Quality Control Board
11020 Sun Center Drive, # 200
Rancho Cordova, CA 95670
Phone (916)464-4639
Fax (916)464-4782

6/5/2012

Excelchem Environmental Lab.

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Laboratory Representative

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
06/29/12 15:18

Sample Integrity

WORK ORDER 1206150

Date Received: 6-14-12

Section 1 - Sample Arrival Info.

Sample Transport: ONTRAC UPS USPS Walk-In EXCELCHEM Courier Fed-Ex Other: _____

Transported In: Ice Chest Box Hand

Describe type of packing materials: Bubble Wrap Foam Packing Peanuts Paper Other: N/A

Has chilling process begun? (Y) N Samples Received: Chilled to Touch / Ambient On Ice

Temperature of Samples (°C): 3 Ice Chest Temperature(s) (°C): 2

Section 2 - Bottle/Analysis Info.

	Yes	No	N/A	Comments
Did all bottles arrive unbroken and intact?	<input checked="" type="checkbox"/>			
Did all bottle labels agree with COC?	<input checked="" type="checkbox"/>			no sample del./flow on COC for WM-20
Were correct containers used for the tests requested?	<input checked="" type="checkbox"/>			*General minerals wanted not listed
Were correct preservations used for the tests requested?	<input checked="" type="checkbox"/>			
Was a sufficient amount of sample sent for tests indicated?	<input checked="" type="checkbox"/>			
Were bubbles present in VOA Vials?: (Volatile Methods Only)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

used info. from bottle

Section 3 - Summa/Flow regulator Info.

Used Summa#: _____
Unused Summa#: _____
Cleaning Summa#: _____
Regulator#: _____

Was there any visual damage to summa canisters or flow regulators? Explain. N/A

WM-20 taken from bottle collected at 120

Section 4 - COC Info.

	Completed		Info From Container	Completed		Comments
	Yes	No		Yes	No	
Was COC Received	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Date Sampled	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Time Sampled	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Sample ID	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Rush TAT		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Analysis Requested				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Samples arrived within holding time				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Any hold times less than 72 hrs				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Client Name				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Address/Telephone #				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Last sample is not checked (WM-20)

Section 5 - Comments / Discrepancies

Was Client notified of discrepancies: Yes No N/A Notified by: _____

Explanations / Comments: _____

Samples Labeled by: MB
Bin #s: 39
COC Scanned/Attached by: MB
Sample labels reviewed by: _____

Filled Out by: CE Date: 6-14-12 Time: 853

[Signature]

Exhibit 77

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

INSPECTION REPORT

3 July 2013

DISCHARGER: Walker Mine, Abandoned and Unclaimed Private Property
LOCATION & COUNTY: Plumas County
CONTACT(S): Central Valley Water Board, Jeff Huggins
INSPECTION DATE: 18-19 June 2013
INSPECTED BY: Jeff Huggins, Water Resources Control Engineer
ACCOMPANIED BY: Bill Brattain, Vino Jain, Water Resources Control Engineers

COMMENTS:

On June 18-19, Board staff performed the annual spring inspection of the Walker Mine in Plumas County as required by Walker Mine Operations and Maintenance Procedures, dated June 1997.

UNDERGROUND AREAS INSPECTED:

Portal Area:

The portal door at the main 700 level adit was securely locked upon our arrival. There did not appear to be any new bullet holes in the steel door that secures access to the 700 level adit nor vandalism of the portal door. The drainage channel between the mine portal and the waste dump was open and flowing at about 0.5 gallons per minute. All four of the heavy-duty locks on the portal doors were securely locked upon leaving the mine portal.

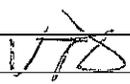
Ventilation Fan:

As shown in photos # 3-5, the flexible ventilation duct was hooked to the ventilation fan which was powered by the portable generator and fresh air was pushed through the rigid ventilation ducting to the mine seal. The ventilation system was allowed to run for approximately 1-hour before entry was made into the 700 level adit. This configuration results in fresh air continually being pushed towards the mine seal area in the 700 level adit and discernible airflow into the inspectors face as you advance into the 700 level adit.

Seal Pressure:

A brief inspection of the Telog pressure data recorder (photo #7) indicated that it was recording pressure data daily as programmed. The Telog data recorder is connected via a 2,500-foot long electronic cable to a Druck pressure sensor at the mine seal. Once per day the data recorder measures and stores an electronic current measurement (mAmps) from the Druck pressure sensor. This data is converted mathematically by Board staff to feet of pressure head on the mine seal¹. At the time of the inspection, a current measurement of 7.06 mAmps (approximately 141 feet of head over the mine seal) was recorded. For the period 1 October 2012 through 16 June 2013, a maximum

¹ (Note: The Druck pressure sensor is scaled to transmit 4 to 20 mAmps for 0 to 300 psi).

Approved: 

Inspection ID# 13055985

WDID #5A320704003

pressure head of 144.7 feet over the mine seal was recorded on 1 October 2012 indicating that 2012-2013 precipitation was below normal. Board staff downloaded the pressure data from the Telog data recorder during the inspection and used it to update the attached *Walker Mine Concrete Seal Pressure Head and Snow Water Content* graph which is attached to this report. The batteries that power the Druck pressure sensor recorder were removed and replaced with recharged batteries during this inspection (photo #6).

Corrugated Metal Pipe:

The drainage channel inside the corrugated section of the mine tunnel was working effectively and was not obstructed. No corrosion, significant seepage, deflection, or physical damage was observed in the corrugated metal pipe section of the 700 level adit.

Timbered Section:

As shown in photo #8, the timbered section of the 700 level was open and clear. Conditions in this section were wet and appear to be from shallow groundwater infiltration from the hillside directly above the timber supported section (first 900 feet) of the 700 level adit. No major support problems were observed. However, a number of the timber sets, lagging, and blocking are showing signs of significant decay and need to be replaced.

Unsupported Section:

As shown in photo #9, no scaling was necessary in the unsupported section of the 700 level and no signs of recent rockfall were noted. Water seepage observed in the unsupported section was minimal.

Mine Seal, Piping and Valves

Conditions at the mine seal are shown in photos #10-14. Water seepage from around the mine seal and pooled water conditions at the base of the mine seal appeared to be unchanged since July of 2010. Seepage appears to come from the crown of the seal and along both sides. Iron precipitate is evident on the face of the mine seal (nearly centered) but does not appear to be significantly different than that shown in the *Walker Mine Seal Testing and Evaluation Report* (GEI Consultants, 1 March 2002). The piping and valves were uncovered and inspected and no seepage or significant changes in corrosion were noted. The valves have not been tested for a number of years due to concern that they may not close completely if opened. Samples of the water pooled at the base of the seal (monitoring location #30) were collected for laboratory analysis.

SURFACE AREAS INSPECTED:

Walker Mine Tailings Facility:

Board staff also inspected and obtained water samples from in and around the Walker Mine tailings facility (see photos 18-34) located on adjacent public lands administered by the United States Department of Agriculture Forest Service (USFS).

Subsidence Areas (Central Orebody and Piute Orebody):

Due to time constraints, inspection of the diversion channels and the subsidence areas was not made during this inspection.

Water Quality Monitoring:

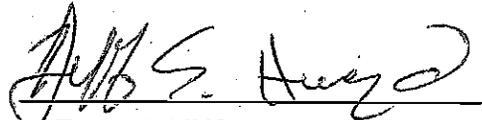
Surface water samples were collected from Dolly, Little Grizzly, Nye, and Ward Creeks. All of the sample locations had sufficient surface water to sample. Laboratory results are pending.

SUMMARY:

A semiannual inspection was made of the Walker Mine site. Surface water monitoring was performed and water pressure measurements on the mine seal were obtained. New batteries were installed for the data logger.

RECOMMENDATIONS:

An experience underground mine contractor should be hired to inspect the timbered section and the unsupported section of the 700 level adit for signs of ground support deterioration. Furthermore, while the stainless steel piping and valves need to be inspected and physically tested to ensure their operability in accordance with the Board's Operations and Maintenance Plan for the Walker Mine, there is some potential risk that the valves cannot be completely closed after being opened.



JEFF HUGGINS

Water Resources Control Engineer



Photo 1. Walker Mine Concentrator and Mill Foundations.

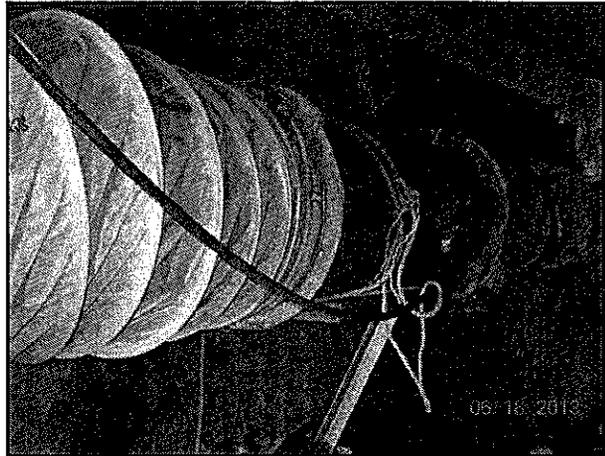


Photo 4. Showing Jetair axiflow fan for ventilation of the 700 level adit.

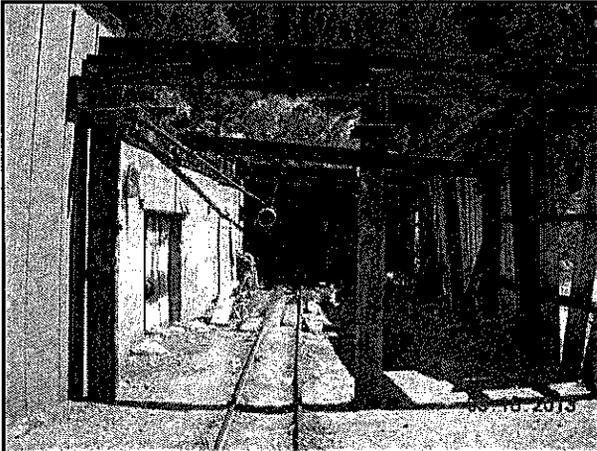


Photo 2. Walker Mine 700 Level Adit/Portal.

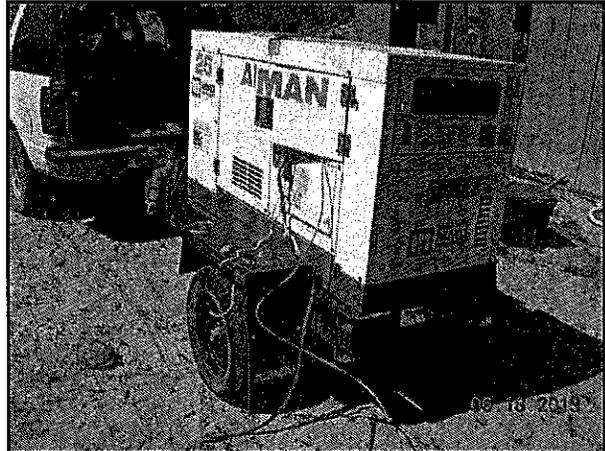


Photo 5. Portable generator used to power the ventilation fan.

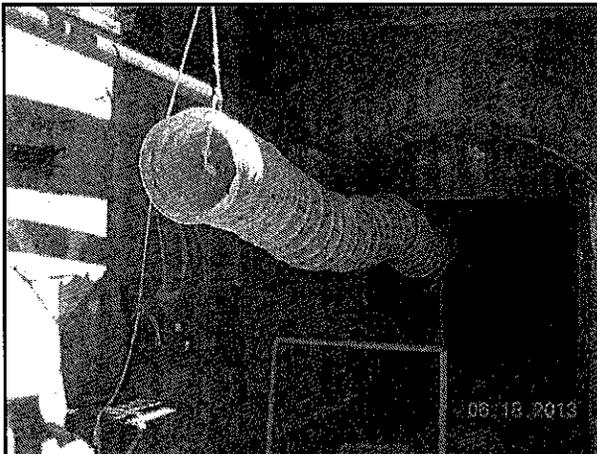


Photo 3. Flexible ventilation duct for the ventilation system at the Walker Mine.

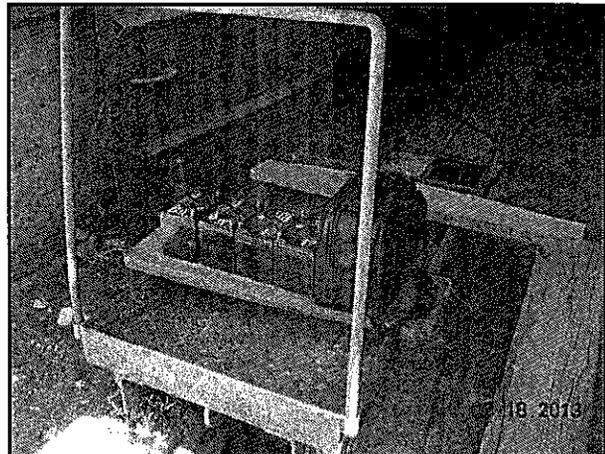


Photo 6. Fresh batteries for the Walker Mine pressure data recorder.

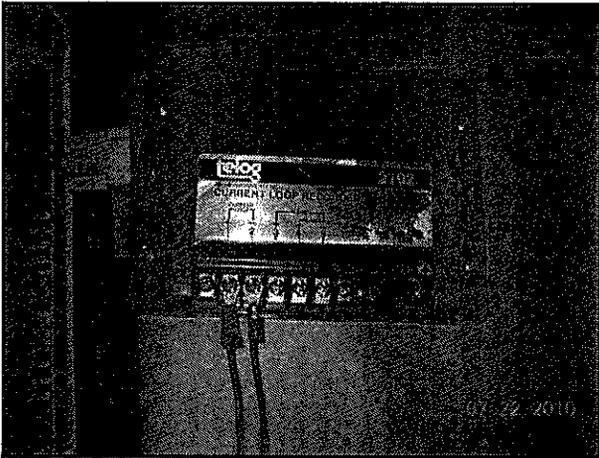


Photo 7. Prior photo of the Walker Mine pressure data recorder located approximately 200 feet inside the 700 level adit.

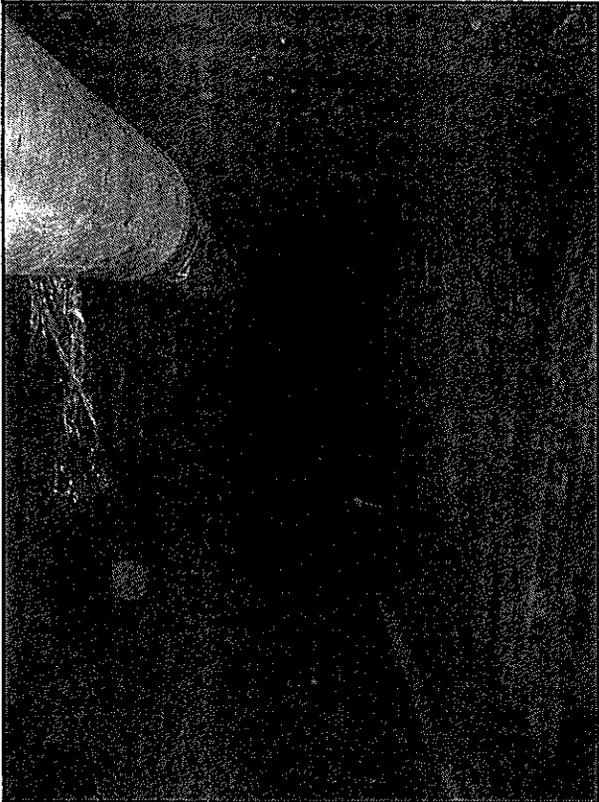


Photo 8. Timber supported section of the 700 level adit. No major support problems were observed, however a number of the timber sets, lagging, and blocking are showing signs of significant decay and should be replaced.



Photo 9. Examining a stull in the unsupported section of the 700 level adit. No scaling was necessary and no signs of recent rockfall were noted. Water seepage observed in the unsupported section was minimal.



Photo 10. Taken at the concrete mine seal in the 700 level adit. Plastic bags are used to protect the twin stainless steel valves, pressure transmitter, and pressure gauge.

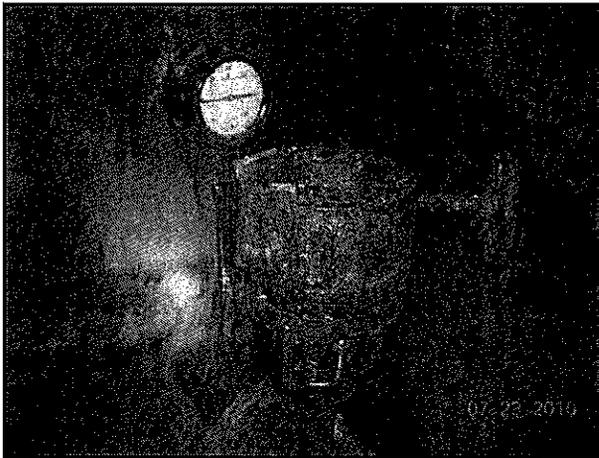


Photo 11. Prior photo of the 4-inch valve and pressure gauge at the mine seal.



Photo 14. Pooled water is approximately 14 inches deep at the base of the mine seal. No significant changes were noted at the mine seal location.

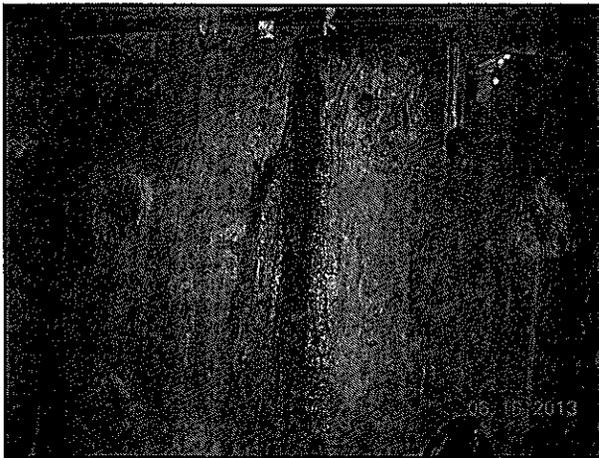


Photo 12. Showing iron precipitate forming on the face of the mine seal from seepage around the seal.

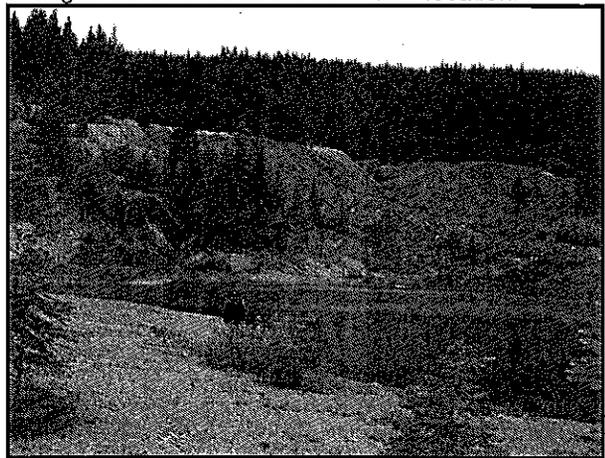


Photo 15. Settling pond located below the Walker Mine portal.



Photo 13. Showing the extent of standing water from seepage around the mine seal. The water seeps into the floor of the 700 level adit within 200 feet of the seal.

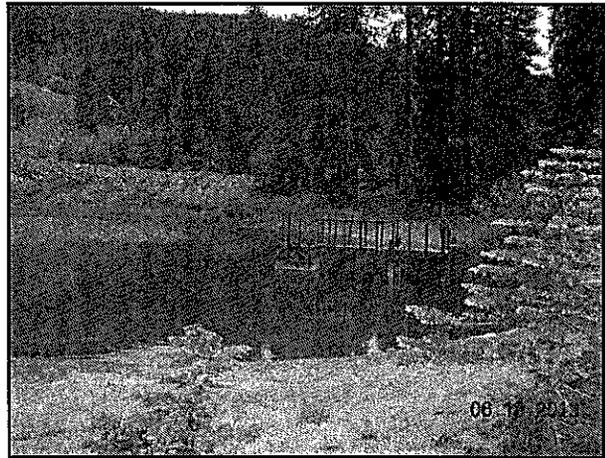


Photo 16. Photo of the west side of the settling pond, monitoring location #19.

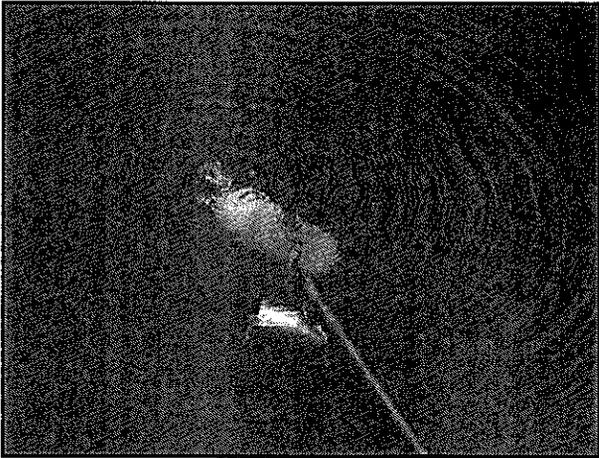


Photo 17. Sampling at monitoring location #19.

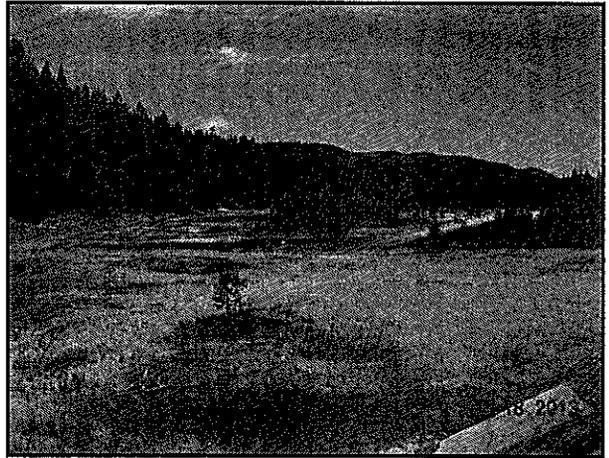


Photo 20. Taken from southeast side of the Walker Mine tailings impoundment looking northwest.

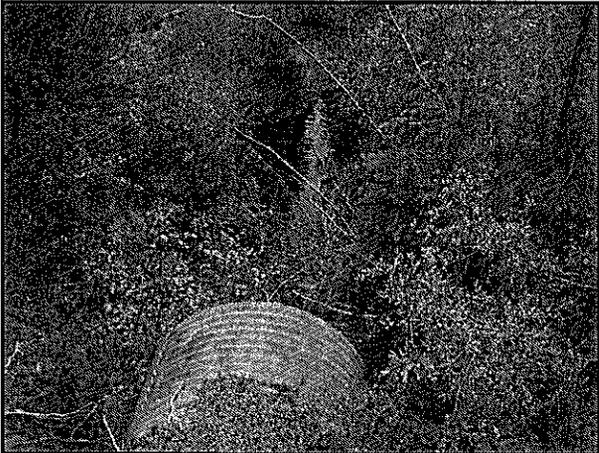


Photo 18. Photo of monitoring location #4, Dolly Creek crossing County Road 112 below the Walker Mine.

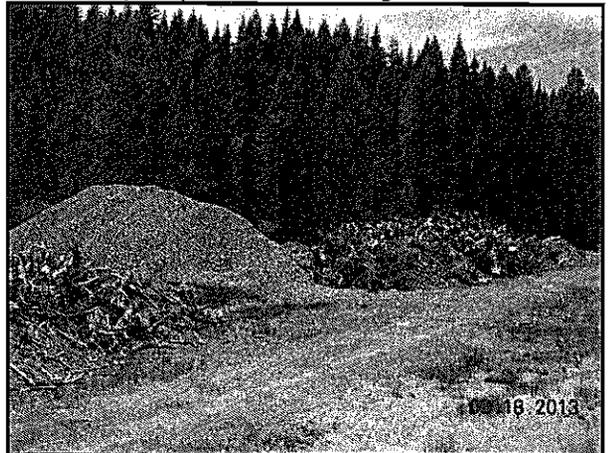


Photo 21. Southeast side of the Walker Mine tailings impoundment showing stockpiled stumps and gravel from the USFS 2008 construction of the Dolly Creek diversion channel.



Photo 19. Taken from spot of previous photo showing exposed tailings in the Dolly Creek drainage below County Road 112.

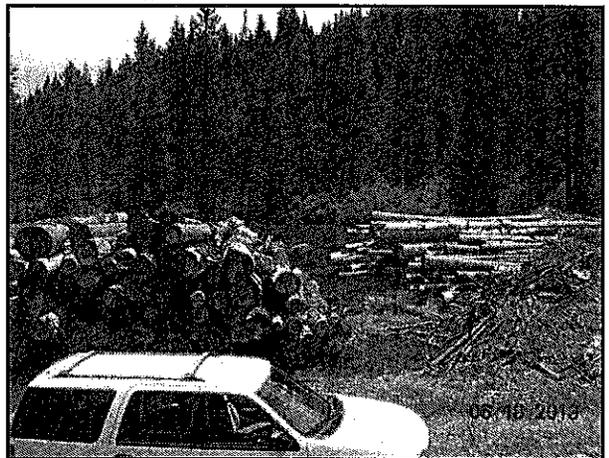


Photo 22. Taken from same location as photos 20-21 showing stockpiled logs and debris at the Walker Mine tailings impoundment.

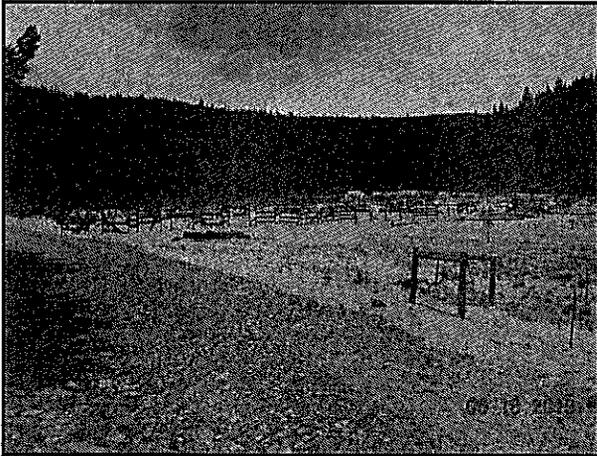


Photo 23. Showing wind erosion control structures (wind fences) on southeastern side of the tailings.



Photo 26. Photo of Dolly Creek outfall to Little Grizzly Creek showing fine grained sediment (tailings) being discharged to Little Grizzly Creek.



Photo 24. Showing fugitive dust (tailings). Wind conditions were considered to be slight.



Photo 27. Closeup view of Photo 26.

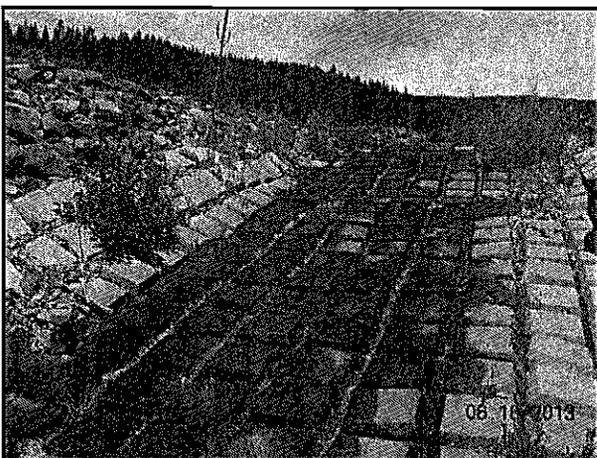


Photo 25. Showing the Dolly Creek diversion channel outfall to Little Grizzly Creek. Photo taken from Little Grizzly Creek.

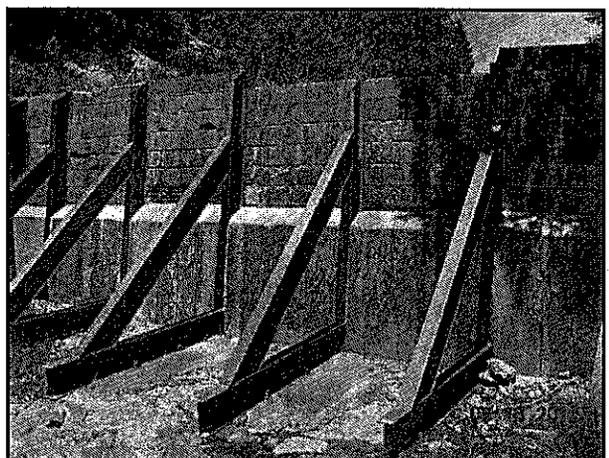


Photo 28. USFS Dam, monitoring location #6. No water was observed flowing over the dam.



Photo 29. Taken from the upstream side of the USFS Dam. No water was observed at this location.

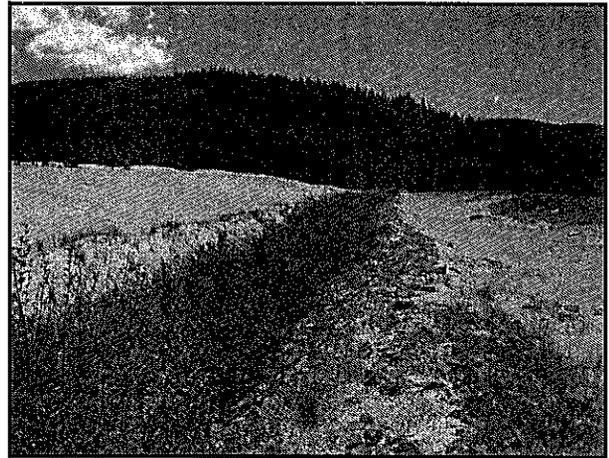


Photo 32. Showing well established vegetation in the Dolly Creek diversion channel.



Photo 30. Showing the Dolly Creek diversion channel headwork's above the tailings impoundment.



Photo 33. Showing the base of the vegetation in the Dolly Creek diversion channel.

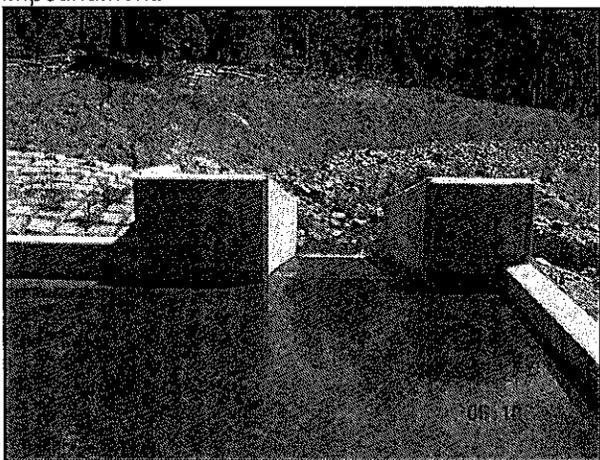


Photo 31. Showing the headwork's outfall to the Dolly Creek diversion channel realignment.



Photo 34. Showing fine grained sediment (tailings) in the Dolly Creek diversion channel.

Exhibit 78

EXCELCHEM
Environmental Labs

1135 W Sunset Boulevard
Suite A
Rocklin, CA 95765
Phone# 916-543-4445
Fax# 916-543-4449



ELAP Certificate No. : 2119

08 July 2013

Jeff Huggins

RWQC Central Valley

11020 Sun Center Dr. #200

Rancho Cordova, CA 95670

RE: Walker Mine

Work order number:1306272

Enclosed are the results of analyses for samples received by the laboratory on 06/19/13 15:21. All Quality Control results are within acceptable limits except where noted as a case narrative. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

John Somers, Lab Director

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
07/08/13 09:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WM-1	1306272-01	Water	06/18/13 09:45	06/19/13 15:21
WM-30	1306272-02	Water	06/18/13 11:45	06/19/13 15:21
WM-2	1306272-03	Water	06/18/13 12:30	06/19/13 15:21
WM-19	1306272-04	Water	06/18/13 12:45	06/19/13 15:21
WM-3	1306272-05	Water	06/18/13 12:50	06/19/13 15:21
WM-4	1306272-06	Water	06/18/13 13:00	06/19/13 15:21
WM-9	1306272-07	Water	06/18/13 13:15	06/19/13 15:21
WM-5	1306272-08	Water	06/18/13 13:30	06/19/13 15:21
WM-7b	1306272-09	Water	06/18/13 13:50	06/19/13 15:21
WM-7c	1306272-10	Water	06/18/13 14:00	06/19/13 15:21
WM-7a	1306272-11	Water	06/18/13 14:25	06/19/13 15:21
WM-11	1306272-12	Water	06/19/13 08:15	06/19/13 15:21
WM-12	1306272-13	Water	06/19/13 08:30	06/19/13 15:21
WM-13	1306272-14	Water	06/19/13 08:40	06/19/13 15:21
WM-17	1306272-15	Water	06/19/13 08:50	06/19/13 15:21
WM-18	1306272-16	Water	06/19/13 09:20	06/19/13 15:21
WM-16	1306272-17	Water	06/19/13 09:45	06/19/13 15:21
WM-15	1306272-18	Water	06/19/13 09:55	06/19/13 15:21
WM-14	1306272-19	Water	06/19/13 10:00	06/19/13 15:21
WM-20	1306272-20	Water	06/19/13 11:00	06/19/13 15:21

Excelchem Environmental Lab.



Laboratory Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Excelchem Environmental Labs

RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 07/08/13 09:50
--	---	----------------------------------

**WM-1
1306272-01 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.6	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	
Sulfate as SO4	1.0	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	62.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	62.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	110	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.60	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	90.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	52.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWF0299	06/20/13	06/26/13	EPA 200.7	
Arsenic	12.5	10.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	12100	100	79.0	"	1	"	"	"	"	
Copper	93.6	5.0	0.8	"	1	"	"	"	"	
Iron	34.8	20.0	11.5	"	1	"	"	"	"	
Magnesium	4580	50.0	15.6	"	1	"	"	"	"	
Potassium	827	200	46.8	"	1	"	"	"	"	
Sodium	4770	200	120	"	1	"	"	"	"	
Zinc	19.8	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	10.6	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.3	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	66.4	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	24.8	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	23.1	10.0	0.3	"	1	"	"	"	"	

Excelchem Environmental Lab.



Laboratory Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
07/08/13 09:50

WM-30
1306272-02 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.6	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	
Wet Chemistry										
Bicarbonate Alkalinity	ND	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	381	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	4.27	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	285	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	558	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Arsenic	1.7	10.0	1.0	ug/l	1	AWF0299	06/20/13	06/26/13	EPA 200.7	J
Cadmium	11.5	5.0	0.1	"	1	"	"	"	"	
Calcium	36500	100	79.0	"	1	"	"	"	"	
Copper	14600	5.0	0.8	"	1	"	"	"	"	
Iron	719	20.0	11.5	"	1	"	"	"	"	
Magnesium	7110	50.0	15.6	"	1	"	"	"	"	
Potassium	2230	200	46.8	"	1	"	"	"	"	
Sodium	2660	200	120	"	1	"	"	"	"	
Zinc	888	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	3910	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	1.1	10.0	1.0	"	1	"	"	"	"	J
Dissolved Cadmium	11.0	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	13300	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	109	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	876	10.0	0.3	"	1	"	"	"	"	

Excelchem Environmental Lab.



Laboratory Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Excelchem Environmental Labs

RWQC Central Valley
 11020 Sun Center Dr. #200
 Rancho Cordova, CA 95670

Project: Walker Mine
 Project Number: [none]
 Project Manager: Jeff Huggins

Date Reported:
 07/08/13 09:50

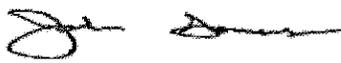
WM-30
1306272-02RE1 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Sulfate as SO4	193	5.0	0.7	mg/L	10	AWF0248	06/19/13	06/19/13	EPA 300.0	
Total Recoverable Metals										
Aluminum	4820	100	49.0	ug/l	2	AWF0299	06/20/13	07/01/13	EPA 200.7	

Excelchem Environmental Lab.



Laboratory Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

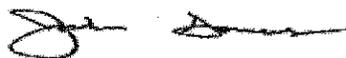
Excelchem Environmental Labs

RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 07/08/13 09:50
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**WM-2
1306272-03 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	0.3	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	80.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	80.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	135	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.41	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	92.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	88.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	54.2	50.0	24.5	ug/l	1	AWF0299	06/20/13	06/26/13	EPA 200.7	
Arsenic	1.5	10.0	1.0	"	1	"	"	"	"	J
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	15400	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	70.8	20.0	11.5	"	1	"	"	"	"	
Magnesium	7700	50.0	15.6	"	1	"	"	"	"	
Potassium	720	200	46.8	"	1	"	"	"	"	
Sodium	2870	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	38.1	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	13.9	20.0	11.5	"	1	"	"	"	"	J
Dissolved Zinc	9.1	10.0	0.3	"	1	"	"	"	"	J

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**WM-19
1306272-04 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	
Sulfate as SO4	31.5	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	56.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	56.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	162	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.28	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	116	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	52.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	44.9	50.0	24.5	ug/l	1	AWF0299	06/20/13	06/26/13	EPA 200.7	J
Arsenic	1.0	10.0	1.0	"	1	"	"	"	"	J
Cadmium	0.4	5.0	0.1	"	1	"	"	"	"	J
Calcium	18300	100	79.0	"	1	"	"	"	"	
Copper	327	5.0	0.8	"	1	"	"	"	"	
Iron	303	20.0	11.5	"	1	"	"	"	"	
Magnesium	5450	50.0	15.6	"	1	"	"	"	"	
Potassium	1800	200	46.8	"	1	"	"	"	"	
Sodium	5340	200	120	"	1	"	"	"	"	
Zinc	27.8	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.3	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	139	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	49.0	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	21.3	10.0	0.3	"	1	"	"	"	"	

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**WM-3
1306272-05 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.3	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	0.8	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	76.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	76.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	133	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.57	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	83.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	72.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	116	50.0	24.5	ug/l	1	AWF0299	06/20/13	06/26/13	EPA 200.7	
Arsenic	1.9	10.0	1.0	"	1	"	"	"	"	J
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	15000	100	79.0	"	1	"	"	"	"	
Copper	4.7	5.0	0.8	"	1	"	"	"	"	J
Iron	750	20.0	11.5	"	1	"	"	"	"	
Magnesium	7370	50.0	15.6	"	1	"	"	"	"	
Potassium	660	200	46.8	"	1	"	"	"	"	
Sodium	2920	200	120	"	1	"	"	"	"	
Zinc	1.9	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	7.6	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	195	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	2.9	10.0	0.3	"	1	"	"	"	"	J

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Project Manager: Jeff Huggins

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**WM-4
1306272-06 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	1.1	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	72.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	72.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	133	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.53	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	81.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	62.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	44.2	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	15600	100	79.0	"	1	"	"	"	"	
Copper	13.1	5.0	0.8	"	1	"	"	"	"	
Iron	387	20.0	11.5	"	1	"	"	"	"	
Magnesium	7300	50.0	15.6	"	1	"	"	"	"	
Potassium	702	200	46.8	"	1	"	"	"	"	
Sodium	3280	200	120	"	1	"	"	"	"	
Zinc	5.4	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	10.4	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	174	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	2.9	10.0	0.3	"	1	"	"	"	"	J

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**WM-9
1306272-07 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	7.4	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	70.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	70.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	138	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.32	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	103	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	68.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	27.2	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	17700	100	79.0	"	1	"	"	"	"	
Copper	10.9	5.0	0.8	"	1	"	"	"	"	
Iron	703	20.0	11.5	"	1	"	"	"	"	
Magnesium	5480	50.0	15.6	"	1	"	"	"	"	
Potassium	1410	200	46.8	"	1	"	"	"	"	
Sodium	4370	200	120	"	1	"	"	"	"	
Zinc	5.6	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	6.6	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	414	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	3.0	10.0	0.3	"	1	"	"	"	"	J

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Project Manager: Jeff Huggins

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**WM-5
1306272-08 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	0.2	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	66.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	66.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	114	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.19	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	78.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	52.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	27.0	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	13500	100	79.0	"	1	"	"	"	"	
Copper	1.1	5.0	0.8	"	1	"	"	"	"	J
Iron	810	20.0	11.5	"	1	"	"	"	"	
Magnesium	5230	50.0	15.6	"	1	"	"	"	"	
Potassium	1230	200	46.8	"	1	"	"	"	"	
Sodium	4100	200	120	"	1	"	"	"	"	
Zinc	0.6	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	3.6	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	478	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	3.1	10.0	0.3	"	1	"	"	"	"	J

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**WM-7b
1306272-09 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	1.2	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	74.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	74.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	128	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.61	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	88.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	66.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	37.0	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	15500	100	79.0	"	1	"	"	"	"	
Copper	15.4	5.0	0.8	"	1	"	"	"	"	
Iron	327	20.0	11.5	"	1	"	"	"	"	
Magnesium	6910	50.0	15.6	"	1	"	"	"	"	
Potassium	742	200	46.8	"	1	"	"	"	"	
Sodium	3490	200	120	"	1	"	"	"	"	
Zinc	3.7	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	11.3	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	180	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	2.7	10.0	0.3	"	1	"	"	"	"	J

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**WM-7c
1306272-10 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	7.6	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	66.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	66.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	132	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.78	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	90.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	56.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	27.9	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	17300	100	79.0	"	1	"	"	"	"	
Copper	1.4	5.0	0.8	"	1	"	"	"	"	J
Iron	1210	20.0	11.5	"	1	"	"	"	"	
Magnesium	4840	50.0	15.6	"	1	"	"	"	"	
Potassium	1580	200	46.8	"	1	"	"	"	"	
Sodium	4660	200	120	"	1	"	"	"	"	
Zinc	1.5	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	1.5	10.0	1.0	"	1	"	"	"	"	J
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	3.6	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	634	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	2.6	10.0	0.3	"	1	"	"	"	"	J

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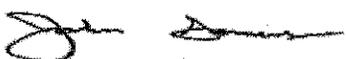
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**WM-7a
1306272-11 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	1.1	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	76.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	76.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	134	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.60	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	90.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	66.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	16200	100	79.0	"	1	"	"	"	"	
Copper	17.6	5.0	0.8	"	1	"	"	"	"	
Iron	500	20.0	11.5	"	1	"	"	"	"	
Magnesium	7360	50.0	15.6	"	1	"	"	"	"	
Potassium	717	200	46.8	"	1	"	"	"	"	
Sodium	3400	200	120	"	1	"	"	"	"	
Zinc	2.7	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	13.3	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	375	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	3.8	10.0	0.3	"	1	"	"	"	"	J

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**WM-11
1306272-12 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.3	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	0.8	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	26.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	26.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	40.3	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.33	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	36.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	18.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	74.0	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	4960	100	79.0	"	1	"	"	"	"	
Copper	3.5	5.0	0.8	"	1	"	"	"	"	J
Iron	52.9	20.0	11.5	"	1	"	"	"	"	
Magnesium	1520	50.0	15.6	"	1	"	"	"	"	
Potassium	458	200	46.8	"	1	"	"	"	"	
Sodium	2320	200	120	"	1	"	"	"	"	
Zinc	10.4	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	29.9	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	J
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	3.0	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	36.2	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	9.2	10.0	0.3	"	1	"	"	"	"	J

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**WM-12
1306272-13 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.3	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	0.5	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	18.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	18.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	27.7	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	6.46	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	25.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	14.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	67.6	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	3270	100	79.0	"	1	"	"	"	"	
Copper	5.2	5.0	0.8	"	1	"	"	"	"	
Iron	37.4	20.0	11.5	"	1	"	"	"	"	
Magnesium	1510	50.0	15.6	"	1	"	"	"	"	
Potassium	291	200	46.8	"	1	"	"	"	"	
Sodium	1110	200	120	"	1	"	"	"	"	
Zinc	7.0	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	42.1	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	J
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	4.8	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	23.2	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	8.6	10.0	0.3	"	1	"	"	"	"	J

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**WM-13
1306272-14 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.2	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	0.2	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	40.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	40.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	86.5	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.00	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	71.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	44.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	10800	100	79.0	"	1	"	"	"	"	
Copper	1.1	5.0	0.8	"	1	"	"	"	"	J
Iron	14.5	20.0	11.5	"	1	"	"	"	"	J
Magnesium	4550	50.0	15.6	"	1	"	"	"	"	
Potassium	408	200	46.8	"	1	"	"	"	"	
Sodium	2400	200	120	"	1	"	"	"	"	
Zinc	2.1	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	2.3	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	3.2	10.0	0.3	"	1	"	"	"	"	J

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11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

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Project Number: [none]
Project Manager: Jeff Huggins

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07/08/13 09:50

**WM-17
1306272-15 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	
Sulfate as SO4	0.6	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	114	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	114	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	152	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.69	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	96.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	70.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	52.5	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	19400	100	79.0	"	1	"	"	"	"	
Copper	1.6	5.0	0.8	"	1	"	"	"	"	J
Iron	39.3	20.0	11.5	"	1	"	"	"	"	
Magnesium	7790	50.0	15.6	"	1	"	"	"	"	
Potassium	1540	200	46.8	"	1	"	"	"	"	
Sodium	3580	200	120	"	1	"	"	"	"	
Zinc	5.8	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	1.6	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	1.8	10.0	0.3	"	1	"	"	"	"	J

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**WM-18
1306272-16 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	
Sulfate as SO4	0.6	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	64.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	64.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	147	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.84	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	101	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	70.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	60.9	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	18600	100	79.0	"	1	"	"	"	"	
Copper	0.9	5.0	0.8	"	1	"	"	"	"	J
Iron	48.6	20.0	11.5	"	1	"	"	"	"	
Magnesium	7340	50.0	15.6	"	1	"	"	"	"	
Potassium	1730	200	46.8	"	1	"	"	"	"	
Sodium	3830	200	120	"	1	"	"	"	"	
Zinc	2.9	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	1.1	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	1.3	10.0	0.3	"	1	"	"	"	"	J

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**WM-16
1306272-17 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	
Sulfate as SO4	0.4	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	78.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	78.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	133	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.89	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	84.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	66.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	38.4	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	17600	100	79.0	"	1	"	"	"	"	
Copper	0.8	5.0	0.8	"	1	"	"	"	"	J
Iron	38.1	20.0	11.5	"	1	"	"	"	"	
Magnesium	6690	50.0	15.6	"	1	"	"	"	"	
Potassium	1070	200	46.8	"	1	"	"	"	"	
Sodium	3110	200	120	"	1	"	"	"	"	
Zinc	1.9	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	0.9	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	1.0	10.0	0.3	"	1	"	"	"	"	J

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Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
07/08/13 09:50

**WM-15
1306272-18 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/20/13	EPA 300.0	J
Sulfate as SO4	0.3	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	66.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	66.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	122	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	7.90	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	79.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	52.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	49.9	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	15500	100	79.0	"	1	"	"	"	"	
Copper	2.0	5.0	0.8	"	1	"	"	"	"	J
Iron	39.1	20.0	11.5	"	1	"	"	"	"	
Magnesium	5920	50.0	15.6	"	1	"	"	"	"	
Potassium	1020	200	46.8	"	1	"	"	"	"	
Sodium	2850	200	120	"	1	"	"	"	"	
Zinc	1.3	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/03/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	2.5	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	3.8	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 07/08/13 09:50
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**WM-14
1306272-19 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/20/13	EPA 300.0	J
Sulfate as SO4	5.9	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	122	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	122	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	221	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	8.01	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	142	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	112	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	42500	100	79.0	"	1	"	"	"	"	
Copper	2.0	5.0	0.8	"	1	"	"	"	"	J
Iron	14.6	20.0	11.5	"	1	"	"	"	"	J
Magnesium	3090	50.0	15.6	"	1	"	"	"	"	
Potassium	937	200	46.8	"	1	"	"	"	"	
Sodium	2980	200	120	"	1	"	"	"	"	
Zinc	2.0	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/03/13	EPA 200.7	
Dissolved Arsenic	1.2	10.0	1.0	"	1	"	"	"	"	J
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	3.0	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	0.8	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
07/08/13 09:50

**WM-20
1306272-20 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Chloride	0.5	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/20/13	EPA 300.0	
Sulfate as SO4	8.7	0.5	0.07	"	1	"	"	"	"	

Wet Chemistry

Bicarbonate Alkalinity	72.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	72.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	142	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pH	8.00	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	90.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	60.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	

Total Recoverable Metals

Aluminum	ND	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	17300	100	79.0	"	1	"	"	"	"	
Copper	3.1	5.0	0.8	"	1	"	"	"	"	J
Iron	109	20.0	11.5	"	1	"	"	"	"	
Magnesium	4570	50.0	15.6	"	1	"	"	"	"	
Potassium	1640	200	46.8	"	1	"	"	"	"	
Sodium	6370	200	120	"	1	"	"	"	"	
Zinc	5.8	10.0	0.3	"	1	"	"	"	"	J

Dissolved Metals

Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/03/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	4.1	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	55.3	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	1.5	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 07/08/13 09:50
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Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWF0248 - EPA 300.0

Blank (AWF0248-BLK1)					Prepared: 06/18/13 Analyzed: 06/19/13						
Chloride	ND	0.5	0.04	mg/L							
Sulfate as SO4	ND	0.5	0.07	"							

LCS (AWF0248-BS1)					Prepared: 06/18/13 Analyzed: 06/19/13						
Chloride	10.1	0.5	0.04	mg/L	10.0		101	90-110			
Sulfate as SO4	10.0	0.5	0.07	"	10.0		100	80-120			

LCS Dup (AWF0248-BSD1)					Prepared: 06/18/13 Analyzed: 06/19/13						
Chloride	10.1	0.5	0.04	mg/L	10.0		101	90-110	0.0198	20	
Sulfate as SO4	10.0	0.5	0.07	"	10.0		99.7	80-120	0.690	20	

Duplicate (AWF0248-DUP1)			Source: 1306272-01			Prepared: 06/18/13 Analyzed: 06/19/13					
Chloride	0.5	0.5	0.04	mg/L		0.6			2.90	20	
Sulfate as SO4	0.9	0.5	0.07	"		1.0			9.47	20	

Matrix Spike (AWF0248-MS1)			Source: 1306272-01			Prepared: 06/18/13 Analyzed: 06/19/13					
Chloride	10.7	0.5	0.04	mg/L	10.0	0.6	101	75-125			
Sulfate as SO4	10.9	0.5	0.07	"	10.0	1.0	98.9	75-125			

Matrix Spike Dup (AWF0248-MSD1)			Source: 1306272-01			Prepared: 06/18/13 Analyzed: 06/19/13					
Chloride	10.7	0.5	0.04	mg/L	10.0	0.6	101	75-125	0.00935	20	
Sulfate as SO4	10.9	0.5	0.07	"	10.0	1.0	99.1	75-125	0.211	20	

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 07/08/13 09:50
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Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWF0238 - EPA 120.1

Duplicate (AWF0238-DUP1)		Source: 1306272-10			Prepared & Analyzed: 06/20/13						
Specific Conductance (EC)	132	5.00	1.09	uS/cm		132			0.0758	20	

Batch AWF0240 - SM 4500-H+ B

Duplicate (AWF0240-DUP1)		Source: 1306272-10			Prepared & Analyzed: 06/20/13						
pH	7.74	0.100	0.100	pH Units		7.78			0.515	20	

Batch AWF0254 - SM2320B

Blank (AWF0254-BLK1)		Prepared & Analyzed: 06/22/13									
Bicarbonate Alkalinity	4.00	5.00	2.37	mg/L							J
Carbonate Alkalinity	ND	5.00	2.37	"							
Hydroxide Alkalinity	ND	5.00	2.37	"							
Total Alkalinity	4.00	5.00	2.37	"							J

LCS (AWF0254-BS1)		Prepared & Analyzed: 06/22/13									
Total Alkalinity	108	5.00	2.37	mg/L	100		108	80-120			

LCS Dup (AWF0254-BSD1)		Prepared & Analyzed: 06/22/13									
Total Alkalinity	108	5.00	2.37	mg/L	100		108	80-120	0.00	20	

Duplicate (AWF0254-DUP1)		Source: 1306272-02			Prepared & Analyzed: 06/22/13						
Bicarbonate Alkalinity	ND	5.00	2.37	mg/L		ND					20
Carbonate Alkalinity	ND	5.00	2.37	"		ND					20
Hydroxide Alkalinity	ND	5.00	2.37	"		ND					20
Total Alkalinity	ND	5.00	2.37	"		ND					20

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 07/08/13 09:50
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Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWF0254 - SM2320B

Matrix Spike (AWF0254-MS1)		Source: 1306272-01			Prepared & Analyzed: 06/22/13						
Total Alkalinity	168	5.00	2.37	mg/L	100	62.0	106	80-120			
Matrix Spike Dup (AWF0254-MSD1)		Source: 1306272-01			Prepared & Analyzed: 06/22/13						
Total Alkalinity	162	5.00	2.37	mg/L	100	62.0	100	80-120	3.64	20	

Batch AWF0291 - SM2340B

Blank (AWF0291-BLK1)		Prepared & Analyzed: 06/23/13									
Total Hardness	ND	5.00	2.86	mg/L							
LCS (AWF0291-BS1)		Prepared & Analyzed: 06/23/13									
Total Hardness	50.0	5.00	2.86	mg/L	50.0		100	80-120			
LCS Dup (AWF0291-BSD1)		Prepared & Analyzed: 06/23/13									
Total Hardness	48.0	5.00	2.86	mg/L	50.0		96.0	80-120	4.08	20	
Duplicate (AWF0291-DUP1)		Source: 1306272-02			Prepared & Analyzed: 06/23/13						
Total Hardness	570	5.00	2.86	mg/L		558			2.13	20	
Matrix Spike (AWF0291-MS1)		Source: 1306272-01			Prepared & Analyzed: 06/23/13						
Total Hardness	102	5.00	2.86	mg/L	50.0	52.0	100	75-125			
Matrix Spike Dup (AWF0291-MSD1)		Source: 1306272-01			Prepared & Analyzed: 06/23/13						
Total Hardness	100	5.00	2.86	mg/L	50.0	52.0	96.0	75-125	1.98	20	

Batch AWF0311 - SM 2540C

Blank (AWF0311-BLK1)		Prepared: 06/20/13 Analyzed: 06/26/13									
Total Dissolved Solids	ND	15.0	7.68	mg/L							

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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 07/08/13 09:50
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Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWF0311 - SM 2540C

Duplicate (AWF0311-DUP1)	Source: 1306272-20		Prepared: 06/20/13 Analyzed: 06/26/13								
Total Dissolved Solids	84.0	15.0	7.68	mg/L		90.0			6.90	20	

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
07/08/13 09:50

Total Recoverable Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWF0299 - EPA 200.7

Blank (AWF0299-BLK1)

Prepared: 06/20/13 Analyzed: 06/26/13

Aluminum	ND	50.0	24.5	ug/l							
Arsenic	2.40	10.0	1.0	"							J
Cadmium	ND	5.0	0.1	"							
Calcium	ND	100	79.0	"							
Copper	ND	5.0	0.8	"							
Iron	ND	20.0	11.5	"							
Magnesium	ND	50.0	15.6	"							
Potassium	ND	200	46.8	"							
Sodium	ND	200	120	"							
Zinc	ND	10.0	0.3	"							

Blank (AWF0299-BLK2)

Prepared: 06/20/13 Analyzed: 07/01/13

Aluminum	ND	50.0	24.5	ug/l							
Arsenic	ND	10.0	1.0	"							
Cadmium	ND	5.0	0.1	"							
Calcium	ND	100	79.0	"							
Copper	ND	5.0	0.8	"							
Iron	ND	20.0	11.5	"							
Magnesium	ND	50.0	15.6	"							
Potassium	ND	200	46.8	"							
Sodium	ND	200	120	"							
Zinc	ND	10.0	0.3	"							

LCS (AWF0299-BS1)

Prepared: 06/20/13 Analyzed: 06/26/13

Aluminum	1050	50.0	24.5	ug/l	1000		105	85-115			
Arsenic	989	10.0	1.0	"	1000		98.9	85-115			
Cadmium	979	5.0	0.1	"	1000		97.9	85-115			
Calcium	1000	100	79.0	"	1000		100	85-115			
Copper	1040	5.0	0.8	"	1000		104	85-115			
Iron	1050	20.0	11.5	"	1000		105	85-115			
Magnesium	970	50.0	15.6	"	1000		97.0	85-115			
Potassium	9960	200	46.8	"	10000		99.6	85-115			
Sodium	987	200	120	"	1000		98.7	85-115			
Zinc	988	10.0	0.3	"	1000		98.8	85-115			

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RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
07/08/13 09:50

Total Recoverable Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWF0299 - EPA 200.7

LCS (AWF0299-BS2)

Prepared: 06/20/13 Analyzed: 07/01/13

Aluminum	1010	50.0	24.5	ug/l	1000		101	85-115			
Arsenic	964	10.0	1.0	"	1000		96.4	85-115			
Cadmium	1010	5.0	0.1	"	1000		101	85-115			
Calcium	1060	100	79.0	"	1000		106	85-115			
Copper	1060	5.0	0.8	"	1000		106	85-115			
Iron	1020	20.0	11.5	"	1000		102	85-115			
Magnesium	995	50.0	15.6	"	1000		99.5	85-115			
Potassium	10300	200	46.8	"	10000		103	85-115			
Sodium	1000	200	120	"	1000		100	85-115			
Zinc	1050	10.0	0.3	"	1000		105	85-115			

LCS Dup (AWF0299-BSD1)

Prepared: 06/20/13 Analyzed: 06/26/13

Aluminum	1060	50.0	24.5	ug/l	1000		106	85-115	0.948	20	
Arsenic	986	10.0	1.0	"	1000		98.6	85-115	0.233	20	
Cadmium	979	5.0	0.1	"	1000		97.9	85-115	0.0204	20	
Calcium	990	100	79.0	"	1000		99.0	85-115	0.955	20	
Copper	1040	5.0	0.8	"	1000		104	85-115	0.866	20	
Iron	1060	20.0	11.5	"	1000		106	85-115	0.568	20	
Magnesium	982	50.0	15.6	"	1000		98.2	85-115	1.20	20	
Potassium	9920	200	46.8	"	10000		99.2	85-115	0.352	20	
Sodium	991	200	120	"	1000		99.1	85-115	0.354	20	
Zinc	986	10.0	0.3	"	1000		98.6	85-115	0.152	20	

LCS Dup (AWF0299-BSD2)

Prepared: 06/20/13 Analyzed: 07/01/13

Aluminum	1050	50.0	24.5	ug/l	1000		105	85-115	3.89	20	
Arsenic	968	10.0	1.0	"	1000		96.8	85-115	0.383	20	
Cadmium	1010	5.0	0.1	"	1000		101	85-115	0.0991	20	
Calcium	1060	100	79.0	"	1000		106	85-115	0.283	20	
Copper	1070	5.0	0.8	"	1000		107	85-115	0.941	20	
Iron	1040	20.0	11.5	"	1000		104	85-115	1.65	20	
Magnesium	1020	50.0	15.6	"	1000		102	85-115	2.07	20	
Potassium	10300	200	46.8	"	10000		103	85-115	0.582	20	
Sodium	1000	200	120	"	1000		100	85-115	0.00	20	
Zinc	1050	10.0	0.3	"	1000		105	85-115	0.286	20	

Excelchem Environmental Lab.



Laboratory Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Excelchem Environmental Labs

RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 07/08/13 09:50
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Total Recoverable Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWF0299 - EPA 200.7

Matrix Spike (AWF0299-MS1)		Source: 1306272-01			Prepared: 06/20/13 Analyzed: 06/26/13						
Aluminum	1040	50.0	24.5	ug/l	1000	ND	104	75-125			
Arsenic	1010	10.0	1.0	"	1000	12.5	99.4	75-125			
Cadmium	982	5.0	0.1	"	1000	ND	98.2	75-125			
Calcium	13000	100	79.0	"	1000	12100	89.0	75-125			
Copper	1130	5.0	0.8	"	1000	93.6	103	75-125			
Iron	1080	20.0	11.5	"	1000	34.8	104	75-125			
Magnesium	5480	50.0	15.6	"	1000	4580	90.3	75-125			
Potassium	11000	200	46.8	"	10000	827	102	75-125			
Sodium	5760	200	120	"	1000	4770	99.6	75-125			
Zinc	1010	10.0	0.3	"	1000	19.8	98.6	75-125			

Matrix Spike (AWF0299-MS2)		Source: 1306272-11			Prepared: 06/20/13 Analyzed: 07/01/13						
Aluminum	1040	50.0	24.5	ug/l	1000	ND	104	75-125			
Arsenic	967	10.0	1.0	"	1000	ND	96.7	75-125			
Cadmium	1010	5.0	0.1	"	1000	0.200	101	75-125			
Calcium	17100	100	79.0	"	1000	16200	87.0	75-125			
Copper	1070	5.0	0.8	"	1000	17.6	105	75-125			
Iron	1520	20.0	11.5	"	1000	500	102	75-125			
Magnesium	8300	50.0	15.6	"	1000	7360	94.2	75-125			
Potassium	11100	200	46.8	"	10000	717	104	75-125			
Sodium	4430	200	120	"	1000	3400	103	75-125			
Zinc	1040	10.0	0.3	"	1000	2.70	104	75-125			

Matrix Spike Dup (AWF0299-MSD1)		Source: 1306272-01			Prepared: 06/20/13 Analyzed: 06/26/13						
Aluminum	1060	50.0	24.5	ug/l	1000	ND	106	75-125	2.48	25	
Arsenic	1010	10.0	1.0	"	1000	12.5	99.4	75-125	0.0994	25	
Cadmium	982	5.0	0.1	"	1000	ND	98.2	75-125	0.0102	25	
Calcium	13100	100	79.0	"	1000	12100	94.0	75-125	0.383	25	
Copper	1120	5.0	0.8	"	1000	93.6	103	75-125	0.712	25	
Iron	1100	20.0	11.5	"	1000	34.8	106	75-125	1.56	25	
Magnesium	5510	50.0	15.6	"	1000	4580	93.0	75-125	0.491	25	
Potassium	11100	200	46.8	"	10000	827	103	75-125	0.996	25	
Sodium	5820	200	120	"	1000	4770	105	75-125	1.00	25	
Zinc	1000	10.0	0.3	"	1000	19.8	98.4	75-125	0.199	25	

Excelchem Environmental Lab.

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Laboratory Representative

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
07/08/13 09:50

Total Recoverable Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWF0299 - EPA 200.7

Matrix Spike Dup (AWF0299-MSD2)	Source: 1306272-11			Prepared: 06/20/13 Analyzed: 07/01/13							
Aluminum	1030	50.0	24.5	ug/l	1000	ND	103	75-125	0.968	25	
Arsenic	975	10.0	1.0	"	1000	ND	97.5	75-125	0.855	25	
Cadmium	1010	5.0	0.1	"	1000	0.200	101	75-125	0.396	25	
Calcium	16800	100	79.0	"	1000	16200	56.0	75-125	1.83	25	QL-01
Copper	1080	5.0	0.8	"	1000	17.6	106	75-125	0.372	25	
Iron	1500	20.0	11.5	"	1000	500	100	75-125	1.26	25	
Magnesium	8220	50.0	15.6	"	1000	7360	86.3	75-125	0.957	25	
Potassium	11000	200	46.8	"	10000	717	103	75-125	1.17	25	
Sodium	4350	200	120	"	1000	3400	95.0	75-125	1.91	25	
Zinc	1040	10.0	0.3	"	1000	2.70	104	75-125	0.0958	25	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 07/08/13 09:50
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Dissolved Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWF0349 - EPA 200.7

Blank (AWF0349-BLK1) Prepared: 06/27/13 Analyzed: 07/02/13

Dissolved Aluminum	ND	50.0	24.5	ug/l							
Dissolved Arsenic	ND	10.0	1.0	"							
Dissolved Cadmium	ND	5.0	0.1	"							
Dissolved Copper	ND	5.0	0.8	"							
Dissolved Iron	ND	20.0	11.5	"							
Dissolved Zinc	1.10	10.0	0.3	"							J

Blank (AWF0349-BLK2) Prepared: 06/27/13 Analyzed: 07/02/13

Dissolved Aluminum	ND	50.0	24.5	ug/l							
Dissolved Arsenic	ND	10.0	1.0	"							
Dissolved Cadmium	ND	5.0	0.1	"							
Dissolved Copper	ND	5.0	0.8	"							
Dissolved Iron	ND	20.0	11.5	"							
Dissolved Zinc	0.900	10.0	0.3	"							J

LCS (AWF0349-BS1) Prepared: 06/27/13 Analyzed: 07/02/13

Dissolved Aluminum	1030	50.0	24.5	ug/l	1000		103	85-115			
Dissolved Arsenic	981	10.0	1.0	"	1000		98.1	85-115			
Dissolved Cadmium	1000	5.0	0.1	"	1000		100	85-115			
Dissolved Copper	1040	5.0	0.8	"	1000		104	85-115			
Dissolved Iron	1060	20.0	11.5	"	1000		106	85-115			
Dissolved Zinc	1010	10.0	0.3	"	1000		101	85-115			

LCS (AWF0349-BS2) Prepared: 06/27/13 Analyzed: 07/02/13

Dissolved Aluminum	1090	50.0	24.5	ug/l	1000		109	85-115			
Dissolved Arsenic	972	10.0	1.0	"	1000		97.2	85-115			
Dissolved Cadmium	1010	5.0	0.1	"	1000		101	85-115			
Dissolved Copper	1040	5.0	0.8	"	1000		104	85-115			
Dissolved Iron	1080	20.0	11.5	"	1000		108	85-115			
Dissolved Zinc	1020	10.0	0.3	"	1000		102	85-115			

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 07/08/13 09:50
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Dissolved Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWF0349 - EPA 200.7

LCS Dup (AWF0349-BSD1)

Prepared: 06/27/13 Analyzed: 07/02/13

Dissolved Aluminum	1040	50.0	24.5	ug/l	1000		104	85-115	1.45	20	
Dissolved Arsenic	987	10.0	1.0	"	1000		98.7	85-115	0.630	20	
Dissolved Cadmium	1010	5.0	0.1	"	1000		101	85-115	0.596	20	
Dissolved Copper	1040	5.0	0.8	"	1000		104	85-115	0.386	20	
Dissolved Iron	1020	20.0	11.5	"	1000		102	85-115	4.14	20	
Dissolved Zinc	1010	10.0	0.3	"	1000		101	85-115	0.792	20	

LCS Dup (AWF0349-BSD2)

Prepared: 06/27/13 Analyzed: 07/02/13

Dissolved Aluminum	1040	50.0	24.5	ug/l	1000		104	85-115	4.50	20	
Dissolved Arsenic	968	10.0	1.0	"	1000		96.8	85-115	0.464	20	
Dissolved Cadmium	1010	5.0	0.1	"	1000		101	85-115	0.0989	20	
Dissolved Copper	1030	5.0	0.8	"	1000		103	85-115	0.677	20	
Dissolved Iron	1100	20.0	11.5	"	1000		110	85-115	1.66	20	
Dissolved Zinc	1020	10.0	0.3	"	1000		102	85-115	0.295	20	

Matrix Spike (AWF0349-MS1)

Source: 1306272-03

Prepared: 06/27/13 Analyzed: 07/02/13

Dissolved Aluminum	1060	50.0	24.5	ug/l	1000	ND	106	75-125			
Dissolved Arsenic	984	10.0	1.0	"	1000	ND	98.4	75-125			
Dissolved Cadmium	1010	5.0	0.1	"	1000	0.200	101	75-125			
Dissolved Copper	1050	5.0	0.8	"	1000	38.1	101	75-125			
Dissolved Iron	1080	20.0	11.5	"	1000	13.9	106	75-125			
Dissolved Zinc	1020	10.0	0.3	"	1000	9.10	101	75-125			

Matrix Spike (AWF0349-MS2)

Source: 1306272-11

Prepared: 06/27/13 Analyzed: 07/02/13

Dissolved Aluminum	1070	50.0	24.5	ug/l	1000	ND	107	75-125			
Dissolved Arsenic	975	10.0	1.0	"	1000	ND	97.5	75-125			
Dissolved Cadmium	1010	5.0	0.1	"	1000	0.200	101	75-125			
Dissolved Copper	1040	5.0	0.8	"	1000	13.3	103	75-125			
Dissolved Iron	1420	20.0	11.5	"	1000	375	104	75-125			
Dissolved Zinc	1010	10.0	0.3	"	1000	3.80	101	75-125			

Excelchem Environmental Lab.

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Laboratory Representative

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
07/08/13 09:50

Dissolved Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWF0349 - EPA 200.7

Matrix Spike Dup (AWF0349-MSD1)		Source: 1306272-03			Prepared: 06/27/13 Analyzed: 07/02/13						
Dissolved Aluminum	1040	50.0	24.5	ug/l	1000	ND	104	75-125	2.76	25	
Dissolved Arsenic	983	10.0	1.0	"	1000	ND	98.3	75-125	0.0610	25	
Dissolved Cadmium	1010	5.0	0.1	"	1000	0.200	101	75-125	0.198	25	
Dissolved Copper	1050	5.0	0.8	"	1000	38.1	101	75-125	0.191	25	
Dissolved Iron	1050	20.0	11.5	"	1000	13.9	103	75-125	2.73	25	
Dissolved Zinc	1010	10.0	0.3	"	1000	9.10	100	75-125	0.887	25	

Matrix Spike Dup (AWF0349-MSD2)		Source: 1306272-11			Prepared: 06/27/13 Analyzed: 07/02/13						
Dissolved Aluminum	1090	50.0	24.5	ug/l	1000	ND	109	75-125	2.22	25	
Dissolved Arsenic	980	10.0	1.0	"	1000	ND	98.0	75-125	0.522	25	
Dissolved Cadmium	1010	5.0	0.1	"	1000	0.200	101	75-125	0.0991	25	
Dissolved Copper	1030	5.0	0.8	"	1000	13.3	102	75-125	0.867	25	
Dissolved Iron	1450	20.0	11.5	"	1000	375	107	75-125	1.96	25	
Dissolved Zinc	1000	10.0	0.3	"	1000	3.80	100	75-125	0.991	25	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
07/08/13 09:50

Notes and Definitions

- QL-01 Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values.
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- Field This analyte was analyzed outside of the EPA recommended hold time of ASAP and should be analyzed in the field.
- ND Analyte not detected at reporting limit.
- NR Not reported

Analysis Method

EPA 8260, EPA 8021/8015M
EPA 8270, EPA 8081, EPA 8082, EPA 8141, EPA 8015M (extractable)
Metals
TCLP
Not Specified

Prep Method

EPA 5030B
Water - EPA 3510C, Soil- EPA 3550B
Water- 3005A, Soil- 3050B
EPA 1311
Same as Analysis Method

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
 11020 Sun Center Dr. #200
 Rancho Cordova, CA 95670

Project: Walker Mine
 Project Number: [none]
 Project Manager: Jeff Huggins

Date Reported:
 07/08/13 09:50

CHAIN OF CUSTODY 7135W, Street Blvd, Suite A Roseville, CA 95765 Ph: 916-583-4445 Fx: 916-580-4448		REPORTING REQUIREMENTS BELOW: PDF / Standard Format <input checked="" type="checkbox"/> YES (Contractor) / EDF / Provider Global ID: _____ EDD / Ensis / Data Table <input type="checkbox"/> MDL Format <input type="checkbox"/> Data to be reported to States Database? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> EDT / CDPT - Provide Source Codes / PWS ID: _____	
Project Manager: Jeff Huggins Email Address for Reporting: jhuggins@excelchem.com Email Address for Response: jhuggins@excelchem.com Company Address: Central Valley Waste Services 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670 Billing Address: Same as above		P.O. / Project Name: Walker Mine Project Location: Murray's Cove Sampler Name: Jeff Huggins Sampler Signature: _____	
Matrix Table: S = Soil / Sludge / Solid (single one) A = Air DW = Drinking Water MW = Monitoring Wells GW = Groundwater TW = Treated Water WW = Waste Water		ANALYSIS REQUEST Matrix (Yes/No Matrix Table) Preserved? (Mark yes and use from analysis) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Matrix # _____ Container / Volume: 1 Liter Amber <input type="checkbox"/> 500ml Amber <input type="checkbox"/> 250ml Amber <input type="checkbox"/> 40ml VOA - Amber <input type="checkbox"/> 40ml VOA - Clear <input type="checkbox"/> 1 Liter Amber <input type="checkbox"/> 1 Gallon Plastic <input type="checkbox"/> 1000ml Plastic <input type="checkbox"/> 500ml Plastic <input type="checkbox"/> 250ml Plastic <input type="checkbox"/> Coliform Tube <input type="checkbox"/> Federal / Summa <input type="checkbox"/>	
SAMPLE ID: WM-1 WM-30 WM-2 WM-19 WM-3 WM-4 WM-9 WM-5 WM-16 WM-9C WM-6	SOURCE: CLOS DATE TIME: 6/18 09:45 11:45 12:30 12:45 12:50 1:00 1:15 1:30 1:50 2:00	DATE TIME RECEIVED BY: DATE: 6/18/13 TIME: 15:31 Received by Laboratory: [Signature] Requisitioned by: [Signature]	
Matrix (Yes/No Matrix Table)		REMAINS: See analysis Request to Marise Torres	

Excelchem Environmental Lab.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

[Signature]

Laboratory Representative

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200.
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
07/08/13 09:50

Page 2 of 3

Thanks,

Jeff H.

>>> FrontDesk@Excelchem.net 6/5/2012 1:56:PM <<<<

Hello Jeff,

For the dissolved metals, will you filter in the field or should we filter in lab?

We will give you 250 ml preserved with HNO3 for the total metals. If we are to do the filtering for dissolved metals, we will give you (4) filter only bottles for rest.

We have some time today to preserve, so we will be able to deliver these bottles to you tomorrow.

If you have any questions or concerns, please send an e-mail

Thank you,

Maria J Lopez

Excelchem Environmental Labs

1135 W Sunset Blvd, Suite A

Rancho, CA 95765

(916) 543-4443 Phone

(916) 543-4449 Fax

From: Jeff Huggins [mailto:jhuggins@waterboards.ca.gov]

Sent: Tuesday, June 05, 2012 4:27 PM

To: Front Desk

Cc: Leticia Valdes

Subject: Request for Sample Bottles and Analytical Services - Walker Mine Project

We are planning on doing some water sampling (no soils) next week at an old abandoned copper mine (Walker Mine) in Plumas County. In October of last year Excelchem provided bottles and analytical services for this same site. Excelchem's Work Order number for the 23 November 2011 analytical report is: 1111021.

We would like Excelchem to analyze and report for the same constituents as last year. Those were:

1. Total Metals - Aluminum, Arsenic, Copper, Iron, Zinc, and Cadmium. All with HNO3 (or equiv) preservative.
2. Dissolved Metals - Aluminum, Arsenic, Copper, Iron, Zinc, and Cadmium.
3. General Minerals - Total Alkalinity, Bicarbonate as CaCO3, Carbonate as CaCO3, Hydroxide as CaCO3, Chloride, Specific Conductance (EC), Calcium, Magnesium, Potassium, Sodium, Hardness as CaCO3, pH, Sulfate as SO4 and Total Dissolved Solids.

File/Chart/Print and Settings/Local Settings/Temp/XP/gpwise/4/CE/IC3/Regions 6/6/2012

Excelchem Environmental Lab.

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Laboratory Representative

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
07/08/13 09:50

Sample Integrity

WORK ORDER 1306272

Date Received: 6/19/13

Section 1 - Sample Arrival Info.

Sample Transport: ONTRAC UPS: USPS Walk-In EXCELCHEM Lab Courier: Est-Fix Other: _____
 Transported In: Ice Chest Box: Used
 Describe type of packing materials: Bubble Wrap Foam: _____ Packing Foam: _____ Paper: _____ Other: _____
 Has chilling process begun? (Y) N Samples Received: Chilled to Touch + Ambient: (On Ice)
 Temperature of Samples (°C): 2 Ice Chest Temperature(s) (°C): 0

Section 2 - Bottle/Analysis Info.

	Yes	No	NA	Comments
Did all bottles arrive unbroken and intact?	<input checked="" type="checkbox"/>			
Did all bottle labels agree with COC?			<input checked="" type="checkbox"/>	06-11 labels use PM of COC Use label
Were correct containers used for the tests requested?	<input checked="" type="checkbox"/>			
Were correct preservations used for the tests requested?	<input checked="" type="checkbox"/>			
Was a sufficient amount of sample sent for tests indicated?	<input checked="" type="checkbox"/>			
Were bubbles present in VOC Vials? (Vials/Methods Only)			<input checked="" type="checkbox"/>	

Section 3 - Summa/Flow regulator Info.

Used Summa#: _____
 Unused Summa#: N/A
 Cleaning Summa#: _____
 Regulator #: _____
 Was there any visual damage to summa canisters or flow regulators? Explicit

Section 4 - COC Info.

	Completed		Ink from Container	Analysis Requested	Completion		Comments
	Yes	No			Yes	No	
Was COC Received	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			
Date Sampled	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			
Time Sampled	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			
Sample ID	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			
Rush TAT		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			

Section 5 - Comments / Discrepancies

Was Client notified of discrepancies? Yes No Notified by: _____
 Explanations / Comments: _____

Samples Labeled by: GH
 Bin #: 533/1331
 COC Scanned/Attached by: GH
 Sample labels reviewed by: _____
 Filled Out by: [Signature]
 Date/Time: 6/19/13 10:21

[Signature]

Exhibit 79

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

INSPECTION REPORT

13 November 2013

DISCHARGER: Walker Mine, Abandoned and Unclaimed Private Property

LOCATION & COUNTY: Plumas County

CONTACT(S): Central Valley Water Board, Jeff Huggins

INSPECTION DATE: 5 November 2013

INSPECTED BY: Jeff Huggins, Water Resources Control Engineer

ACCOMPANIED BY: Vino Jain and Ben Lehman, Central Valley Water Board staff

COMMENTS:

On 5 November 2013, Board staff performed the annual fall inspection of Walker Mine (photo 1) in Plumas County as required by the Walker Mine Operations and Maintenance Procedures (June 1997).

AREAS INSPECTED:

Former Concentrator Plant Foundations:

An inspection of the former concentrator plant area was made as shown in photos 2-11 of the attached photo-log. The formation of copper oxides was observed throughout the area on the concrete ruins and in residual mining waste material in and below the concentrator plant foundations. Copper oxides become soluble in water and pose a threat to water quality by means of flushing during winter rains and snowmelt. In general, little vegetation which might help to control erosion of mining waste was observed on the exposed mining waste within and near the concentrator plant ruins.

1921 to 1927 Period Tailings Facility:

Staff also inspected the former 1920s period tailings area located below the Walker Mine and Mill area (see photos 11-18). A settling pond (photos 13-14) collects runoff from the slope below the former mine and mill area. The pond never completely fills, but it is suspected to indirectly discharge to Dolly Creek via a buried drainage structure or through the fill material. The tailings material shown in photos 15-18 is sparsely vegetated and copper oxides were observed in the drainages shown in photos 15-18.

Portal Area:

The drainage channel between the mine portal and the waste dump was open and flowing at about 0.5 gallons per minute. The portal door (photo 19) at the 700 level adit had been tampered with by vandals which made the door difficult to open, but it was still securely locked upon our arrival.

Ventilation Fan:

Staff rented a portable generator for the ventilation fan, which is needed for the underground inspection. This fan provides fresh air through the ventilation duct all the way to the mine seal. Underground ventilation is needed to provide a flow of air to the underground workings of sufficient volume to dilute and remove noxious gases and provide fresh air for staff. The ventilation system was

Approved:

VTA

Inspection ID# 14436452

WDID #5A320704003

allowed to run for approximately 1.5-hours before entry was made into the 700 level adit. This arrangement results in fresh air continually being pushed towards the mine seal and perceptible airflow into the inspectors face as you advance into the 700 level adit.

Seal Pressure:

The first task of the inspection was to download the mine seal pressure data from the Telog data recorder (photos 20-21) located 180 feet into the 10-foot diameter corrugated metal pipe section of the adit. The Telog data recorder is connected via a 2,500-foot long electronic cable to a Druck pressure transmitter at the mine seal. Three times per day the data recorder measures (and then averages the daily measurement) and stores an electronic current measurement (mAmps) from the Druck pressure transmitter. This data is converted mathematically by Board staff to feet of head on the mine seal¹. When downloading the data logger, staff discovered that from August 19th to August 21st, electronic current measurement from the pressure transmitter fell from 6.92 to 4 mAmps, which likely represents a failure of the pressure transmitter. The data also indicated that a maximum head of 141-feet occurred on the mine seal during the period of June 4th through June 14th, 2013.

Corrugated Metal Pipe:

The drainage channel inside the corrugated section of the mine tunnel was working effectively and was not obstructed. No corrosion, significant seepage, deflection, or physical damage was observed in the corrugated metal pipe section of the 700 level adit.

Timbered Section:

The timbered section of the 700 level adit was open and clear. The conditions in this section were wet and the liquid appear to be from the infiltration of shallow groundwater from the hillside directly above the timber supported section (first 900 feet) of the 700 level adit. No major support problems were observed. However, a number of the timber sets, lagging, and blocking are showing signs of significant decay and need to be replaced.

Unsupported Section:

No scaling was necessary in the unsupported section of the 700 level and no signs of recent rockfall were noted. Water seepage observed in the unsupported section of the adit was minimal; however a small pool of water was noted for the first time on the left-hand side of the adit near the 1600 foot station (photo 22).

Mine Seal, Piping and Valves

Conditions at the mine seal are shown in photos 24-28. The pressure gauge read nearly 50 psi, which indicates a head of approximately 115 feet over the mine seal. Water seepage from around the mine seal and pooled water conditions at the base of the mine seal appeared to be unchanged since July of 2010. Seepage appears to come from the crown of the seal and along both sides. Iron precipitate is evident on the face of the mine seal (photo 24) but does not appear to be significantly different than that shown in the *Walker Mine Seal Testing and Evaluation Report* (GEI Consultants, 1 March 2002). The piping and valves were uncovered (photo 26) and inspected. No seepage or significant changes in corrosion were noted. The valves were not tested due to concern that they may not close completely if opened. Samples of the water pooled at the base of the seal (monitoring location #30) were collected for laboratory analysis. Staff then exited the 700 level adit and securely locked the portal door.

¹ (Note: The Druck pressure sensor is scaled to transmit 4 to 20 mAmps which equates to 0 to 300 feet of head).

Central Ore-Body Subsidence Area:

Inspection of the Central ore body area was made later in the afternoon (see photos 28-34). The primary mining related features in this area consist of the subsidence areas caused by sublevel mining below the Central ore body, several small mining waste piles, and a ventilation shaft located near the top of the hill north of the Central ore body. The subsidence areas act as a natural funnel to transmit precipitation to the underground workings, which in turn increases the hydrostatic pressure on the mine seal, which was installed to stop the discharge of acid mine drainage from the Walker Mine. Staff also inspected the concrete lined diversion ditches, constructed on behalf of the Central Valley Water Board in the early 2000's, which are intended to reduce the amount of surface water runoff during snowmelt periods to the subsidence areas. The diversion ditches were relatively clean of debris, but contained no water at the time of our inspection.

In a brief examination of the mining waste piles located near the Central ore body location, some copper oxide formation was observed as shown in photos 32-33. As noted above, copper oxides become soluble in water and pose a threat to water quality by means of flushing during winter rains and snowmelt. Finally, we located an open ventilation shaft near the top of the hill north of the Central ore body. The ventilation shaft appears to drop approximately 50 vertical feet before dipping at an angle of about 30 degrees to the east to some unknown depth. Coordinates for the shaft were recorded and will be mapped for future reference. The open shaft is an obvious safety hazard and should be closed so that it no longer poses a physical hazard.

Walker Mine Tailings Facility:

Board staff also inspected and obtained water samples from in and around the Walker Mine tailings facility (see photos 35-39) located on adjacent public lands administered by the United States Department of Agriculture Forest Service (USFS). Copper oxides continue to be observed on large boulders (photo 36) just above the Dolly Creek diversion head-works located just east of the Walker Mine tailings. The tailings, shown in photos 37-39, are sparsely vegetated and wind-blown erosion of the tailings continues pose a threat to water quality.

Water Quality Monitoring:

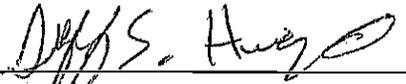
Surface water samples were collected from Dolly, Little Grizzly, Nye, and Ward Creeks. Most of the sample locations had sufficient surface water to sample. Laboratory results are pending.

SUMMARY:

A semiannual inspection was made of the Walker Mine site. Surface water sampling was performed and water pressure measurements on the mine seal were obtained. The pressure transmitter for the Walker Mine seal appears to have failed on or about August 19th and a new pressure transmitter needs to be purchased and installed during the spring 2014 inspection.

RECOMMENDATIONS:

An experienced underground mine contractor should be hired to inspect the timbered section and the unsupported section of the 700 level adit for signs of ground support deterioration. Furthermore, while the stainless steel piping and valves need to be inspected and physically tested to ensure their operability in accordance with the Board's Operations and Maintenance Plan for the Walker Mine, there is some potential risk that the valves cannot be completely closed after being opened.



JEFF HUGGINS

Water Resources Control Engineer



Photo 1. Walker Mine.



Photo 4. Upper concentrator plant foundations showing formation of copper oxides on the concrete foundations.

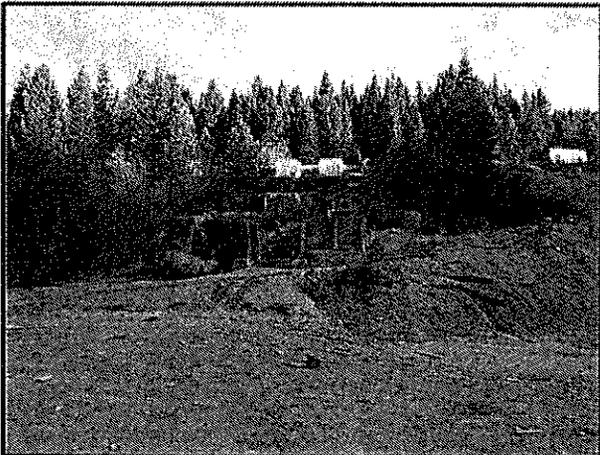


Photo 2. Concentrator plant location. Mining waste is evident in and below the concentrator plant foundations.



Photo 5. Closeup view of the previous photo.

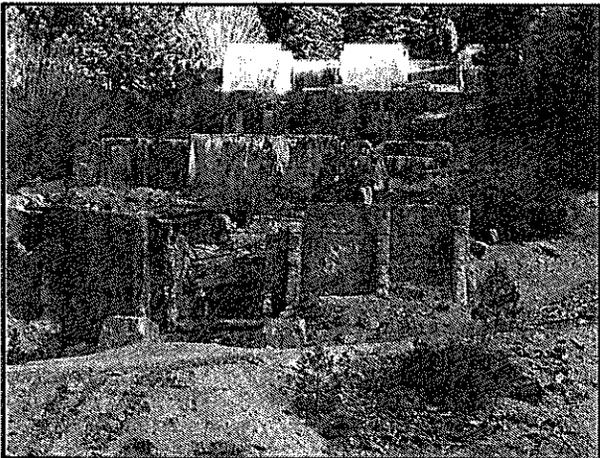


Photo 3. Concentrator plant foundations. Formation of copper oxides can be seen in numerous locations within the concrete foundations.



Photo 6. Residual mill tailings containing copper oxides within the mill foundations.

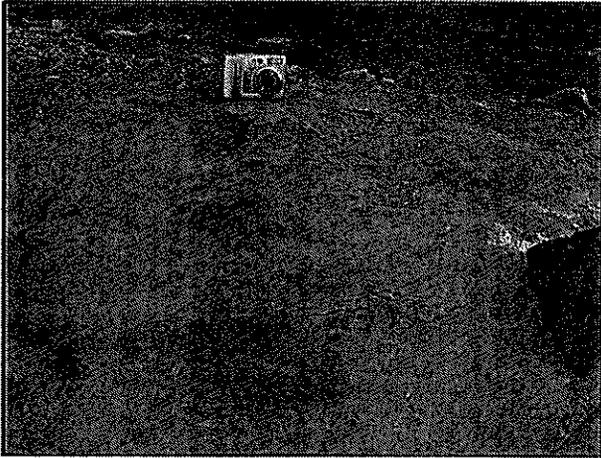


Photo 7. Closeup view of the previous photo showing fine grained mill tailings.



Photo 10. Close-up view of previous photo. Note the absence of vegetative growth in the mining waste.



Photo 8. Showing drainage pathway from the concentrator foundations to the tailings area located below the concentrator foundations.



Photo 11. Looking from the concentrator foundations to the 1921 to 1927 period tailings pond

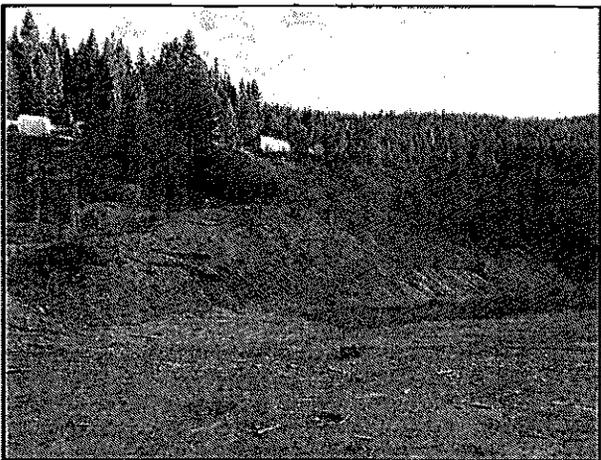


Photo 9. Mining waste located below the Concentrator foundations.

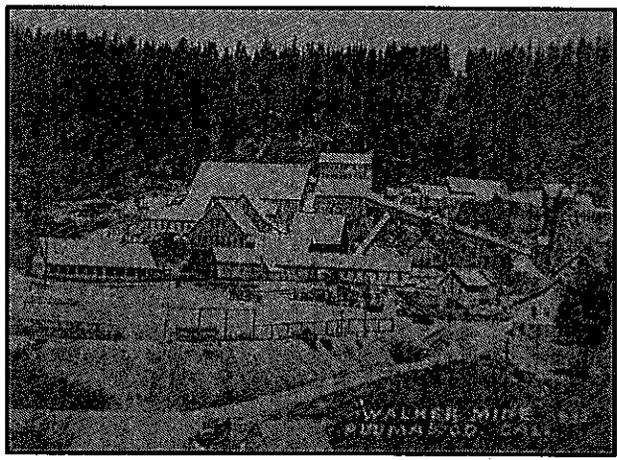


Photo 12. 1920s period tailings impoundment being used as a baseball field in the 1930s.



Photo 13. Settling pond located below the Walker Mine mill location. Settling pond likely discharges to Dolly Creek.



Photo 16. Looking up gradient and east at feeder channel to the drainage channel in previous photo. Drainage channel is cut into fine grained tailings material.

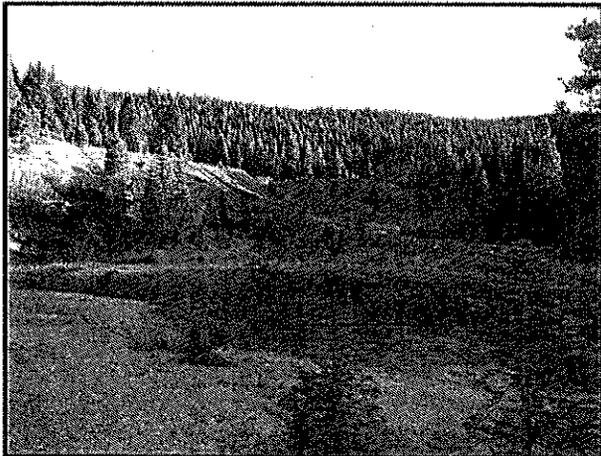


Photo 14. Looking northeast at mining waste piles located below the Walker Mine portal. Runoff from the mining waste piles flows to Dolly Creek.



Photo 17. Close-up view of tailings material in feeder channel shown in the previous photo.



Photo 15. Looking southeast down gradient towards Dolly Creek. Drainage channel has cut into tailings material from the 1921 to 1927 period tailings pond.

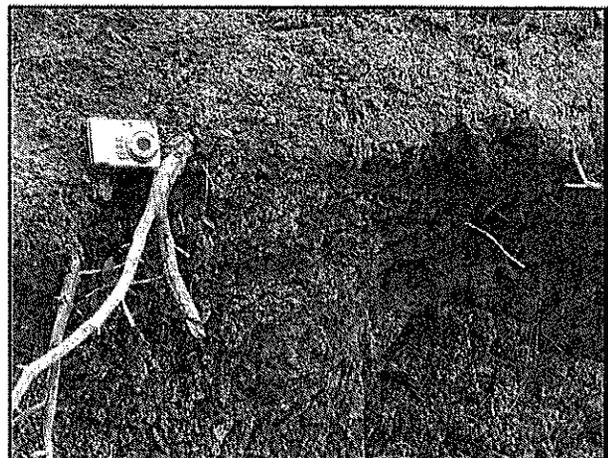


Photo 18. Copper oxides are shown (blue-green material) in the fine grained tailings material.



Photo 19. Walker Mine 700 level access adit.



Photo 22. Small pool of water noted for the first time near the 1600 foot station.

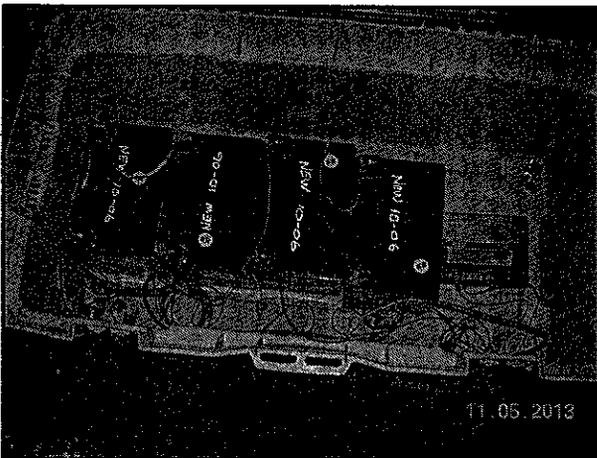


Photo 20. Four 12 volt deep cycle batteries provide power for the Druck pressure transmitter. Telog data logger collects, processes, and stores data.

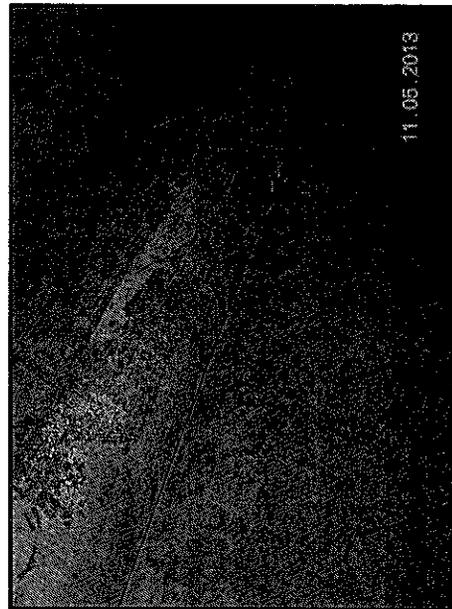


Photo 23. Copper oxide on the floor of the 700 level adit next to the ventilation ducting. Location of the photo is about 2000-feet inside the 700 level adit.

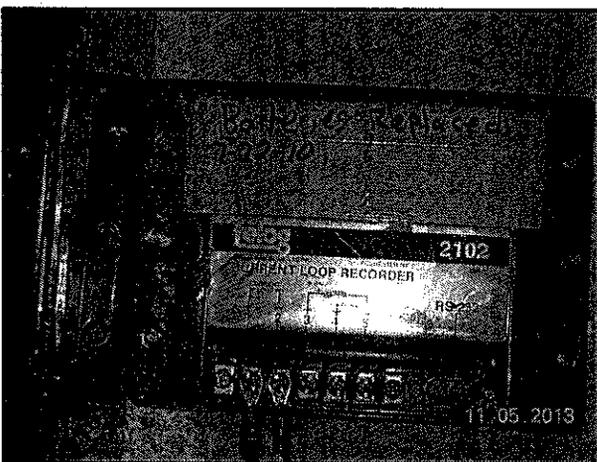


Photo 21. Telog data recorder shown at right of previous photo. Located near the 700 level portal.

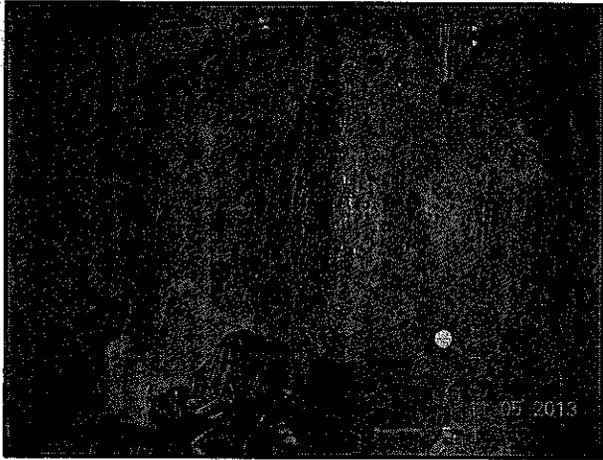


Photo 24. Walker Mine concrete seal located 1650-feet inside the 700 level adit.

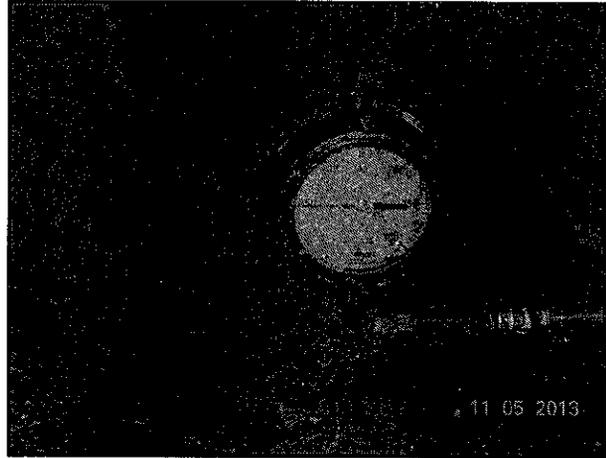


Photo 27. Pressure gauge showing 50 psi. This equates to 115 feet of head over the mine seal.



Photo 25. Covered 4-inch stainless steel valve.

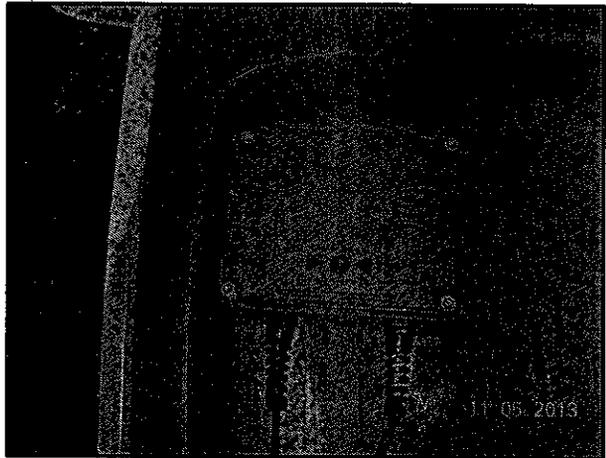


Photo 28. Pressure transmitter sensor termination enclosure located near the mine seal.

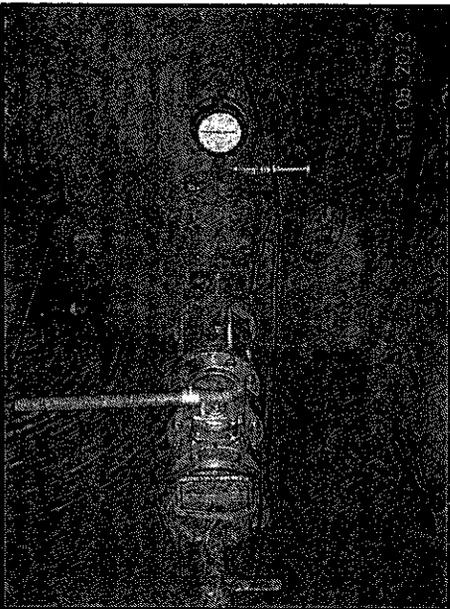


Photo 26. One of the two stainless steel 4-inch valves and pressure gauge at the mine seal.



Photo 28. Central ore body location. Mining waste pile shown in the center of the photo. Subsidence area to the left of the waste pile. Runoff from the waste pile drains to the South Branch of Ward Creek.

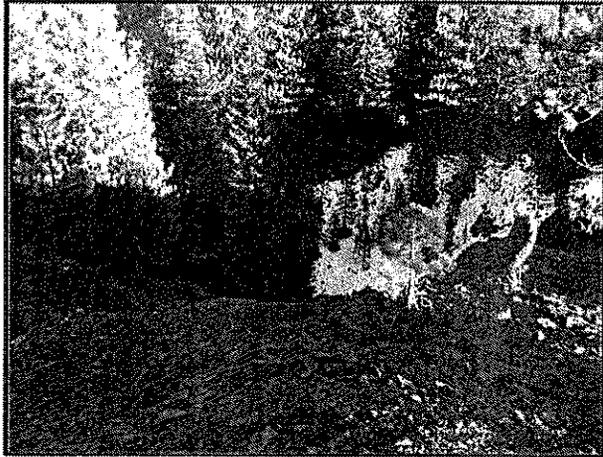


Photo 29. One of several subsidence areas in the vicinity of the Central ore body. Subsidence areas resulted from sublevel mining activities (see below).

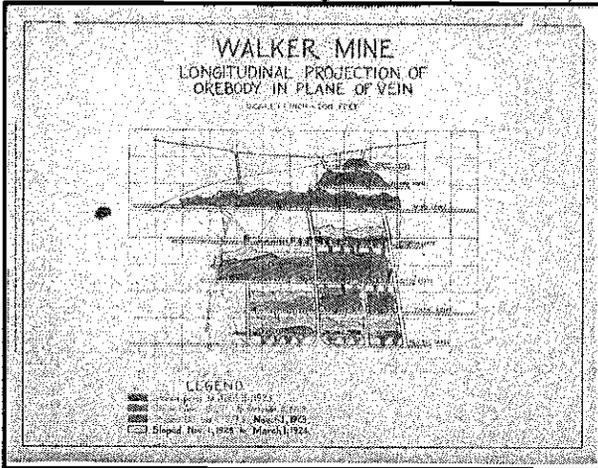


Photo 30. Central ore body, Paul Billingsley, Walker Mine Report March 7, 1924.



Photo 31. Mining waste pile located above the Central ore body location. Waste pile is graded and level and used as building site for mining activities.



Photo 32. Copper oxide formation on the surface of waste rock at the Central ore body location.



Photo 33. Another example of copper oxide forming on the surface of waste rock at the Central ore body location.



Photo 34. Open ventilation shaft located on the hillside above the Central ore body location.

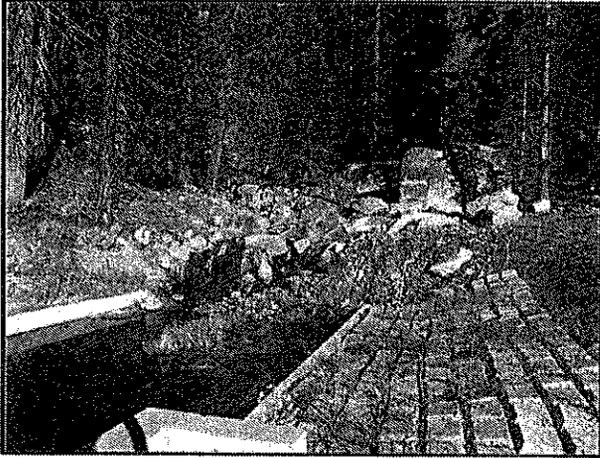


Photo 35. Dolly Creek diversion head-works located above the Walker Mine tailings facility.

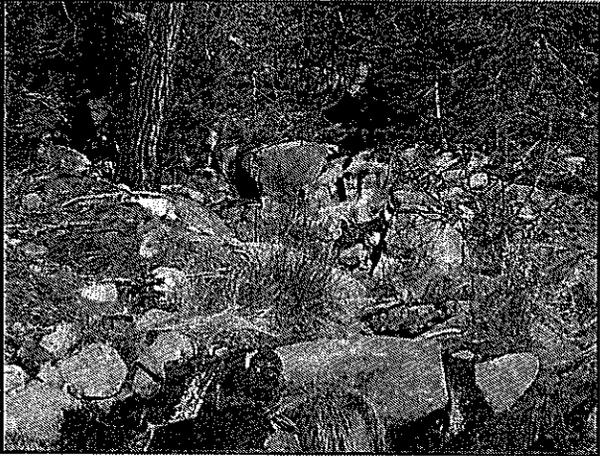


Photo 36. Close-up view of prior photo. Copper oxide can be seen on the large boulders in the center of the photo.

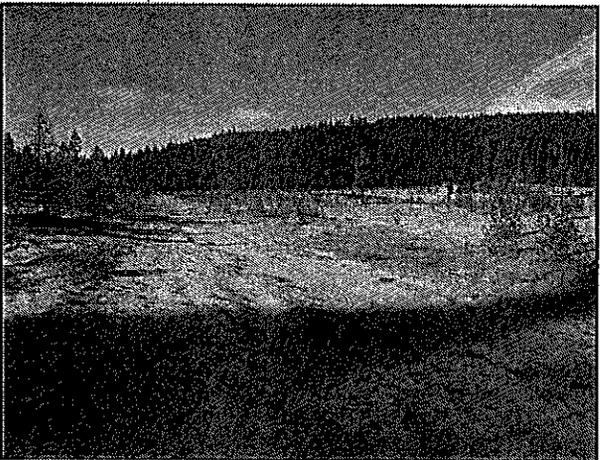


Photo 37. Walker Mine Tailings facility showing scarcity of vegetation to control erosion of the tailings.



Photo 38. Showing wind fences erected as a wind erosion control measure over a portion of the Walker Mine Tailings facility.

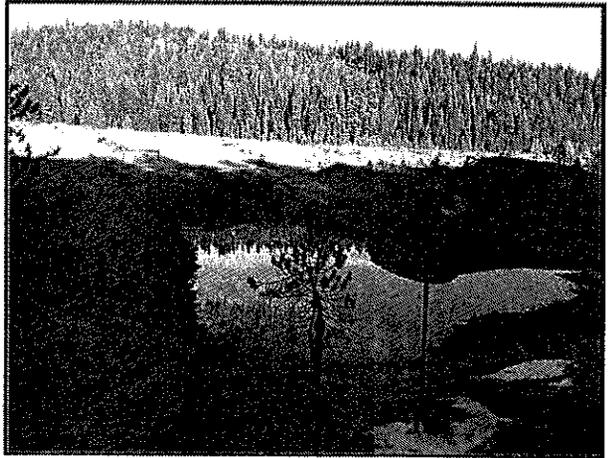


Photo 39. Walker Mine Tailings settling pond. No drainage path to the settling pond was observed which would indicate that the water shown is the saturation level in the tailings.

Exhibit 80

EXCELCHEM
Environmental Labs

1135 W Sunset Boulevard
Suite A
Rocklin, CA 95765
Phone# 916-543-4445
Fax# 916-543-4449



ELAP Certificate No. : 2119

15 November 2013

Jeff Huggins

RWQC Central Valley

11020 Sun Center Dr. #200

Rancho Cordova, CA 95670

RE: Walker Mine

Work order number:1311042

Enclosed are the results of analyses for samples received by the laboratory on 11/06/13 10:32. All Quality Control results are within acceptable limits except where noted as a case narrative. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

John Somers, Lab Director

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WM-30	1311042-01	Water	11/05/13 11:15	11/06/13 10:32
WM-1	1311042-02	Water	11/05/13 12:00	11/06/13 10:32
WM-3	1311042-03	Water	11/05/13 12:25	11/06/13 10:32
WM-19	1311042-04	Water	11/05/13 12:20	11/06/13 10:32
WM-4	1311042-05	Water	11/05/13 12:30	11/06/13 10:32
WM-9	1311042-06	Water	11/05/13 12:40	11/06/13 10:32
WM-12	1311042-07	Water	11/05/13 13:08	11/06/13 10:32
WM-13	1311042-08	Water	11/05/13 13:20	11/06/13 10:32
WM-17	1311042-09	Water	11/05/13 13:30	11/06/13 10:32
WM-5	1311042-10	Water	11/05/13 14:05	11/06/13 10:32
WM-7b	1311042-11	Water	11/05/13 14:20	11/06/13 10:32
WM-7c	1311042-12	Water	11/05/13 14:25	11/06/13 10:32
WM-7a	1311042-13	Water	11/05/13 14:45	11/06/13 10:32
WM-2	1311042-14	Water	11/05/13 12:05	11/06/13 10:32

Excelchem Environmental Lab.



Laboratory Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

**WM-30
1311042-01 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.6	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Wet Chemistry										
Bicarbonate Alkalinity	ND	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	386	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	4.40	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	264	15.0	7.68	mg/L	1	AWK0098	11/08/13	11/13/13	SM 2540C	
Total Hardness	508	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	3340	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	10.4	5.0	0.1	"	1	"	"	"	"	
Calcium	35300	100	79.0	"	1	"	"	"	"	
Copper	10800	5.0	0.8	"	1	"	"	"	"	
Iron	761	20.0	11.5	"	1	"	"	"	"	
Magnesium	5610	50.0	15.6	"	1	"	"	"	"	
Potassium	2180	200	46.8	"	1	"	"	"	"	
Sodium	2640	200	120	"	1	"	"	"	"	
Zinc	748	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	3070	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	9.5	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	10200	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	202	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	719	10.0	0.3	"	1	"	"	"	"	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

WM-30
1311042-01RE1 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
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Ion Chromatography

Sulfate as SO4	181	5.0	0.7	mg/L	10	AWK0088	11/07/13	11/07/13	EPA 300.0	
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Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

**WM-1
1311042-02 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.7	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Sulfate as SO4	1.2	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	64.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	64.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	118	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	7.58	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	107	15.0	7.68	mg/L	1	AWK0098	11/08/13	11/13/13	SM 2540C	
Total Hardness	64.0	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	10.1	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.3	5.0	0.1	"	1	"	"	"	"	J
Calcium	12500	100	79.0	"	1	"	"	"	"	
Copper	84.0	5.0	0.8	"	1	"	"	"	"	
Iron	51.0	20.0	11.5	"	1	"	"	"	"	
Magnesium	4370	50.0	15.6	"	1	"	"	"	"	
Potassium	983	200	46.8	"	1	"	"	"	"	
Sodium	4760	200	120	"	1	"	"	"	"	
Zinc	14.8	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	8.5	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.4	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	98.2	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	62.2	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	19.7	10.0	0.3	"	1	"	"	"	"	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

**WM-3
1311042-03 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.7	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Sulfate as SO4	0.9	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	78.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	78.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	140	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	7.75	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	90.0	15.0	7.68	mg/L	1	AWK0099	11/08/13	11/13/13	SM 2540C	
Total Hardness	74.0	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	79.6	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	15400	100	79.0	"	1	"	"	"	"	
Copper	6.5	5.0	0.8	"	1	"	"	"	"	
Iron	612	20.0	11.5	"	1	"	"	"	"	
Magnesium	7000	50.0	15.6	"	1	"	"	"	"	
Potassium	1020	200	46.8	"	1	"	"	"	"	
Sodium	3070	200	120	"	1	"	"	"	"	
Zinc	7.7	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.3	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	11.0	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	184	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	4.8	10.0	0.3	"	1	"	"	"	"	J

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Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

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**WM-19
1311042-04 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.8	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Sulfate as SO4	28.3	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	62.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	62.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	173	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	7.73	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	111	15.0	7.68	mg/L	1	AWK0099	11/08/13	11/13/13	SM 2540C	
Total Hardness	106	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	71.0	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.4	5.0	0.1	"	1	"	"	"	"	J
Calcium	19400	100	79.0	"	1	"	"	"	"	
Copper	190	5.0	0.8	"	1	"	"	"	"	
Iron	230	20.0	11.5	"	1	"	"	"	"	
Magnesium	5190	50.0	15.6	"	1	"	"	"	"	
Potassium	1980	200	46.8	"	1	"	"	"	"	
Sodium	6210	200	120	"	1	"	"	"	"	
Zinc	26.9	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.3	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	223	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	50.6	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	18.0	10.0	0.3	"	1	"	"	"	"	

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**WM-4
1311042-05 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.7	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Sulfate as SO4	1.6	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	78.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	78.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	139	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	7.78	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	93.0	15.0	7.68	mg/L	1	AWK0099	11/08/13	11/13/13	SM 2540C	
Total Hardness	82.0	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.3	5.0	0.1	"	1	"	"	"	"	J
Calcium	15000	100	79.0	"	1	"	"	"	"	
Copper	8.6	5.0	0.8	"	1	"	"	"	"	
Iron	218	20.0	11.5	"	1	"	"	"	"	
Magnesium	6460	50.0	15.6	"	1	"	"	"	"	
Potassium	1100	200	46.8	"	1	"	"	"	"	
Sodium	3180	200	120	"	1	"	"	"	"	
Zinc	10.2	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	11.3	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	135	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	6.3	10.0	0.3	"	1	"	"	"	"	J

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**WM-9
1311042-06 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.8	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Sulfate as SO4	10.8	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	78.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	78.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	166	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	7.81	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	114	15.0	7.68	mg/L	1	AWK0099	11/08/13	11/13/13	SM 2540C	
Total Hardness	88.0	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	20200	100	79.0	"	1	"	"	"	"	
Copper	3.7	5.0	0.8	"	1	"	"	"	"	J
Iron	588	20.0	11.5	"	1	"	"	"	"	
Magnesium	5420	50.0	15.6	"	1	"	"	"	"	
Potassium	1800	200	46.8	"	1	"	"	"	"	
Sodium	4420	200	120	"	1	"	"	"	"	
Zinc	10.6	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	14.6	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	314	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	6.4	10.0	0.3	"	1	"	"	"	"	J

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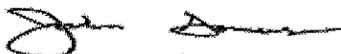
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Project Number: [none]
Project Manager: Jeff Huggins

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**WM-12
1311042-07 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	J
Sulfate as SO4	0.3	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	16.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	16.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	21.5	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	6.76	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	31.0	15.0	7.68	mg/L	1	AWK0099	11/08/13	11/13/13	SM 2540C	
Total Hardness	22.0	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	51.6	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	2140	100	79.0	"	1	"	"	"	"	
Copper	3.4	5.0	0.8	"	1	"	"	"	"	J
Iron	31.2	20.0	11.5	"	1	"	"	"	"	
Magnesium	837	50.0	15.6	"	1	"	"	"	"	
Potassium	256	200	46.8	"	1	"	"	"	"	
Sodium	1000	200	120	"	1	"	"	"	"	
Zinc	8.4	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	37.1	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	J
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	5.1	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	57.2	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	3.6	10.0	0.3	"	1	"	"	"	"	J

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**WM-13
1311042-08 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Sulfate as SO4	0.2	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	78.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	78.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	140	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	7.54	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	103	15.0	7.68	mg/L	1	AWK0099	11/08/13	11/13/13	SM 2540C	
Total Hardness	72.0	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	16200	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	55.3	20.0	11.5	"	1	"	"	"	"	
Magnesium	6760	50.0	15.6	"	1	"	"	"	"	
Potassium	605	200	46.8	"	1	"	"	"	"	
Sodium	2950	200	120	"	1	"	"	"	"	
Zinc	20.7	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	14.9	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	58.9	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	19.7	10.0	0.3	"	1	"	"	"	"	

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**WM-17
1311042-09 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.6	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Sulfate as SO4	0.6	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	86.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	86.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	158	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	7.91	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	104	15.0	7.68	mg/L	1	AWK0099	11/08/13	11/13/13	SM 2540C	
Total Hardness	84.0	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	18700	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	20.9	20.0	11.5	"	1	"	"	"	"	
Magnesium	7500	50.0	15.6	"	1	"	"	"	"	
Potassium	1680	200	46.8	"	1	"	"	"	"	
Sodium	3550	200	120	"	1	"	"	"	"	
Zinc	4.4	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.3	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	3.2	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	28.8	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	2.8	10.0	0.3	"	1	"	"	"	"	J

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Project Manager: Jeff Huggins

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**WM-5
1311042-10 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.7	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Sulfate as SO4	0.2	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	62.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	62.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	112	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	7.53	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	65.0	15.0	7.68	mg/L	1	AWK0099	11/08/13	11/13/13	SM 2540C	
Total Hardness	56.0	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	12400	100	79.0	"	1	"	"	"	"	
Copper	0.8	5.0	0.8	"	1	"	"	"	"	J
Iron	208	20.0	11.5	"	1	"	"	"	"	
Magnesium	4110	50.0	15.6	"	1	"	"	"	"	
Potassium	1600	200	46.8	"	1	"	"	"	"	
Sodium	4040	200	120	"	1	"	"	"	"	
Zinc	7.9	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	2.9	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	110	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	3.5	10.0	0.3	"	1	"	"	"	"	J

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**WM-7b
1311042-11 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.7	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Sulfate as SO4	1.8	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	74.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	74.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	138	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	8.04	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	82.0	15.0	7.68	mg/L	1	AWK0099	11/08/13	11/13/13	SM 2540C	
Total Hardness	78.0	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	14900	100	79.0	"	1	"	"	"	"	
Copper	10.1	5.0	0.8	"	1	"	"	"	"	
Iron	261	20.0	11.5	"	1	"	"	"	"	
Magnesium	5790	50.0	15.6	"	1	"	"	"	"	
Potassium	1130	200	46.8	"	1	"	"	"	"	
Sodium	3420	200	120	"	1	"	"	"	"	
Zinc	4.3	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	9.4	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	180	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	2.7	10.0	0.3	"	1	"	"	"	"	J

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**WM-7c
1311042-12 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.8	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Sulfate as SO4	12.4	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	80.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	80.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	170	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	7.38	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	102	15.0	7.68	mg/L	1	AWK0099	11/08/13	11/13/13	SM 2540C	
Total Hardness	94.0	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	20900	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	1300	20.0	11.5	"	1	"	"	"	"	
Magnesium	4990	50.0	15.6	"	1	"	"	"	"	
Potassium	2100	200	46.8	"	1	"	"	"	"	
Sodium	4960	200	120	"	1	"	"	"	"	
Zinc	19.3	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	3.4	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	510	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	4.1	10.0	0.3	"	1	"	"	"	"	J

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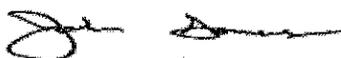
Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
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**WM-7a
1311042-13 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.7	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Sulfate as SO4	1.7	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	74.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	74.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	140	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	7.99	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	92.0	15.0	7.68	mg/L	1	AWK0099	11/08/13	11/13/13	SM 2540C	
Total Hardness	80.0	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	15200	100	79.0	"	1	"	"	"	"	
Copper	11.6	5.0	0.8	"	1	"	"	"	"	
Iron	380	20.0	11.5	"	1	"	"	"	"	
Magnesium	6510	50.0	15.6	"	1	"	"	"	"	
Potassium	1020	200	46.8	"	1	"	"	"	"	
Sodium	3420	200	120	"	1	"	"	"	"	
Zinc	6.5	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	10.2	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	267	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	2.7	10.0	0.3	"	1	"	"	"	"	J

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Project Manager: Jeff Huggins

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**WM-2
1311042-14 (Water)**

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.6	0.5	0.04	mg/L	1	AWK0088	11/07/13	11/07/13	EPA 300.0	
Sulfate as SO4	0.2	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	86.0	5.00	2.37	mg/L	1	AWK0105	11/13/13	11/13/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	86.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	149	5.00	1.09	uS/cm	1	AWK0056	11/07/13	11/07/13	EPA 120.1	
pH	7.84	0.100	0.100	pH Units	1	AWK0055	11/07/13	11/07/13	SM 4500-H+ B	Field
Total Dissolved Solids	80.0	15.0	7.68	mg/L	1	AWK0099	11/08/13	11/13/13	SM 2540C	
Total Hardness	88.0	5.00	2.86	"	1	AWK0100	11/13/13	11/13/13	SM2340B	
Total Recoverable Metals										
Aluminum	37.0	50.0	24.5	ug/l	1	AWK0083	11/07/13	11/12/13	EPA 200.7	J
Arsenic	ND	5.0	1.0	"	1	"	"	"	"	
Cadmium	0.3	5.0	0.1	"	1	"	"	"	"	J
Calcium	16400	100	79.0	"	1	"	"	"	"	
Copper	1.6	5.0	0.8	"	1	"	"	"	"	J
Iron	70.5	20.0	11.5	"	1	"	"	"	"	
Magnesium	7960	50.0	15.6	"	1	"	"	"	"	
Potassium	1040	200	46.8	"	1	"	"	"	"	
Sodium	2890	200	120	"	1	"	"	"	"	
Zinc	1.3	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWK0102	11/12/13	11/13/13	EPA 200.7	
Dissolved Arsenic	1.9	5.0	1.0	"	1	"	"	"	"	J
Dissolved Cadmium	0.3	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	2.5	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	39.9	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	1.8	10.0	0.3	"	1	"	"	"	"	J

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Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
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Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AWK0088 - EPA 300.0											
Blank (AWK0088-BLK1)											
					Prepared & Analyzed: 11/07/13						
Chloride	ND	0.5	0.04	mg/L							
Sulfate as SO4	ND	0.5	0.07	"							
LCS (AWK0088-BS1)											
					Prepared & Analyzed: 11/07/13						
Chloride	10.0	0.5	0.04	mg/L	10.0		100	90-110			
Sulfate as SO4	10.2	0.5	0.07	"	10.0		102	80-120			
LCS Dup (AWK0088-BSD1)											
					Prepared & Analyzed: 11/07/13						
Chloride	10.0	0.5	0.04	mg/L	10.0		99.7	90-110	0.610	20	
Sulfate as SO4	10.2	0.5	0.07	"	10.0		102	80-120	0.00	20	
Duplicate (AWK0088-DUP1)											
			Source: 1311042-12			Prepared: 11/07/13 Analyzed: 11/08/13					
Chloride	0.8	0.5	0.04	mg/L		0.8			2.64	20	
Sulfate as SO4	12.5	0.5	0.07	"		12.4			1.17	20	
Matrix Spike (AWK0088-MS1)											
			Source: 1311042-12			Prepared: 11/07/13 Analyzed: 11/08/13					
Chloride	9.9	0.5	0.04	mg/L	10.0	0.8	91.4	75-125			
Sulfate as SO4	21.6	0.5	0.07	"	10.0	12.4	91.6	75-125			
Matrix Spike Dup (AWK0088-MSD1)											
			Source: 1311042-12			Prepared: 11/07/13 Analyzed: 11/08/13					
Chloride	9.9	0.5	0.04	mg/L	10.0	0.8	91.0	75-125	0.384	20	
Sulfate as SO4	21.4	0.5	0.07	"	10.0	12.4	90.0	75-125	0.726	20	

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Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
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Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWK0055 - SM 4500-H+ B

Duplicate (AWK0055-DUP1) Source: 1311042-14 Prepared & Analyzed: 11/07/13

pH	7.84	0.100	0.100	pH Units		7.84			0.00	20	
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Batch AWK0056 - EPA 120.1

Duplicate (AWK0056-DUP1) Source: 1311042-14 Prepared & Analyzed: 11/07/13

Specific Conductance (EC)	149	5.00	1.09	uS/cm		149			0.0670	20	
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Batch AWK0098 - SM 2540C

Blank (AWK0098-BLK1) Prepared: 11/08/13 Analyzed: 11/13/13

Total Dissolved Solids	ND	15.0	7.68	mg/L							
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Duplicate (AWK0098-DUP1) Source: 1311042-02 Prepared: 11/08/13 Analyzed: 11/13/13

Total Dissolved Solids	109	15.0	7.68	mg/L		107			1.85	20	
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Batch AWK0099 - SM 2540C

Blank (AWK0099-BLK1) Prepared: 11/08/13 Analyzed: 11/13/13

Total Dissolved Solids	ND	15.0	7.68	mg/L							
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Duplicate (AWK0099-DUP1) Source: 1311042-13 Prepared: 11/08/13 Analyzed: 11/13/13

Total Dissolved Solids	93.0	15.0	7.68	mg/L		92.0			1.08	20	
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Batch AWK0100 - SM2340B

Blank (AWK0100-BLK1) Prepared & Analyzed: 11/13/13

Total Hardness	ND	5.00	2.86	mg/L							
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Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWK0100 - SM2340B

LCS (AWK0100-BS1)					Prepared & Analyzed: 11/13/13						
Total Hardness	50.0	5.00	2.86	mg/L	50.0		100	80-120			
LCS Dup (AWK0100-BSD1)					Prepared & Analyzed: 11/13/13						
Total Hardness	50.0	5.00	2.86	mg/L	50.0		100	80-120	0.00	20	
Duplicate (AWK0100-DUP1)					Source: 1311042-12		Prepared & Analyzed: 11/13/13				
Total Hardness	90.0	5.00	2.86	mg/L		94.0			4.35	20	
Matrix Spike (AWK0100-MS1)					Source: 1311042-03		Prepared & Analyzed: 11/13/13				
Total Hardness	120	5.00	2.86	mg/L	50.0	74.0	92.0	75-125			
Matrix Spike Dup (AWK0100-MSD1)					Source: 1311042-03		Prepared & Analyzed: 11/13/13				
Total Hardness	118	5.00	2.86	mg/L	50.0	74.0	88.0	75-125	1.68	20	

Batch AWK0105 - SM2320B

Blank (AWK0105-BLK1)					Prepared & Analyzed: 11/13/13						
Bicarbonate Alkalinity	4.00	5.00	2.37	mg/L							J
Carbonate Alkalinity	ND	5.00	2.37	"							
Hydroxide Alkalinity	ND	5.00	2.37	"							
Total Alkalinity	4.00	5.00	2.37	"							J
LCS (AWK0105-BS1)					Prepared & Analyzed: 11/13/13						
Total Alkalinity	104	5.00	2.37	mg/L	100		104	80-120			
LCS Dup (AWK0105-BSD1)					Prepared & Analyzed: 11/13/13						
Total Alkalinity	102	5.00	2.37	mg/L	100		102	80-120	1.94	20	

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Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWK0105 - SM2320B

Duplicate (AWK0105-DUP1)

Source: 1311042-03

Prepared & Analyzed: 11/13/13

Bicarbonate Alkalinity	78.0	5.00	2.37	mg/L		78.0			0.00	20	
Carbonate Alkalinity	ND	5.00	2.37	"		ND				20	
Hydroxide Alkalinity	ND	5.00	2.37	"		ND				20	
Total Alkalinity	78.0	5.00	2.37	"		78.0			0.00	20	

Matrix Spike (AWK0105-MS1)

Source: 1311042-03

Prepared & Analyzed: 11/13/13

Total Alkalinity	180	5.00	2.37	mg/L	100	78.0	102	80-120			
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Matrix Spike Dup (AWK0105-MSD1)

Source: 1311042-03

Prepared & Analyzed: 11/13/13

Total Alkalinity	178	5.00	2.37	mg/L	100	78.0	100	80-120	1.12	20	
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Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
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Total Recoverable Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWK0083 - EPA 200.7

Blank (AWK0083-BLK1)

Prepared: 11/07/13 Analyzed: 11/12/13

Aluminum	ND	50.0	24.5	ug/l							
Arsenic	ND	5.0	1.0	"							
Cadmium	0.100	5.0	0.1	"							J
Calcium	ND	100	79.0	"							
Copper	ND	5.0	0.8	"							
Iron	ND	20.0	11.5	"							
Magnesium	23.1	50.0	15.6	"							J
Potassium	ND	200	46.8	"							
Sodium	ND	200	120	"							
Zinc	0.700	10.0	0.3	"							J

Blank (AWK0083-BLK2)

Prepared: 11/07/13 Analyzed: 11/12/13

Aluminum	ND	50.0	24.5	ug/l							
Arsenic	ND	5.0	1.0	"							
Cadmium	0.100	5.0	0.1	"							J
Calcium	ND	100	79.0	"							
Copper	ND	5.0	0.8	"							
Iron	ND	20.0	11.5	"							
Magnesium	19.8	50.0	15.6	"							J
Potassium	ND	200	46.8	"							
Sodium	ND	200	120	"							
Zinc	0.400	10.0	0.3	"							J

LCS (AWK0083-BS1)

Prepared: 11/07/13 Analyzed: 11/12/13

Aluminum	1020	50.0	24.5	ug/l	1000		102	85-115			
Arsenic	991	5.0	1.0	"	1000		99.1	85-115			
Cadmium	995	5.0	0.1	"	1000		99.5	85-115			
Calcium	1040	100	79.0	"	1000		104	85-115			
Copper	1030	5.0	0.8	"	1000		103	85-115			
Iron	1040	20.0	11.5	"	1000		104	85-115			
Magnesium	989	50.0	15.6	"	1000		98.9	85-115			
Potassium	10400	200	46.8	"	10000		104	85-115			
Sodium	1010	200	120	"	1000		101	85-115			
Zinc	988	10.0	0.3	"	1000		98.8	85-115			

Excelchem Environmental Lab.



Laboratory Representative

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Excelchem Environmental Labs

RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670	Project: Walker Mine Project Number: [none] Project Manager: Jeff Huggins	Date Reported: 11/15/13 10:47
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Total Recoverable Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWK0083 - EPA 200.7

LCS (AWK0083-BS2)		Prepared: 11/07/13 Analyzed: 11/12/13									
Aluminum	1000	50.0	24.5	ug/l	1000		100	85-115			
Arsenic	995	5.0	1.0	"	1000		99.5	85-115			
Cadmium	995	5.0	0.1	"	1000		99.5	85-115			
Calcium	1020	100	79.0	"	1000		102	85-115			
Copper	1040	5.0	0.8	"	1000		104	85-115			
Iron	1040	20.0	11.5	"	1000		104	85-115			
Magnesium	994	50.0	15.6	"	1000		99.4	85-115			
Potassium	10400	200	46.8	"	10000		104	85-115			
Sodium	1010	200	120	"	1000		101	85-115			
Zinc	984	10.0	0.3	"	1000		98.4	85-115			

LCS Dup (AWK0083-BSD1)		Prepared: 11/07/13 Analyzed: 11/12/13									
Aluminum	1020	50.0	24.5	ug/l	1000		102	85-115	0.295	20	
Arsenic	1010	5.0	1.0	"	1000		101	85-115	1.58	20	
Cadmium	1010	5.0	0.1	"	1000		101	85-115	1.37	20	
Calcium	1040	100	79.0	"	1000		104	85-115	0.673	20	
Copper	1050	5.0	0.8	"	1000		105	85-115	1.35	20	
Iron	1050	20.0	11.5	"	1000		105	85-115	1.53	20	
Magnesium	986	50.0	15.6	"	1000		98.6	85-115	0.304	20	
Potassium	10400	200	46.8	"	10000		104	85-115	0.0960	20	
Sodium	1010	200	120	"	1000		101	85-115	0.0991	20	
Zinc	998	10.0	0.3	"	1000		99.8	85-115	1.07	20	

LCS Dup (AWK0083-BSD2)		Prepared: 11/07/13 Analyzed: 11/12/13									
Aluminum	995	50.0	24.5	ug/l	1000		99.5	85-115	0.900	20	
Arsenic	1000	5.0	1.0	"	1000		100	85-115	0.481	20	
Cadmium	1010	5.0	0.1	"	1000		101	85-115	1.12	20	
Calcium	1050	100	79.0	"	1000		105	85-115	2.60	20	
Copper	1040	5.0	0.8	"	1000		104	85-115	0.289	20	
Iron	1030	20.0	11.5	"	1000		103	85-115	1.26	20	
Magnesium	993	50.0	15.6	"	1000		99.3	85-115	0.181	20	
Potassium	10400	200	46.8	"	10000		104	85-115	0.192	20	
Sodium	994	200	120	"	1000		99.4	85-115	1.84	20	
Zinc	996	10.0	0.3	"	1000		99.6	85-115	1.19	20	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

Total Recoverable Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWK0083 - EPA 200.7

Matrix Spike (AWK0083-MS1)		Source: 1311042-01			Prepared: 11/07/13 Analyzed: 11/12/13						
Aluminum	3980	50.0	24.5	ug/l	1000	3340	64.6	75-125			QL-01
Arsenic	1010	5.0	1.0	"	1000	ND	101	75-125			
Cadmium	1020	5.0	0.1	"	1000	10.4	101	75-125			
Calcium	35900	100	79.0	"	1000	35300	56.0	75-125			QL-01
Copper	11800	5.0	0.8	"	1000	10800	100	75-125			
Iron	1790	20.0	11.5	"	1000	761	103	75-125			
Magnesium	7360	50.0	15.6	"	1000	5610	175	75-125			QL-01
Potassium	13100	200	46.8	"	10000	2180	109	75-125			
Sodium	3730	200	120	"	1000	2640	109	75-125			
Zinc	1730	10.0	0.3	"	1000	748	97.8	75-125			

Matrix Spike (AWK0083-MS2)		Source: 1311042-14			Prepared: 11/07/13 Analyzed: 11/12/13						
Aluminum	1070	50.0	24.5	ug/l	1000	37.0	103	75-125			
Arsenic	980	5.0	1.0	"	1000	ND	98.0	75-125			
Cadmium	981	5.0	0.1	"	1000	0.300	98.1	75-125			
Calcium	17300	100	79.0	"	1000	16400	91.0	75-125			
Copper	1010	5.0	0.8	"	1000	1.60	101	75-125			
Iron	1080	20.0	11.5	"	1000	70.5	101	75-125			
Magnesium	8850	50.0	15.6	"	1000	7960	89.0	75-125			
Potassium	11800	200	46.8	"	10000	1040	107	75-125			
Sodium	3960	200	120	"	1000	2890	107	75-125			
Zinc	973	10.0	0.3	"	1000	1.30	97.2	75-125			

Matrix Spike Dup (AWK0083-MSD1)		Source: 1311042-01			Prepared: 11/07/13 Analyzed: 11/12/13						
Aluminum	4010	50.0	24.5	ug/l	1000	3340	67.7	75-125	0.776	25	QL-01
Arsenic	1010	5.0	1.0	"	1000	ND	101	75-125	0.199	25	
Cadmium	1020	5.0	0.1	"	1000	10.4	101	75-125	0.0980	25	
Calcium	36500	100	79.0	"	1000	35300	118	75-125	1.71	25	
Copper	11900	5.0	0.8	"	1000	10800	108	75-125	0.677	25	
Iron	1790	20.0	11.5	"	1000	761	103	75-125	0.167	25	
Magnesium	7480	50.0	15.6	"	1000	5610	186	75-125	1.52	25	QL-01
Potassium	13100	200	46.8	"	10000	2180	109	75-125	0.382	25	
Sodium	3740	200	120	"	1000	2640	110	75-125	0.375	25	
Zinc	1740	10.0	0.3	"	1000	748	99.1	75-125	0.750	25	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

Total Recoverable Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWK0083 - EPA 200.7

Matrix Spike Dup (AWK0083-MSD2)		Source: 1311042-14			Prepared: 11/07/13 Analyzed: 11/12/13						
Aluminum	1070	50.0	24.5	ug/l	1000	37.0	103	75-125	0.468	25	
Arsenic	995	5.0	1.0	"	1000	ND	99.5	75-125	1.49	25	
Cadmium	998	5.0	0.1	"	1000	0.300	99.7	75-125	1.67	25	
Calcium	16900	100	79.0	"	1000	16400	50.0	75-125	2.39	25	QL-01
Copper	1030	5.0	0.8	"	1000	1.60	103	75-125	1.57	25	
Iron	1110	20.0	11.5	"	1000	70.5	104	75-125	2.28	25	
Magnesium	8650	50.0	15.6	"	1000	7960	69.0	75-125	2.28	25	QL-01
Potassium	11700	200	46.8	"	10000	1040	106	75-125	0.769	25	
Sodium	3920	200	120	"	1000	2890	102	75-125	1.19	25	
Zinc	989	10.0	0.3	"	1000	1.30	98.8	75-125	1.68	25	

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

Dissolved Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWK0102 - EPA 200.7

Blank (AWK0102-BLK1)

Prepared: 11/12/13 Analyzed: 11/14/13

Dissolved Aluminum	ND	50.0	24.5	ug/l							
Dissolved Arsenic	ND	5.0	1.0	"							
Dissolved Cadmium	0.100	5.0	0.1	"							J
Dissolved Copper	ND	5.0	0.8	"							
Dissolved Iron	13.0	20.0	11.5	"							J
Dissolved Zinc	0.800	10.0	0.3	"							J

Blank (AWK0102-BLK2)

Prepared: 11/12/13 Analyzed: 11/13/13

Dissolved Aluminum	ND	50.0	24.5	ug/l							
Dissolved Arsenic	ND	5.0	1.0	"							
Dissolved Cadmium	0.100	5.0	0.1	"							J
Dissolved Copper	1.10	5.0	0.8	"							J
Dissolved Iron	13.0	20.0	11.5	"							J
Dissolved Zinc	0.400	10.0	0.3	"							J

LCS (AWK0102-BS1)

Prepared: 11/12/13 Analyzed: 11/13/13

Dissolved Aluminum	1020	50.0	24.5	ug/l	1000		102	85-115			
Dissolved Arsenic	1010	5.0	1.0	"	1000		101	85-115			
Dissolved Cadmium	980	5.0	0.1	"	1000		98.0	85-115			
Dissolved Copper	1050	5.0	0.8	"	1000		105	85-115			
Dissolved Iron	1020	20.0	11.5	"	1000		102	85-115			
Dissolved Zinc	988	10.0	0.3	"	1000		98.8	85-115			

LCS (AWK0102-BS2)

Prepared: 11/12/13 Analyzed: 11/13/13

Dissolved Aluminum	1010	50.0	24.5	ug/l	1000		101	85-115			
Dissolved Arsenic	1010	5.0	1.0	"	1000		101	85-115			
Dissolved Cadmium	981	5.0	0.1	"	1000		98.1	85-115			
Dissolved Copper	1050	5.0	0.8	"	1000		105	85-115			
Dissolved Iron	1050	20.0	11.5	"	1000		105	85-115			
Dissolved Zinc	984	10.0	0.3	"	1000		98.4	85-115			

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

Dissolved Metals - Quality Control

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch AWK0102 - EPA 200.7

LCS Dup (AWK0102-BSD1)

Prepared: 11/12/13 Analyzed: 11/13/13

Dissolved Aluminum	1020	50.0	24.5	ug/l	1000		102	85-115	0.0981	20	
Dissolved Arsenic	1010	5.0	1.0	"	1000		101	85-115	0.297	20	
Dissolved Cadmium	981	5.0	0.1	"	1000		98.1	85-115	0.0714	20	
Dissolved Copper	1050	5.0	0.8	"	1000		105	85-115	0.380	20	
Dissolved Iron	1040	20.0	11.5	"	1000		104	85-115	2.63	20	
Dissolved Zinc	990	10.0	0.3	"	1000		99.0	85-115	0.192	20	

LCS Dup (AWK0102-BSD2)

Prepared: 11/12/13 Analyzed: 11/13/13

Dissolved Aluminum	1010	50.0	24.5	ug/l	1000		101	85-115	0.296	20	
Dissolved Arsenic	1020	5.0	1.0	"	1000		102	85-115	0.591	20	
Dissolved Cadmium	986	5.0	0.1	"	1000		98.6	85-115	0.498	20	
Dissolved Copper	1060	5.0	0.8	"	1000		106	85-115	0.664	20	
Dissolved Iron	1050	20.0	11.5	"	1000		105	85-115	0.572	20	
Dissolved Zinc	990	10.0	0.3	"	1000		99.0	85-115	0.608	20	

Matrix Spike (AWK0102-MS1)

Source: 1311042-01

Prepared: 11/12/13 Analyzed: 11/13/13

Dissolved Aluminum	3850	50.0	24.5	ug/l	1000	3070	77.5	75-125			
Dissolved Arsenic	1030	5.0	1.0	"	1000	ND	103	75-125			
Dissolved Cadmium	1000	5.0	0.1	"	1000	9.50	99.6	75-125			
Dissolved Copper	11400	5.0	0.8	"	1000	10200	123	75-125			
Dissolved Iron	1200	20.0	11.5	"	1000	202	99.6	75-125			
Dissolved Zinc	1700	10.0	0.3	"	1000	719	98.1	75-125			

Matrix Spike (AWK0102-MS2)

Source: 1311042-14

Prepared: 11/12/13 Analyzed: 11/13/13

Dissolved Aluminum	1060	50.0	24.5	ug/l	1000	ND	106	75-125			
Dissolved Arsenic	1030	5.0	1.0	"	1000	1.90	102	75-125			
Dissolved Cadmium	992	5.0	0.1	"	1000	0.300	99.2	75-125			
Dissolved Copper	1070	5.0	0.8	"	1000	2.50	106	75-125			
Dissolved Iron	1100	20.0	11.5	"	1000	39.9	106	75-125			
Dissolved Zinc	994	10.0	0.3	"	1000	1.80	99.3	75-125			

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

Notes and Definitions

- QL-01 Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values.
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- Field This analyte was analyzed outside of the EPA recommended hold time of ASAP and should be analyzed in the field.
- ND Analyte not detected at reporting limit.
- NR Not reported

Analysis Method

EPA 8260, EPA 8021/8015M
EPA 8270, EPA 8081, EPA 8082, EPA 8141, EPA 8015M (extractable)
Metals
TCLP
Not Specified

Prep Method

EPA 5030B
Water - EPA 3510C, Soil- EPA 3550B
Water- 3005A, Soil- 3050B
EPA 1311
Same as Analysis Method

Excelchem Environmental Lab.



Laboratory Representative

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Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

Page 1 of 1

W/lot# 1311042

Front Desk

From: Huggins, Jeff@Waterboards [Jeff.Huggins@waterboards.ca.gov]
Sent: Wednesday, October 30, 2013 2:16 PM
To: Front Desk
Subject: Request for Sample Bottles and Analytical Services - Walker Mine Project

Hello Front Desk.

We are planning on doing some surface water sampling (no soils) next week at an old abandoned copper mine (Walker Mine) in Plumas County. In June of 2013, Excelchem provided bottles and analytical services for this same site. Excelchem's Work Order number for the 3 July 2013 analytical report is: 1306272. We would like Excelchem to analyze and report for the same constituents as last year. Those were:

- 1. Total Metals - Aluminum, Arsenic, Copper, Iron, Zinc, and Cadmium. All with HNO3 (or equal) preservative.
- 2. Dissolved Metals - Aluminum, Arsenic, Copper, Iron, Zinc, and Cadmium.
- 3. General Minerals - Total Alkalinity, Bicarbonate as CaCO3, Carbonate as CaCO3, Hydroxide as CaCO3, Chloride, Specific Conductance (EC), Calcium, Magnesium, Potassium, Sodium, Hardness as CaCO3, pH, Sulfate as SO4 and Total Dissolved Solids.

Items 1 and 2 above should be analyzed on an individual basis (not as a Bid Group) to reduce costs. Item 3 should be run as Bid Group 20 (Title 22 General Minerals) in accordance with the Regional Water Boards contract if that is most effective/cost-wise.

We will not be filtering in the field, but do want Excelchem to filter the samples in the laboratory. Reporting limits for metals should be sufficiently low to meet the following criteria:

- Al 50 ug/L
- As 5 ug/L
- Cd 5 ug/L
- Cu 5 ug/L
- Fe 150 ug/L
- Zn 20 ug/L

For this sampling event we have 23 sample locations. I believe that we used 500-ml plastic bottles for the total and dissolved samples, and 1-liter plastic bottles for the general minerals. If this protocol has changed, please contact me and let me know what to expect.

We need the sample bottles (and chain of custody) delivered to our Rancho Cordova office no later than 1:00pm on Monday November 4th and we will drop off the sample bottles at your Roseville facility later in the week.

Please contact me should you have any questions.

Jeff S. Huggins
Water Resources Control Engineer
Title 27 Permitting and Mining Unit
Central Valley Water Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670
Phone (916) 464-4639
Email jhuggins@waterboards.ca.gov

11/6/2013

Excelchem Environmental Labs

RWQC Central Valley
11020 Sun Center Dr. #200
Rancho Cordova, CA 95670

Project: Walker Mine
Project Number: [none]
Project Manager: Jeff Huggins

Date Reported:
11/15/13 10:47

Sample Integrity

WORK ORDER 1311042

Date Received: 11/6/13

Section 1 - Sample Arrival Info.

Sample Transport: ONTRAC UPS USPS Walk-In EXCELCHEM Courier Fed-Ex Other _____

Transported In: Ice Chest Box Hand

Describe type of packing materials: Bubble Wrap Foam Packing Peanuts Paper Other: _____

Has chilling process begun? N Y Samples Received: Chilled to Touch / Ambient / On Ice

Temperature of Samples (°C): 2 Ice Chest Temperature(s) (°C): 2

Section 2 - Bottle/Analysis Info.

	Yes	No	N/A	Comments
Did all bottles arrive unbroken and intact?	X			
Did all bottle labels agree with COC?	X			
Were correct containers used for the tests requested?	X			
Were correct preservations used for the tests requested?	X			
Was a sufficient amount of sample sent for tests indicated?	X			
Were bubbles present in VOA Vials? (Volatile Methods Only)			X	

Section 3 - Summa/Flow regulator Info.

Used Summa#: _____
Unused Summa#: N/A
Cleaning Summa#: _____
Regulator#: _____
Was there any visual damage to summa canisters or flow regulators? Explain: _____

Section 4 - COC Info.

	Completed		Info from Customer	Completed		Comments
	Yes	No		Yes	No	
Was COC Received	X					
Date Sampled	X					
Time Sampled	X					
Sample ID	X					
Rush TAT		X				
Analysis Requested				X		attached email
Samples arrived within holding time				X	*	ptt
Any hold times less than 72 hrs				X	*	*out of help
Client Name				X		
Address/Telephone #				X		

Section 5 - Comments / Discrepancies

Was Client notified of discrepancies: Yes No N/A Notified by: _____

Explanations / Comments: _____

Samples Labeled by: CK
Bin #s: P-15
COC Scanned/Attached by: CK
Sample labels reviewed by: _____

Filled	<u>CK</u>	Date:	<u>11-6-13</u>
Out by:		Time:	<u>1450</u>



Exhibit 81

WALKER GOLD-COPPER MINE

PLUMAS COUNTY, CA

INTRODUCTION

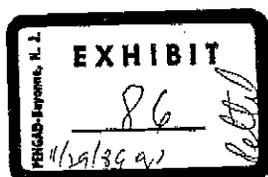
At the request of Mr. Robert Barry available historical and technical records of his Walker gold-copper mine, Plumas County, California have been reviewed and summarized. Intent has been to describe and rank both short and long term targets for additional exploration and development. The information used has been drawn from the records in Mr. Barry's possession as well as several brief personal examinations carried out over the past several years.

SUMMARY

The Walker mine was operated semi-continuously by the Anaconda Company between 1923 and 1942 and produced 5,300,000 tons of ore grading 1.55 percent copper, 0.70 opt silver and 0.04 opt gold. The operation was closed in 1942 due to the combination of rising costs and labor shortages because of the war effort.

Mineralization at Walker occurs within a lenticular quartz zone hosted by Jurassic metasediments and metavolcanics. The zone is up to 75 feet thick and has been traced and developed along a strike length of 8000 feet and through a vertical range of about 1200 feet. The developed ore shoots remain open to depth below the existing workings and along strike to the north where they pass under Tertiary volcanics. Blocked underground reserves, as estimated by Anaconda at closure of the mine, are on the order of 1,200,000 tons at historical grades.

The Walker mine property contains a number of near and longer term exploration and development targets. The Piute zone, a low risk geologic target for one to two million tons of near-surface ore averaging 0.06 opt gold, offers best opportunity for near term development if amenable to heap leaching. Potentially enhanced gold grades in other, near-surface portions of the main Walker quartz zone, and in less explored parallel zones elsewhere on the property, offer more speculative but worthwhile exploration opportunities. Re-consideration of Walker's base metal potential, as a conventional underground mine at historical grades, a bulk tonnage open pit operation taking the main zone and flanking lower grade halo mineralization, or perhaps an in-situ leach do not appear very attractive under present economic conditions but represent longer term opportunities.



500143

LOCATION AND PHYSICAL SETTING

The Walker mine is located at south end of the Plumas Copper Belt some 25 miles northwest of Portola, Plumas, County, CA (Figures 1&2). Claims specifically lie within Sections 5-8 incl., T24N, R12E; Section 12, T24N, R11E; Sections 7-8, 17-20 incl., and 29-32 incl., T32N, R12E; and Sections 11-14 incl., 23-26 incl., 35-36 incl., T25N, R11E MDM.

Access is via State Route 70 two miles east from Portola and then by paved or well maintained gravel road up Grizzly Creek, by Lake Davis, about 25 miles to the property.

Terrain and physical setting are typical of the Sierra with elevations at the mine site of 6500 to 7000 feet. Property lies in a heavy snow belt and has an average operating season of mid April through early December.

PROPERTY AND OWNERSHIP

Thirty-four patented mining claims	687 acres
Mill and townsite patents	108 acres
Three hundred forty-seven unpatented claims	<u>7169</u> acres
Total	7964 acres

Owned by Mr. Robert R. Barry
PO Box Y
Rancho Mirage, California 02270

MINING HISTORY

1905 Discovery.

1910 Initial development by Walker Mining Company.

1916-20 Acquired by International Smelting (Anaconda subsidiary). 700 level adit x-c driven and principal orebodies developed. 75 tpd mill constructed and minor production.

1923-42 500 tpd flotation mill constructed. Principal operating period by International Smelting. Production 5,300,000 tons grading 1.55% Cu, 0.70 opt Ag, 0.04 opt Au.

POST-MINING HISTORY

1946 Acquired by Robert Barry.

1969-70 Noranda. Target; bulk tonnage copper-gold. Work included mapping, geochem, geophysics, 11 core holes.

1976-77 AMAX. Target; extension of main copper gold zone under volcanics to north. Work included 3 core holes.

- 1979-81 Conoco. Targets; extensions of main zone at depth and to north under volcanics, parallel "exhalite" zones. Re-interpreted mineralization as volcanogenic. Work included surface surveys and 11 core holes.
- 1985 Standard Bullion Company/Century 2000. Limited assessment of gold potential of Piute Zone.

MINE DEVELOPMENT, EXISTING FACILITIES AND RECORDS

The Walker mine is developed by a 3600 foot long adit crosscut and 8000 foot haulage drift at the 700 level and an internal shaft to 1200 feet. The 700 level crosscut and drift have been re-opened and maintained in excellent shape. They are accessible by tram to the vicinity of the Central orebody and internal shaft station. Much of the remainder of the 700 level to the North, 712 and Piute orebodies is accessible on foot. The mine is flooded below the adit level. Parts of the mine above the 700 can be entered through raises and stopes from the adit level and limited surface workings. In particular, the Piute shaft and first level are open and partially accessible for examination and sampling.

? The mill was dismantled and sold years ago. However, remaining surface buildings and equipment are in good shape. All of the drill core remains neatly stored on site. Extensive historical records, including the modern exploration data of Noranda, AMAX, and Conoco, are available at Mr. Barry's Redwood City residence.

GENERAL GEOLOGY OF THE MINE PROPERTY

The Walker claims are principally underlain by a five mile long belt of Jurassic metasediments and metavolcanics overthrust by Paleozoic sediments on the west and intruded and terminated by Nevadan granite to the north and south. Tertiary volcanics cap the older rocks, including north and south extensions of the mineralized quartz zone, over most of the east half of the property (Figures 2&3).

The Jurassic units include schists that are probably derived from intermediate to felsic tuffs and agglomerates. They strike consistently north-northwesterly and dip steeply west except in the mine area where dips are reversed to the east. Conoco interpreted the quartz-sulfide-magnetite zone hosting the Walker gold-copper orebodies as an exhalite unit in the volcanic assemblage and there is a good deal of evidence to support their conclusions (general geologic environment, conformability of mineralized zone to enclosing rocks, remarkable continuity along strike and down dip, quartz-sulfide-magnetite association). Although debate over whether the deposit is an epigenetic vein or synvolcanic has little impact upon assessment of the direct targets, a synvolcanic origin could suggest a more attractive longer term exploration potential for significant gold or polymetallic mineralization.

Detailed descriptions of the geologic setting at Walker, and more detailed arguments for volcanogenic origin of the mineralization, are available in numerous Conoco reports.

ORE DEPOSITS AND MINERALIZATION

The Walker gold-copper deposits are lenticular "veins" consisting of massive chalcopyrite-pyrite seams and stringers in a granular quartz gangue with locally heavy magnetite. The veins are essentially conformable with the enclosing schists, strike north-north-westerly and dip variably east. Ore shoots rake directly down dip. Where examined in the field, particularly the Piute area, footwall of the quartz zone is sharp against an unmineralized sericitic schist. Hangwall is more gradational through variably silicified and mineralized quartz-mica schist.

The main mineralized zone has an overall strike length, developed by underground workings, of 8000 feet with a little under half this length "making ore" in six distinct shoots. Developed slope length is 1200 feet. Thickness of the quartz zone itself varies up to 75 feet but overall widths of mineralized, or potentially mineralized, silicified rock are up to 200 feet.

Following is a tabulation of ore shoot dimensions taken from Anaconda's historical records.

<u>Ore Shoot</u>	<u>Length (Ft)</u>	<u>Mineable Thickness (Ft)</u>	<u>Slope Length (Ft)</u>
South	250	20	300
South Hangwall	400	6	200
Central	800	30	700
North	1200	40	700
712	200	35	600
Piute	800	60	500

These dimensions, and historical production, suggest an overall ore incidence of about 11,000 tpmf, certainly impressive for this style of mineralization.

Level of oxidation has not been determined throughout the zone but sulfides are apparent in shallow workings below Pit 3 in the Piute area (Figure 4). The effect of sulfides and oxide copper on leach characteristics of the near surface gold ore is not adequately known at this time.

A number of similar quartz zones have been identified west of the Main Walker zone in its structural footwall, and to the north where

the favorable Jurassic host rocks reappear beyond volcanic cover. These zones are poorly known and require more extensive prospecting.

GOLD EXPLORATION - SHORT TERM TARGETS

Piute Gold Zone - The Piute area is most northerly segment of the Main Walker Zone. It has been exposed at surface by trenching for a length of 600 feet and developed underground for about 1000 feet. Gold values on surface average 0.059 opt across an exposed horizontal width of 35 feet (Figure 4). Historical sample data on the first level, at a vertical depth of 105 feet, average about 0.06 opt gold across 40-50 feet if low grade footwall material is excluded (Figure 4a). The zone above this level appears to be mostly intact. Impact of historical mining at greater depth is not known although stoping records may be available in Mr. Barry's files.

These data suggest a probable surface mineable deposit of 350,000 to 450,000 tons to 100 feet. Lower grade hangwall mineralization in the .03 to .04 range can't be accurately measured on basis of present information but could significantly increase contained ounces and reduce stripping costs. The occurrence appears to be open in both strike directions. From the information at hand I believe an ultimate surface mineable deposit in the 1-2 million ton range at a grade of 0.06 opt gold is a realistic expectation at Piute.

Geologic confidence in the Piute gold zone is high. However, sulfides occur at fairly shallow depths and metallurgical characteristics are much more questionable. A 72 hour bottle roll test on oxidized ore from the shaft outcrop, crushed to $-\frac{1}{4}$ ", yielded a 76 percent recovery with moderate reagent consumption but sulfide-rich material from workings off the No. 3 pit yielded poor recoveries and had high cyanide consumptions. More work is required to determine metallurgical characteristics of the Piute ores.

Walker Vein Zone South of Piute - The surface trace of the Walker Vein Zone is intermittently exposed for a length of 4500 feet between the Piute area on the north and the Central mine area to the south where it again passes under volcanic cover (Figures 2&3).

Surface assay data is limited to a few reconnaissance-type samples which confirm anomalous gold where expected (Figure 3). Anaconda assay plans for shallow workings on the North, South and 712 ore shoots provide more information on potential gold grades. The following data represent simple arithmetic averages of Anaconda samples.

<u>Ore Shoot</u>	<u>#Assays</u>	<u>Est. Thick.</u>	<u>Strike Length</u>	<u>Ave. Gold</u>
North	41	±20'	1050'	0.034
South	28	?	1450'	0.044
712	38	?	820'	0.022

These grades are certainly modest but do suggest the surface remnants of the entire zone above historical workings represent a reasonable target for more detailed work. Impact of former mining operations is not known but, if the Piute is typical, considerable surface pillars are probably intact.

The Central Zone is partially exposed in the series of pits shown on Figure 5. Vein here appears to run about 0.035 opt gold with ±3.0 opt silver. Thickness can't be determined from surface exposures.

A 72 hour bottle roll on vein material crushed to -¼" from the shaft outcrop yielded 73% and 59% recoveries respectively for gold and silver suggesting oxidized ores are probably leachable. However, depth of oxidation is not known.

Other Zones - Conoco's geological mapping of the entire Walker property defined other vein zones and iron formation both west of the Walker zone in its footwall and to the north where the Jurassic rocks are again exposed beyond volcanic cover. Apart from a few drill holes, prospecting and exploration of these zones has been very limited. They certainly represent less direct but reasonable exploration targets for precious metal or polymetallic base/precious metal mineralization.

BASE METAL EXPLORATION - LONG TERM TARGETS

Underground Copper Gold - Mineable reserves blocked out by Anaconda at mine closure in 1942 are 1,200,000 tons grading 1.55% copper, 0.70 opt silver, and 0.04 opt gold. Reserves in all categories were estimated to be 3,000,000 tons at like grades. Much of the mineable reserve is tied up in pillars and on fringes of old stopes and, after 40 years, may not be recoverable at realistic cost.

Anaconda's closure of the mine in 1942 reflected current economic conditions and was not because reserves were exhausted. In fact, there is nothing to indicate the known ore shoots have bottomed and I think one can reasonably predict maintenance of the historical ore incidence of 11,000 tpmv below the existing workings. Apart from two very deep holes by Conoco (respectively 1000 and 1500 feet below the 1200 level) I'm not aware of any drilling below the developed ore shoots, although anyone seriously interested in this target should research the Anaconda records in more detail.

Potential extension of the Walker zone to the north under volcanic cover has been a target of Noranda, AMAX, and Conoco during their exploration programs. However, these efforts have been limited to geophysics followed by only five drill holes, two of which did not get through the volcanics. Considering fact that a new blind ore shoot north of the Piute was discovered and only partly developed at the time of mine closure I'd say chances of developing additional deep underground ore to the north are almost certain. However, in my view, surface exploration in this area, as well as to depth, is probably unrealistic. Effective work is likely going to have to be carried out as part of a major and expensive underground program.

Low Grade Halo Ore - Conventional Open Pit - Potential for developing a large tonnage, low grade copper (gold) deposit by taking the entire Walker Zone was considered and partially tested by Noranda and others. Target here is a tabular zone with a strike length of about 8000 feet, and widths of ± 200 feet, capable of generating a deposit on the order of 30 million tons to a depth of 200 feet. Possible grade, as indicated by material in pillars and crosscuts, has been estimated at about 0.70% copper and, say, 0.02 opt gold. However, the few drill holes testing this idea are not so encouraging. The best, WM-1, averaged only 0.46% Cu along 170 feet.

Low grade, open pit copper (gold) target at Walker is not very attractive under current conditions but does constitute a potentially significant future resource.

Low Grade Halo Ore - In Situ Leach - Natural leaching of copper mineralization above the 700 level at Walker suggests that in-situ leaching is a possible option for eventual development of the copper reserve. Because of its attractiveness, both in terms of capital requirements and environmental acceptance, it is an option that should be seriously considered when economics of copper improve. However, at this time we have no hard data regarding efficiency or economy of the process on a significant operating scale.

CONCLUSIONS

The Walker mine in Plumas County, California is a major historical producer of copper and gold which was operated semi-continuously by Anaconda between 1923 and 1942. Overall production has been 5,300,000 tons of ore grading 1.55% copper, 0.70 opt silver, and 0.04 opt gold from a quartz-sulfide zone with a developed strike length of 8000 feet, known vertical range of 1200 feet and width up to 75 feet. The property has been explored by a number of major Companies in the 1970's and 80's all of whom considered copper as the principal target commodity.

Given current economic conditions in the mining industry, Walker should be re-evaluated for its considerable gold potential. In particular, the Piute segment of the Main Walker quartz-sulfide zone represents a direct target with good geologic evidence for one to two million tons of near surface ore averaging 0.06 opt gold which can be quickly tested at modest cost. Limited metallurgical test work indicates surface oxidized ores at Piute are leachable but more work must be done to determine extent of oxide zone and metallurgical characteristics of copper-bearing sulfide ores.

Remainder of the main Walker quartz-sulfide zone, representing about 7000 feet of known strike length, and poorly known footwall zones, constitute additional target areas for potential near surface gold deposits similar to Piute, or precious metals-rich polymetallic deposits.

The known copper resources at Walker have potentially important long term potential but are of little interest at current metal prices.

John Prochnau
Consulting Mining Geologist
Reno, Nevada

December 30, 1986

JP:cb

ADDENDUM

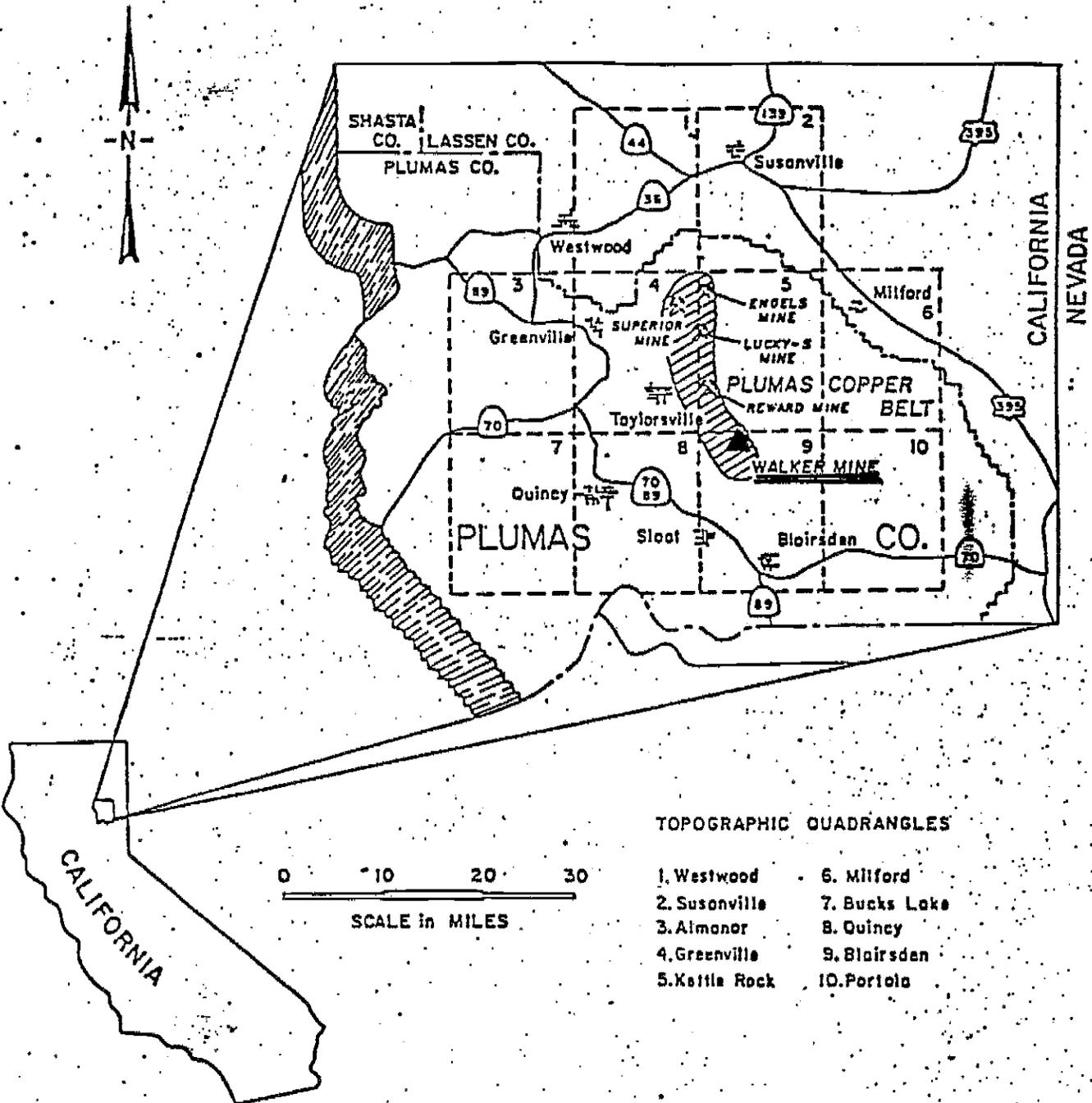
ENVIRONMENTAL MATTERS

There has been concern on the part of the California Water Quality Control Board over the past several years regarding acid waters draining the Walker Mine workings and entering Grizzly Creek. Despite considerable expense incurred during the past 20 years by Mr. Barry, and various lessees, in rehabilitating the 700 level adit and directing effluent into settling ponds, some pollutants continue to drain into Grizzly Creek and the CWQCB has unsuccessfully attempted to enforce a seal of the 700 level adit portal.

Such an action would seriously impact long term development of the mine but would not effect the near term development of the Piute area or other shallow gold targets which may be generated through additional exploration.

The status of actions between the CWQCB and Mr. Barry was not a part of this review. However, any serious party can be thoroughly advised of the situation through direct contact with Mr. Barry or his consultant, Mr. Peter Dohms of Condor Mineral Consultants, Sonora, California.

JP:cb



TOPOGRAPHIC QUADRANGLES

- | | |
|----------------|---------------|
| 1. Westwood | 6. Milford |
| 2. Susonville | 7. Bucks Lake |
| 3. Almonor | 8. Quincy |
| 4. Greenville | 9. Blairsden |
| 5. Kettle Rock | 10. Portola |

Figure 1
 Location Map
 Walker Mine
 Plumas County
 California

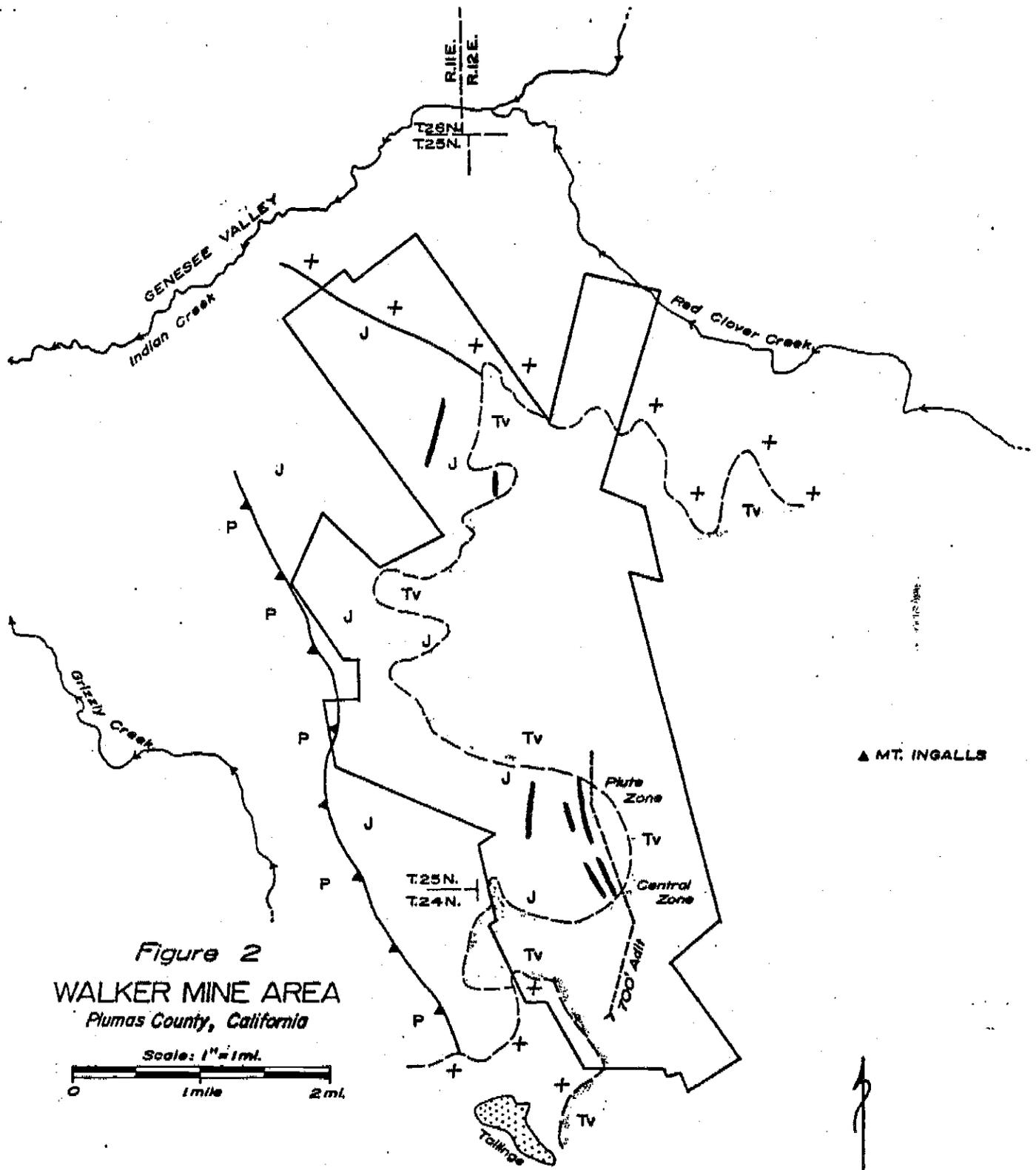


Figure 2
WALKER MINE AREA
Plumas County, California

Scale: 1" = 1 ml.
 0 1 mile 2 ml.

-  Quartz Zone or Fe Formation
-  Tertiary Volcanics
-  Cretaceous Granite
-  Jurassic MetaSediments & Volcanics
-  Paleozoic Sediments

Base Map from: BLAIRSDEN & KETTLE FALLS 15' Quad.

500153

Exhibit 82



**Walker Mine Evaluation
Plumas County, California**

**Testimony of
Marc R. Lombardi, P.G. C.E.M
March 27, 2014**

**Professional Qualifications of
Marc R. Lombardi, P.G., C.E.M.**



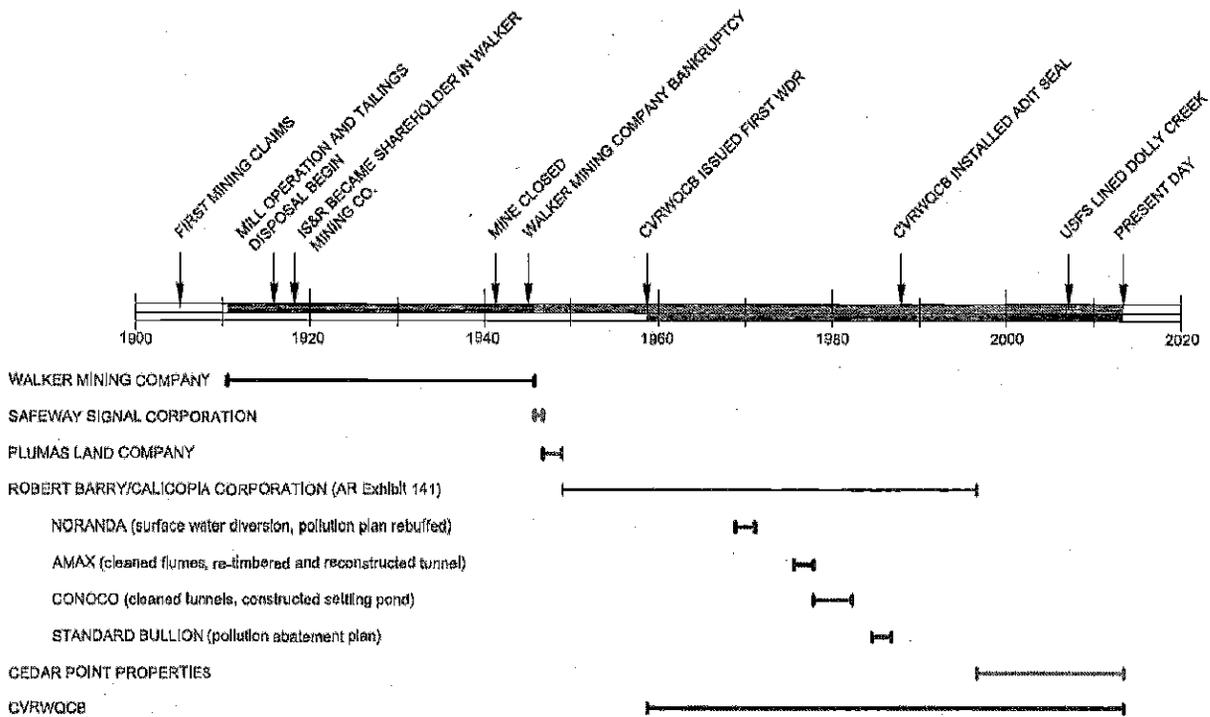
- Principal Geologist with AMEC Environment and Infrastructure, Inc.
- Over 24 years environmental characterization and remediation experience at active or abandoned mines
- California Registered Professional Geologist (GEO6810)
- Bachelor of Science in Geology (University of California, Davis)
- Master of Science in Geology (San Diego State University)

-
1. Actions by Owners and Operators After the Walker Mining Company Explain Current Conditions at the Site
 2. Walker Mine is One Integrated Site
 3. The Regional Water Quality Control Board's Response has Spread Contamination
 4. Current Environmental Conditions Are Caused by Mining Wastes, Not Development Activities

- 1 -

**Actions by Owners and Operators After
the Walker Mining Company Explain
Current Conditions at the Site**

Walker Mine Owners and Operators



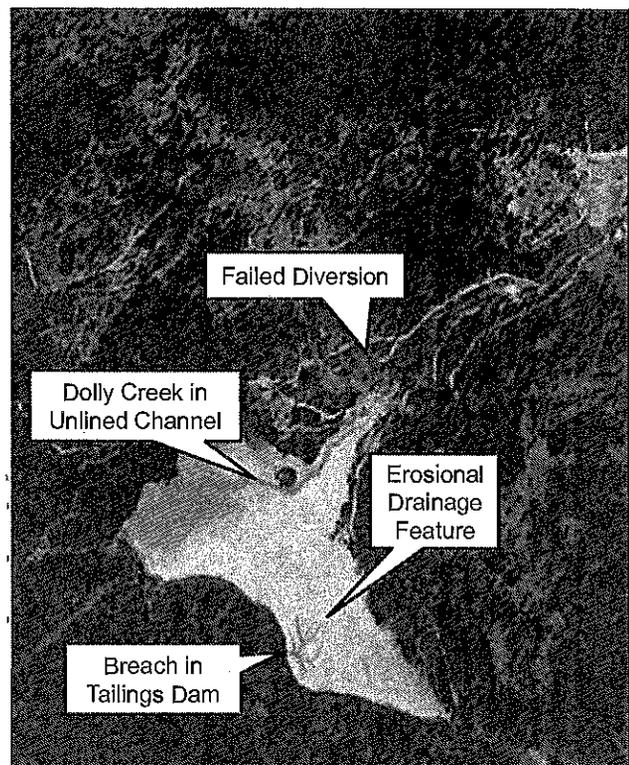
Protective Features Created by Walker Mining Company Were Later Abandoned



1941

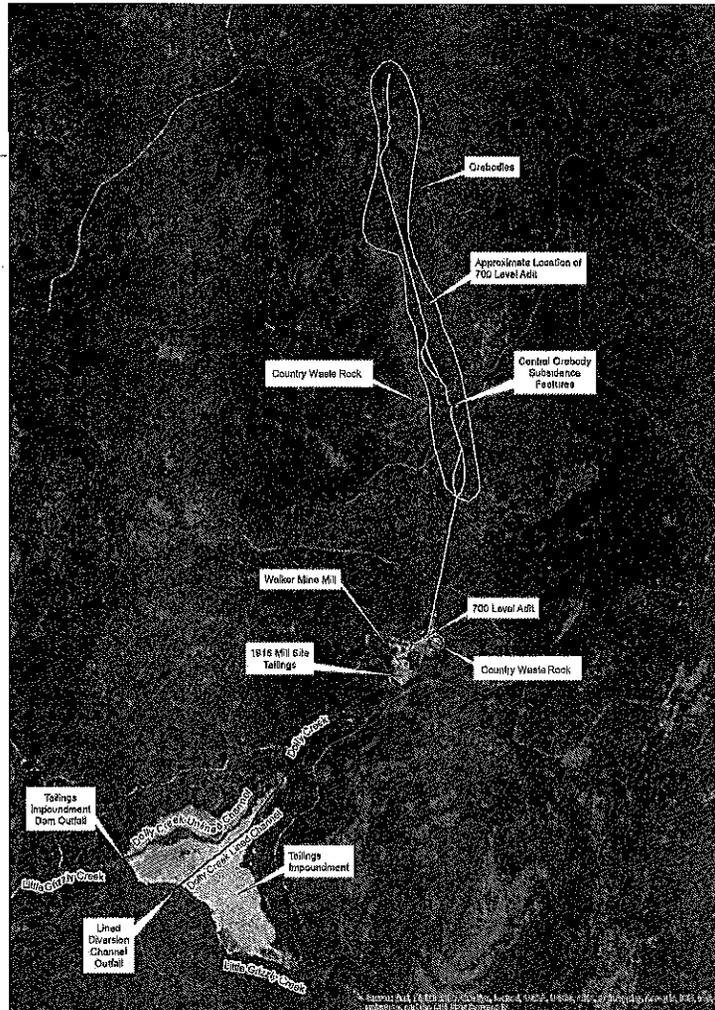


1954



- 2 -

Walker Mine is One Integrated Site



Walker Mine is One Integrated Site



-
- **The Mill Site, Underground Workings and Tailings Facility are Parts of the Same Hydrologic System**
 - Surface water and groundwater flow cross property lines and “site” boundaries
 - Surface water and groundwater flow generally from the adit and mill area to the lower elevation tailings impoundment, and to downstream creeks

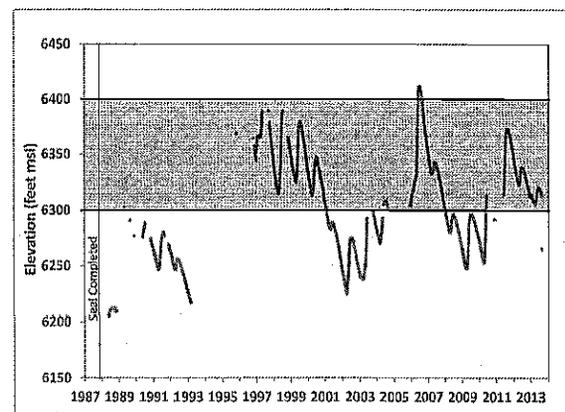
- 3 -

**The Regional Water Quality Control
Board's Response has Spread
Contamination**

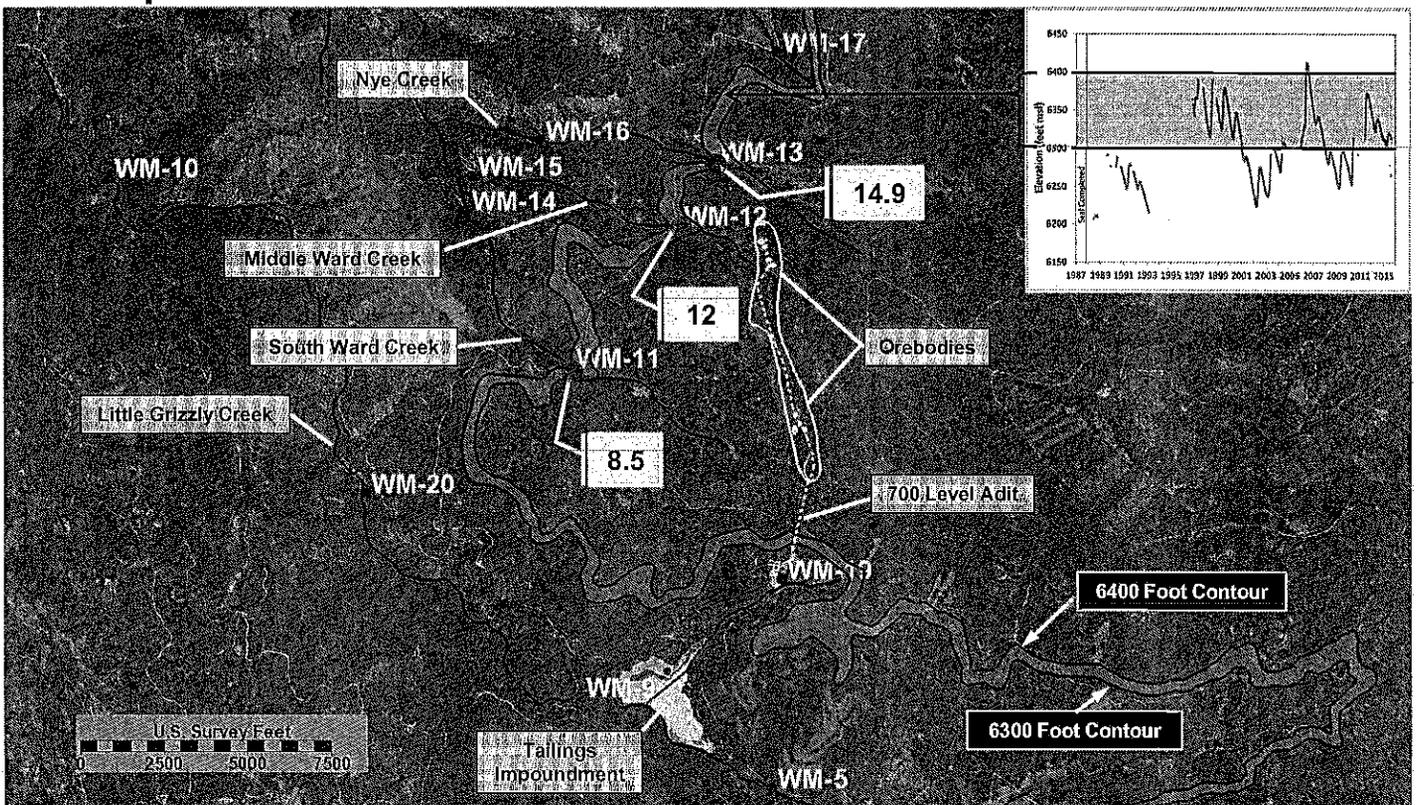
RWQCB's 1987 Response Expanded the Area and Volume of Contaminated Water



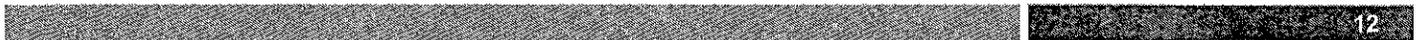
- Inflow into Subsidence Features Not Adequately Addressed
- Sealing the Mine Caused it to Flood
- Water in the Mine Creates AMD
- Fluctuating Water Levels in Mine:
 - Increase AMD Generation
 - Leakage Impacts Surface Water and Groundwater



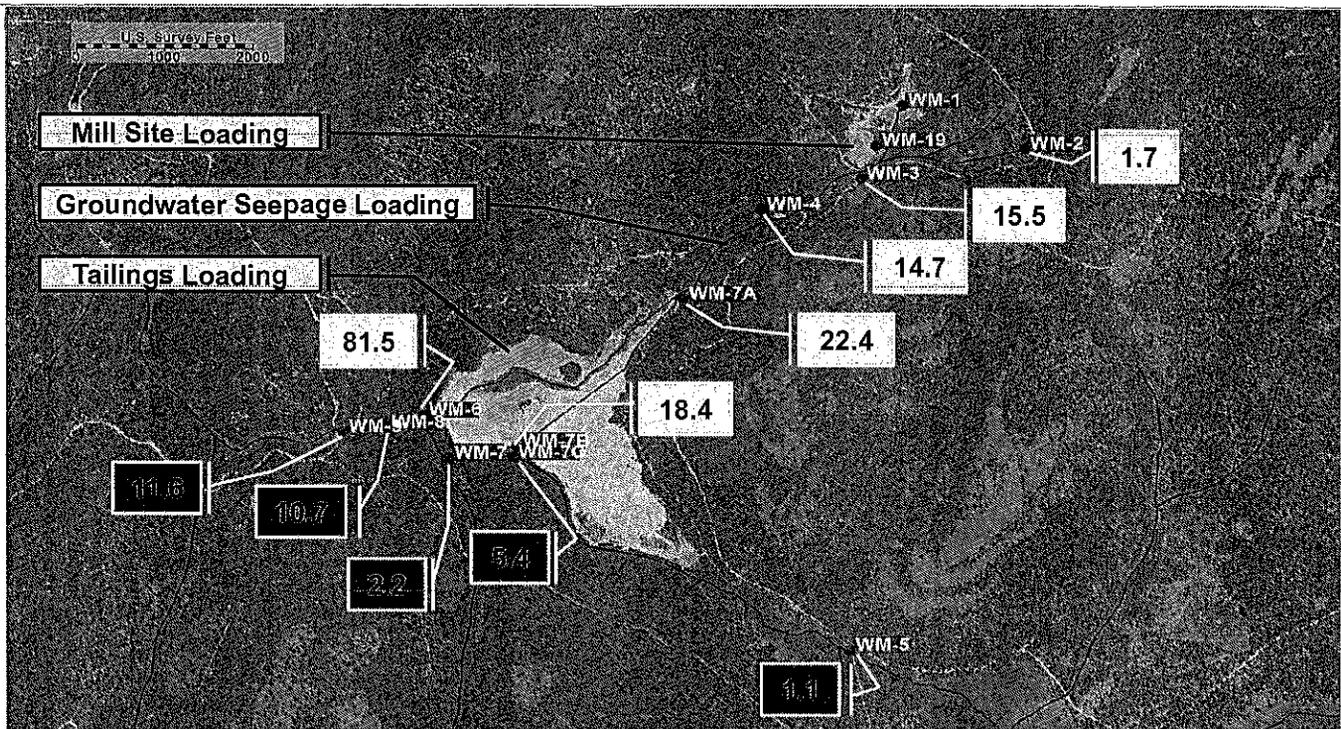
Flooding the Mine Spread Surface Water Impacts



2006 to 2013 Maximum Dissolved Copper Concentrations in $\mu\text{g/L}$



Mining Wastes are Sources of Surface Water and Groundwater Contamination



Source Dolly Creek Little Grizzly Creek

2006 to 2013
Average Dissolved Copper Concentrations in µg/L

- 4 -

**Current Environmental Conditions Are
Caused by Mining Wastes, Not
Development Activities**

Mining Wastes – Not Development Waste Rock - Are a Source of Copper to Surface and Groundwater

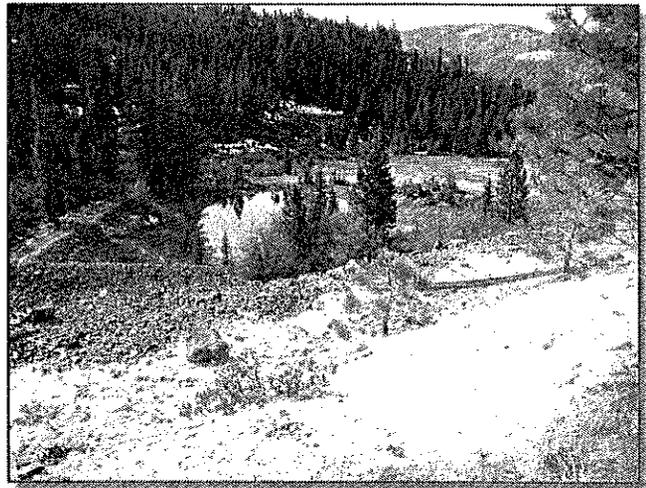


Mining and Milling

- Produced ore and tailings with sulfide minerals
- Sulfide minerals weather to produce Acid Mine Drainage (AMD)

Exploration and Development

- Country Rock – minimal sulfides / not AMD Source
 - WESTEC (1993)



Mill Area

- Continuing sources of copper loading to Dolly Creek
 - Tailings near the mill
 - Mine water from the 700 Level Adit
 - Water in the settling pond

Conclusions



-
1. Timeline / Events following Walker Mining Company (WMC) and Effect on Site Conditions
 2. Walker Mine is One Integrated Site
 3. The Regional Water Quality Control Board's (RWQCB) Response has Spread Contamination
 4. Current Environmental Conditions Are Caused by Mining Wastes, Not Development Activities

Exhibit 83

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

CLEANUP AND ABATEMENT ORDER NO. R5-2014-XXXX

**ATLANTIC RICHFIELD COMPANY
UNITED STATES DEPARTMENT OF AGRICULTURE,
UNITED STATES FOREST SERVICE**

**WALKER MINE TAILINGS
PLUMAS COUNTY**

CLEANUP AND ABATEMENT ORDER NO. R5-2014-YYYY

ATLANTIC RICHFIELD COMPANY

**WALKER MINE
PLUMAS COUNTY**

**PROSECUTION TEAM'S RESPONSE TO ATLANTIC RICHFIELD COMPANY'S
PREHEARING MOTION NO. 2**

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I. Introduction

Discharger Atlantic Richfield's (ARCO's) Prehearing Motion No. 2 seeks a ruling that the Central Valley Water Board itself is a discharger at both the Walker Mine and Tailings sites, as well as withdrawal or revision of proposed Cleanup and Abatement Orders R5-2014-XXXX (Tailings CAO) and R5-2014-YYYY (Mine CAO) to name the Central Valley Water Board as a discharger, on the basis that the Board installed the Mine seal and conducted other work under authority of Water Code section 13305 and because the Board has subsequently entered settlement agreements with prior owners of the Mine.

ARCO's motion should be denied as to the Tailings CAO because the Board does not own the Tailings and has never conducted any remedial work nor entered into any agreements regarding that site. The Board is not a discharger at the Tailings.

ARCO's motion should be denied as to the Mine CAO because the Board is also not a discharger at the Mine. The Board's activities at the Mine have been limited to: 1) installation of the seal, which halted discharge of acid mine drainage (AMD) and other waste from the 700 level portal (portal) to Dolly Creek; 2) rehabilitation of the portal access tunnel to maintain access to the seal; and 3) installation of surface water diversion channels near ground collapses and mine openings high above the portal, which reduces the inflow of surface runoff into the mine workings, and therefore reduces the volume of water behind the seal. The Board conducted these limited activities pursuant to a resolution adopted under Water Code section 13305, and therefore they do not result in Board liability for the entire Mine site.

Following the installation of the Mine Seal, and as authorized under Water Code section 13305, the Board brought two lawsuits against the owners of the Mine site to recover costs related to the seal and subsequent work. The Board settled those lawsuits in 1991 and 2004, respectively. As is standard, the Board released most of the various owners from liability for matters addressed in the lawsuits, but the Board did not assume liability for the Mine site in doing so.

II. The Central Valley Water Board is not a discharger at the Tailings

ARCO requests a ruling that the Board should be a responsible party for the Tailings site, but it offers no evidence or argument in support. That is because there is no such evidence and no basis for Board liability at the Tailings. The Tailings site is owned by the Forest Service, which operates the site subject to Board WDR Order No. R5-00-028. The Forest Service has conducted some remedial work at the Tailings, but the Board's involvement has been limited to twice-yearly inspections and water quality sampling. The Board has not entered into any agreements regarding the Tailings site, regarding remedial action or otherwise. There is simply no basis by which the Central Valley Water Board can be deemed a responsible party under Water Code section 13304 at the Tailings.

III. The Central Valley Water Board is not a discharger at the Mine

a. The Board acted in a limited capacity under Water Code section 13305 to stop harmful discharges from the Walker Mine portal

ARCO's predecessors abandoned the Mine in the early 1940s, and the Mine likely began discharging acid mine drainage (AMD) and metals, notably copper, shortly thereafter as groundwater filled the lower mine workings and reached the 700 level portal opening. (Walker Mine Kaiser Report dated 10 December 1942 [submitted with the Prosecution Team's Case-in-Chief Submittal CD under the electronic folder "Walker Electronic Records Submitted by Reference"; see also PT Exhibits 18 [Resolution 58-180] and 20 [Trumbull Report describing discharges and impacts].) Discharges from the portal and from the rest of the site eliminated most aquatic life and beneficial uses in Dolly Creek and Little Grizzly Creek for a distance of about 10 miles, to the confluence with Indian Creek. (*Id.*) This was a serious and significant environmental problem, although likely not well publicized due to the remoteness of the area. The Board worked for decades with landowners to try and address the problems.

By the mid-1980s, the Board decided to address the portal discharge itself pursuant to Water Code section 13305, which provides that a regional board, upon determining that a condition of pollution or nuisance exists which results from a nonoperating industrial or business location, may, after notice and hearing, require abatement of a pollution or nuisance condition by the city, county, other public agency, or regional board at the property owner's expense. (Wat. Code § 13305 subd. (a).) If a city, county, or other public agency does not respond to a regional board's request to abate the condition of pollution or nuisance, the regional board shall cause the condition to be abated. (Wat. Code § 13305 subd. (e)(1) and (e)(2).)

After studying the portal discharge and commissioning technical reports to investigate potential solutions, the Board adopted Resolution R5-86-057 on 28 February 1986. (PT Exh 13.) Resolution R5-86-087 authorized the Board to take steps to install the seal in the portal, as described in the SRK Report. (PT Exh 14.) The Board certainly could have purchased the site (cf. Leviathan Mine where the State of California purchased the property from Alpine Mining Enterprises and performed remediation activities) or chosen another technical option, but it determined that the seal was the most appropriate and cost-effective way to stop the discharges from the portal. The Board installed the seal in 1987, and continues to conduct twice-yearly inspections of the portal and seal.

The seal has been very effective in halting discharges of AMD and metals from the underground mine workings. Today, mining waste from the Mine site reaches Dolly Creek and Little Grizzly Creek only through surface runoff and erosion from surface mining waste not subject to Resolution 86-057. Although discharges to Dolly Creek and Little Grizzly Creek still violate water quality standards, aquatic life has largely returned to Little Grizzly Creek. (See USFS Tailings Monitoring Reports submitted with the

Prosecution Team's Case-in-Chief as "Walker Electronic Records Submitted by Reference.")

A few years after installing the seal, the Board conducted a tunnel rehabilitation project to maintain access to the seal through the portal. The Board also constructed a number of small, concrete-lined channels on the mountain above the portal, in order to reduce the amount of surface runoff entering the underground mine workings through collapse openings and old Mine adits. These activities have been very effective, they have not disturbed surface mine waste, and they do not cause discharge.

b. The Board is not a discharger under Section 13304

Water Code section 13304 applies to any person who has 1) discharged or discharges waste into waters of this state in violation of any waste discharge requirement or other order or prohibition issued by a regional board or the state board; 2) caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is or probably will be discharged into waters of the state and creates; or 3) threatens to create, a condition of pollution or nuisance. Should the activities of any person result in a discharge or waste or a threat of pollution or nuisance, that person shall upon order of the regional board, clean up the waste or abate the effects of the waste or take other necessary remedial action in the case of threatened pollution or nuisance. (Wat. Code § 13304 subd. (a).) The Board is a "person" under Water Code section 13050, subdivision (c), so if its activities fall within one of the three above-mentioned categories, then it will be considered a "discharger" responsible for cleaning up and/or abating the effects of the waste and/or taking other remedial actions to abate the threat of pollution or nuisance.

Ownership, operation, possession, and control are all factors to consider when determining whether a person has caused or permitted a discharge, but they are not dispositive. When the Board acts pursuant to Water Code section 13305 or 13304 subdivision (b) to perform abatement or remedial activities, it does not automatically become a discharger under those provisions unless its activities also create, cause, or permit a discharge or condition or pollution or nuisance. In *City of Modesto Redevelopment Agency v. Superior Court*, 119 Cal.App.4th 28, 37 (2004) the Court noted "The Porter-Cologne Act appears to be harmonious with the common law of nuisance," under which "liability ... does not hinge on whether the defendant owns, possesses or controls the property, nor on whether he is in a position to abate the nuisance." Rather, liability attaches if a defendant "created or assisted in the creation of the nuisance." (*Id.* at 38.)

ARCO analogizes the Board's activities at Walker Mine to the Board's activities at Penn Mine, as discussed in *Committee to Save Mokelumne River v. East Bay Municipal Utility District*. (13 F. 3d 305.) There, the Court found the Board liable under the Clean Water Act for discharges from the Penn Mine Facility, a series of dams and surface impoundments which the Board constructed together with East Bay MUD in an attempt

to reduce the threat of continued toxic runoff from the site. (*Id.* at 306.) The Board was liable under the Clean Water Act because the facility it constructed and operated discharged waste to waters of the United States. (*Id.* at 307.)

ARCO misstates the important factual differences between the Board's activities in the Penn Mine matter and its activities at Walker Mine. At Penn Mine, the Board owned and operated the series of dams, pumps, and pipes at the facility which contributed to an actual discharge of waste to surface waters. At Walker Mine, the mine seal stopped a discharge that for decades had eliminated most or all beneficial uses in Little Grizzly Creek for ten miles downstream. The Board's tunnel rehabilitation work helped keep access to the seal. The diversion channels on the mountain above the portal reduce the amount of surface runoff flowing into the underground mine workings, thereby reducing the amount of pressure behind the seal. The Board does not meet any of the Section 13304 elements.¹

c. It is appropriate for ARCO to assume responsibility for the entire Mine site, including the mine seal

ARCO contends that the Board alone must bear liability for maintaining or fixing the remedies it installed, namely the seal at the 700 level mine portal, and that ARCO cannot be compelled to assume responsibility for the operation and maintenance of the seal. (ARCO Prehearing Motion No. 2, at p. 3-4.) ARCO is incorrect; the Board can and should require ARCO to assume liability for the site, including the mine seal.

The Board should not be responsible for the seal in perpetuity simply because it exercised its Water Code section 13305 authority to cease an ongoing discharge. Water Code section 13305 is a tool allowing regional boards to step in on an interim basis to abate a condition of pollution or nuisance that the regional board did not cause when there are no viable responsible parties, landowners who are unable to perform cleanup, and an absence of other public agencies conducting abatement activities within a reasonable time. The remedy supplied by Water Code section 13305 was intended as a supplemental remedy available at the discretion of the regional board where other remedies may be ineffective given the nonoperational nature of the business. (*In the Matter of New Penn Mines, Inc.* Order No. WQ-73-13, p. 5.) It is completely appropriate for the Central Valley Water Board to assign liability for the mine seal to ARCO here.

It is bad policy and counter to the purpose of Water Code section 13305 to argue that the Board must bear responsibility for maintaining the mine seal in perpetuity when the Board is not a discharger under Section 13304. To hold regional boards liable for remedial actions that stop discharges, without the ability to compel subsequently identified responsible parties to carry-on and takeover abatement activities, would

¹ ARCO, however, does meet the Section 13304 elements, because its predecessors directed pollution-causing activities at the facility, including, but not limited to, specific exploration, development and operations.

surely serve as a disincentive for boards to quickly act to abate a pollution or nuisance condition at nonoperational facilities, likely resulting in continued water quality harm.

Rather, when the Board acts under Section 13305 to abate a pollution or nuisance condition that it did not cause or permit in the first place, its role should be viewed akin to that of a trustee acting in the interim to stop imminent discharges while continuing to make reasonable efforts to identify potential dischargers associated with the discharge as required by State Board Resolution 92-49.² The elements of Water Code section 13304 are not subsumed in section 13305, and the Board's efforts to locate additional responsible parties under Water Code section 13304 and Resolution 92-49 continued even though Board acted under section 13305.

It is reasonable to assume that the Board recognized that its liability would be greater as a landowner than if it simply acted to stop the portal discharges pursuant to Water Code section 13305, which is likely why it did not choose to purchase the site in 1986.³

Health and Safety Code section 25400 recognizes the need to encourage public entities to abate discharges of hazardous substances by allowing for qualified immunity from liability to apply to those public entities and their employees who respond. (Hlth. & Saf. Code § 25400 subd. (a).) When acting within the scope of employment to abate or attempt to abate hazards reasonably believed to be an imminent peril to public health and safety caused by a discharge of hazardous substances, those persons shall not be liable for any injury or property damage caused by an act or omission unless it was performed in bad faith or in a grossly negligent manner. (Hlth. & Saf. Code § 25400 subd. (b).) CERCLA provides similar protection for state and local governments taking emergency response actions on facilities owned by third parties, except in cases of gross negligence or intentional misconduct by the agency. (CERCLA section 107(d)(2), 42 U.S.C. § 9607, subd. (d)(2).)

Similar logic and policy considerations apply here. Regional boards will be discouraged from acting under Water Code section 13305 if in doing so they 1) become liable as a discharger even when they have not caused or permitted a discharge and 2) are somehow prohibited from compelling subsequently identified potential dischargers responsible for the discharge to takeover abatement of a site.

Furthermore, the Board's liability should be limited so long as its activities do not cause or permit a discharge within the meaning of Water Code section 13304.⁴ This concept of

² *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges under Water Code section 13304*, Resolution No. 92-49, as amended on April 21, 1994 and October 2, 1996.

³ ARCO's citations to two deliberative process memoranda prepared by Board staff are red herrings that should be ignored, as described on pages 1-2 of the Prosecution Team's Response to Atlantic Richfield's Prehearing Motion No. 5. Those memoranda do not constitute decisions of the Board, nor even public representations of Board positions by staff, and cannot bind the Board. The references to potential Board liability refer only to the ongoing costs for monitoring the seal and maintaining the access tunnel.

limited liability or immunity from liability is discussed in *United States v. Iron Mountain Mines* (1995) 881 F. Supp. 1432. In that case, the State of California was alleged to have "actively participated in the operation of the Shasta and Keswick Dams," which allegedly released hazardous substances triggering operator liability under CERCLA. (*Id.* at 1437.) In response to the State's assertion of immunity from CERCLA based on its regulatory or remedial capacity, the Court noted that there is no general "unexpressed, residual immunity for the states or the federal government when they act in a regulatory or remedial capacity." (*Id.* at 1443.) However, specific immunity provisions are enumerated in CERCLA, notably a provision that expressly addresses liability of those who act in a remedial capacity, and *who are otherwise not liable as owners or operators*, and provides them with protection from strict liability in CERCLA. This provision provides a special standard of liability for state and local governments acting "in response to an emergency created by the release or threatened release of a hazardous substance generated by or from a facility owned by another person" (*Id.* at 1444.) State and local governments are liable only for costs or damages resulting from their "gross negligence or intentional misconduct." (*Id.*) The State of California was not able to avail itself of this specific immunity provision as the court found its activities of participating in the operation of the dams sufficient to constitute operator liability.

The Board's actions at the Walker Mine are distinguishable from the State's actions in *Iron Mountain* because the Board does not own or operate the Mine site and it does not own or operate the seal, and in any event the seal is not causing or permitting a discharge or a condition of pollution or nuisance. Contrary to ARCO's assertions, the Board would not be liable under CERCLA for its remedial activities. Even CERCLA limits the liability of those who act in a remedial capacity where they are *not* the owner or operator. ARCO's predecessors operated the Mine, and ARCO should be liable for the entire site.

IV. The Central Valley Water Board did not assume liability for the Mine through settlement agreements with prior property owners

Atlantic Richfield contends that the Board assumed liability for the entire Mine site through its settlements with former Mine owners. (ARCO Prehearing Motion No. 2, at pp. 2-3.) ARCO misstates the terms of the settlement agreements between the Board and the settling parties. The Board did not assume liability for the Mine through the settlement agreements.

ARCO's misunderstanding of the terms of the settlement agreements is somewhat understandable, because Paragraphs 28 and 29 of the proposed Mine CAO inadvertently contain language suggesting that the Board agreed to hold the prior property owner corporations and the other defendants harmless for pollution at the site. The Prosecution Team concedes that those recitations in the Draft CAO should be

⁴ The Prosecution Team's Opening Brief, at page 20 and footnote 12, describes why ARCO should be deemed primarily liable if the Board chooses to allocate liability.

clarified and acknowledges that "hold harmless" agreements carry a specific legal definition, as noted in *California School Boards Association v. State Board of Education*, 191 Cal.App.4th 530, 568 (defining "hold harmless" as "a contractual agreement whereby one party assumes the liability inherent in a situation, thereby relieving the other party of responsibility."). In fact, the Board did not agree to hold the settling defendants harmless. The Prosecution Team has submitted a revised proposed Mine CAO herewith.

Nothing in the prior agreements or stipulation for entry of judgments purports to have the Board 1) assume responsibility for cleanup of the entire Mine Site or 2) assume liability for cleanup costs associated with the Board's efforts to install the plug at the 700 level mine portal, pursuant to its authority under Water Code section 13305, and cease a discharge that it was not responsible for causing. No such "hold harmless" provision exists within the four corners of the 1999 Settlement Agreement or the 2004 Stipulation for Entry of Judgment between the Central Valley Water Board and Cedar Point Properties. (See PT Exhibit 54 [Settlement Agreement]⁵ and PT Exhibit 17, previously submitted.) In fact, Section IV of the Settlement Agreement makes clear that "[n]othing in this Agreement shall be construed to prevent the Central Valley Water Board from undertaking any activity authorized by law at the Walker Mine Property, or from seeking cost recovery for such activity from the Corporation [Cedar Point Properties, Inc.], or *any other potentially responsible party*, for any such activity. (PT Exhibit 54, p. 7-8, emphasis added.) The 1999 Settlement Agreement belies ARCO's contention that the Board is the sole bearer of costs associated with activities it conducted.

With respect to the 1991 Judgment Pursuant to Stipulation (Judgment) memorializing a previous Settlement Agreement between the Board and Calicopia Corporation, Paragraph 9 of the Judgment grants the Board the right to enter the Mine Site to investigate environmental conditions, monitor discharges and water quality, and to conduct such remedial activities as it deems necessary to protect water quality. (PT Exhibit 16, p. 6, lines 17-22.) This Judgment reaffirms the Board's ability to have continuing access to the Mine Site in order to carry out necessary steps to abate ongoing discharges of mining waste as described in the 1986 Resolution adopted pursuant to Water Code section 13305. (PT Exhibit 13 [Resolution R5-86-057].)

Paragraph 9 of the Judgment also contains a limited hold harmless or indemnification clause that reads as follows: "The Board shall indemnify, save, and hold harmless defendants and each of them from any loss, liability, or damages occasioned by or arising out of any act or omission of the Board upon the Property pursuant to any right granted to it hereunder." (PT Exhibit 16, p. 7, lines 3-7.) This simply means that should loss, liability, or damages occur that are related to the right granted to Board, i.e. the right to enter, investigate, monitor, and conduct necessary remedial activities, Calicopia Corporation, the co-trustees of the Robert R. Barry trust, and other individuals in their

⁵ The Settlement Agreement was disclosed to ARCO through PRA requests prior to the Prosecution Team's case-in-chief.

personal capacity, will be relieved of responsibility to answer for those losses, liability, or damages, only. This limited provision cannot be reasonably construed to effectively place the Board into the shoes of Calicopia Corporation or Cedar Point Properties for cleanup or costs. More importantly, the agreement cannot be construed to require the Board to step into ARCO's shoes for those purposes.

V. The Central Valley Water Board need not bring all Mine site potentially responsible parties to the same hearing

ARCO argues that there may be additional potentially responsible parties at the Mine site, and that the Board has assumed the liability of those parties through the prior settlements. As described above, the Board has not assumed any such liability through prior settlements. Moreover, the Board's investigations to date have not revealed any additional potentially responsible parties; it appears that ARCO is the sole remaining potentially responsible party. Should additional information become available regarding other potentially responsible parties, the Board will investigate and bring appropriate action. That does not mean that ARCO cannot be named as a discharger now. All liability under Water Code section 13304 is joint and several, and the Board need not address liability of other dischargers at the same hearing. (*In the Matter of the Petition of Union Oil Company of California*, State Water Resources Control Board Order No. WQ 90-2, at 8.)

VI. Conclusion

For the reasons stated above, the Central Valley Water Board should deny Atlantic Richfield's Prehearing Motion No. 2.

For the Prosecution Team:



ANDREW TAURIAINEN
Senior Staff Counsel
MAYUMI OKAMOTO
Staff Counsel
Office of Enforcement

Exhibit 84



**California Regional Water Quality Control Board
Central Valley Region
Katherine Hart, Chair**



Linda S. Adams
Acting Secretary for
Environmental Protection

11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • FAX (916) 464-4645
<http://www.waterboards.ca.gov/centralvalley>

Edmund G. Brown Jr.
Governor

TO: Victor Izzo
Senior Engineering Geologist
Title 27 Permitting and Mining

FROM: Jeff Huggins *JSA*
WRCE
Title 27 Permitting and Mining

Richard Loncarovich
Assistant Executive Officer

SIGNATURE:

Victor Izzo

DATE: 28 July 2011

SIGNATURE:

Richard Loncarovich

**SUBJECT: WALKER MINE - RESPONSIBLE PARTY RECORDS SEARCH,
ANACONDA GEOLOGICAL COLLECTION, UNIVERSITY OF WYOMING**

Background

Walker Mine is an inactive copper mine in northeastern Plumas County. The mine was discovered in 1904 and in production from 1915 until 1941. The underground workings are extensive, with about thirteen horizontal miles of workings extending vertically almost 2,000-feet. Oxidation of the sulfides in these workings has caused acid mine drainage and severely impacted water quality in Dolly Creek and Little Grizzly Creek.

In 1987, the Central Valley Water Board, as part of an enforcement action against the Calicopia Corporation, placed a mine seal in Walker Mine. The mine seal stopped the discharge of acid mine drainage from within the mine to Little Grizzly Creek. Since that action, the quality of water in Little Grizzly Creek has improved significantly.

However, the Walker Mine has since been abandoned and Calicopia Corporation and any potential successors no longer exist. For the past 20-years, the Central Valley Water Board has incurred considerable obligations for long term operations and maintenance of the mine seal. This is expensive and the liabilities are not insignificant. If the Central Valley Water Board is to reduce its liabilities for Walker Mine, it must determine if a responsible party exists.

Walker Mine was operated by Walker Mining Company (WMC) of Salt Lake City. International Smelting and Refining Company (ISRC) held slightly more than a 50% stock interest in WMC during a majority of the company's period of existence (approximately 1916 to 1941). ISRC is believed to have been a subsidiary to Anaconda Copper Mining Company (Anaconda). Preliminary research by staff indicates that both WMC and ISRC were controlled during that same period by Anaconda. ARCO is successor to Anaconda.

Anaconda's Geological Documents Collection is maintained by the University of Wyoming. The Anaconda Geological Documents Collection is the scientific product of

California Environmental Protection Agency

the Anaconda Company's 90-year program of exploration and development work throughout the United States and in 110 foreign countries.

A previous search of the Anaconda Geological Documents Collection by Central Valley Water Board staff in the late 1990's provided information that links the operations of WMC to Anaconda. A review of the index of that search indicates that other documents exist which may provide a clearer link between WMC and Anaconda.

Paid Anaconda Collection Memberships are required in order to access the collection. The State agency membership annual fee is \$750.00.

This category is open to any State, County, or City Agency.

- Access by any designated researcher who is a full-time regular employee of the State Agency.
- Materials accessed from the files are limited to the state which the agency represents.
- Unlimited duplication at the rates specified.

Duplication Rates

Photocopies (Black/White) or Scans (Color or Black/White) up to 11x17": \$1.00/page. 50% discount offered for self-service black/white photocopies made on-site.

Oversize Duplication

Map Photocopies (black/white; up to 36" wide) or Scans (color or black/white, up to 42" wide): \$2.00/per square foot.

Scans burned to CD/DVD and shipped free of charge.

Summary

In the past year, staff has made considerable progress in understanding the relationship between WMC, ISRC, and Anaconda. However, if we are to name Anaconda and its successor (ARCO) as a responsible party, we need more detailed information showing that Anaconda directed the operations of WMC. Staff believes this information is in the University of Wyoming's Anaconda Geological Documents Collection.

Therefore, staff recommends that funds from Cleanup and Abatement Account No. 69 be approved to pay the State Government Agency Membership annual fee of \$750.00 and duplication rates shown on the attached invoice.

Attachment:

University of Wyoming – American Heritage Center Invoice and Transmittal Letter.

Exhibit 85



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

3443 Routier Road, Suite A
Sacramento, CA 95827-3098
Phone: (916) 255-3000
Fax: (916) 255-3015

CalVEP



Pete Wilson, Governor

8 August 1997

Mr. Walt Pettit
Executive Director
State Water Resources Control Board
Sacramento, CA

**REMEDICATION PLAN FOR THE WALKER MINE ACID MINE DRAINAGE
ABATEMENT PROJECT**

We are hereby submitting a Remediation Plan to the State Board for approval under Water Code Section 13397 for the Walker Mine Acid Mine Drainage Abatement Project. The purpose of this remediation plan is to limit the Regional Board's responsibilities for implementation of corrective action activities at this abandoned mine site. The Remediation Plan provides information on the operations and maintenance of existing remediation structures at the Walker Mine site.

If you have any questions, please call me at (916) 255-3039 or your staff may call Patrick Morris at (916) 255-3121.

GARY M. CARLTON
Executive Officer

Enclosure

cc: Regional Board Members

FILE



Recycled Paper

Our mission is to preserve and enhance the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

Exhibit 86

From: Richard Loncarovich
To: Victor Izzo
CC: Jeff Huggins; Michael Hoffman; Rick Moss; Robert Busby
Date: 06/16/11 1:11 PM
Subject: Re: Walker Mine Responsible Party Search (Ancandona, ARCO)

I do not have a problem with the proposed expenditure. There is a problem with our timing. The last day for expenditures is tomorrow which does not give us enough time to get SB approval and pay for the service. We will have to wait until a new budget is passed. When that will happen I am not sure but once it does happen Jeff can work with Michael Hoffman to get this ordered.

Richard Loncarovich
Central Valley (Region 5)
(916) 464-4640

>>> Victor Izzo 6/15/2011 8:50 AM >>>

Hi Richard

Attached is memo explaining why we need to spend some of the CAO account money approved for this project to research Anaconda (ARCO) relationship with Walker Mine. We are finishing up our search and are preparing to hand the case over to the Office of Enforcement to name ARCO as a responsible party. If this is successful, we will no longer be operator of the site and will become the regulator again. If you want to know more about the Anaconda Document Collection go to the following website:
<http://ahc.uwyo.edu/about/departments/anaconda/default.htm>.

If you concur with us proceeding, please tell us what would be the next step to subscribe for one year.
Rick, Rob - Do you have any questions?

Victor J. Izzo
Senior Engineering Geologist
Title 27 Permitting and Mining
Region 5 - Sacramento
916-464-4626
vizzo@waterboards.ca.gov

Exhibit 87

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

CLEANUP AND ABATEMENT ORDER NO. R5-2014-XXXX

**ATLANTIC RICHFIELD COMPANY
UNITED STATES DEPARTMENT OF AGRICULTURE,
UNITED STATES FOREST SERVICE**

**WALKER MINE TAILINGS
PLUMAS COUNTY**

**CLEANUP AND ABATEMENT ORDER NO. R5-2014-YYYY
ATLANTIC RICHFIELD COMPANY**

**WALKER MINE
PLUMAS COUNTY**

**ATLANTIC RICHFIELD COMPANY'S PREHEARING MOTION NO. 4 REQUESTING A
REGIONAL BOARD RULING THAT DUE PROCESS REQUIRES THE BOARD TO
RECUSE ITSELF**

INTRODUCTION

The Hearing Procedures the Regional Board (the "Board") adopted are constitutionally inadequate for considering the contemplated Cleanup and Abatement Orders ("CAOs") against Atlantic Richfield Company ("Atlantic Richfield"). The result the Prosecution Team seeks to achieve – wholly shifting the Board's liability for the Sites by ordering Atlantic Richfield, a former shareholder of Walker Mining Company, which itself owned and operated the mine, to remediate environmental conditions on hundreds of acres of forest – would be the subject of a years-long proceeding and days or weeks of trial if pursued in a court. Yet the Board has given Atlantic Richfield only 45 minutes of hearing time and a few months to prepare and present its defenses to the Prosecution Team's claims. These procedures do not afford Atlantic Richfield a meaningful opportunity to investigate all relevant facts related to the Sites and to present that information to the Board. The Hearing Procedures thus do not satisfy the federal or state constitutions' guarantees of due process. Nor could the Board ever satisfy due process in a prosecution involving these Sites given the Prosecution Team's failure to acknowledge in its case-in-chief the Board's own liability for the conditions at the Sites.

Atlantic Richfield therefore moves the Board for a ruling that the Board must recuse itself from ruling on the Draft CAOs.

BACKGROUND

The facts at issue in this case date from 1906 to 1941. That is the period of time when Walker Mining Company operated the Mine and Tailings Sites and the period of time during which the Prosecution Team claims that International Smelting & Refining Company ("IS&R") and Anaconda Copper Mining Company ("Anaconda") incurred the liability supposedly supporting the Draft CAOs. Under *United States v. Bestfoods*, which the Prosecution Team agrees supplies the governing standard, the Board must look at these hundred-year-old facts and evaluate whether IS&R or Anaconda directed pollution-causing activities at the Mine or Tailings Site. (Prosecution Team Opening Brief at p. 12 ("Under *Bestfoods*, operator liability occurs where the parent corporation operated the subsidiary's facility and directed the activities that caused the pollution.")) The *Bestfoods* standard thus incorporates a requirement that the Board determine in the first instance what pollution is occurring at the Sites and what activities caused that pollution, issues that require experts' scientific and technical examination. In sum, the alleged Dischargers, the Prosecution Team, and the Board not only must uncover and understand a one hundred-year-old historical record, but must also develop and distill a body of scientific facts related to the current environmental conditions at the Sites and the historical mining practices that could have caused those conditions.

Unsurprisingly, given the complicated nature of the facts and law at issue, Board staff has taken multiple years just to conduct the investigation on which the Prosecution Team now relies in attempting to justify the CAOs against Atlantic Richfield. In 1999,

the Board threatened enforcement against Atlantic Richfield upon these same facts, but elected not to proceed. (Exhibits 149-152.) The Board staff's more "recent" investigation of the Sites appears to have begun in at least 2010. (See Draft CAO R5-2014-YYYY at ¶ 35 ("[Board] staff recently obtained and reviewed relevant documents from the database and other sources."); Exhibit No. 157, Board email to Anaconda Collection dated Sept. 2010.) By contrast, Atlantic Richfield was able to begin preparing for the upcoming hearing only in October 2013 when (after a four month period of silence following Atlantic Richfield's June 3, 2013 comments on the original Draft CAOs), the Prosecution Team confirmed that it would go forward with the prosecution of this matter.

A final schedule for the hearing was not announced until January 27, 2014 when the Advisory Team rejected Atlantic Richfield's challenges to the Prosecution Team's proposed hearing procedures¹ and, instead, adopted the Prosecution Team's proposed deadlines: February 20, 2014 for presentation of Atlantic Richfield's evidence and legal arguments in written form, and March 27 or 28, 2014 for the hearing. The Hearing Procedures give Atlantic Richfield only 45 minutes to present evidence and argument to the Board. Despite Atlantic Richfield's requests, the Hearing Procedures lack any provision for formal discovery and deposition procedures, for expert disclosure procedures, or for separate argument of legal issues. Finally, Atlantic Richfield's request for bifurcation of the hearing on the CAOs was rejected. Bifurcation would have allowed the parties to develop and present evidence to the Board first as to liability and, only if necessary, as to the divisibility and proper apportionment of responsibilities for carrying out the CAOs. The Advisory Team did not articulate any reasons for rejecting Atlantic Richfield's requests.

ARGUMENT

I. The Hearing Procedures Violate Due Process By Denying Atlantic Richfield An Adequate Hearing.

The U.S. Supreme Court's decision in *Mathews v. Eldridge* determines the constitutional adequacy of proceedings that deprive a person of property. Under *Mathews*, courts analyze three factors to determine what process is due: "First, the private interest that will be affected by the official action; second, the risk of an erroneous deprivation of such interest through the procedures used, and the probable value, if any, of additional or substitute procedural safeguards; and finally, the Government's interest, including the function involved and the fiscal and administrative burdens that the additional or substitute procedural requirement would entail." 424 U.S. 319, 335 (1976); see also *Ching v. Mayorkas*, 725 F.3d 1149, 1157-59 (9th Cir. 2013) (applying *Mathews* to overturn a U.S. Citizenship & Immigration Services decision). The Board's procedures in this case fail under the *Mathews* test and therefore violate due process.

¹ Atlantic Richfield's objections to hearing procedures are attached hereto as Exhibit 4023.

A. The Private Interest at Stake is Substantial.

If entered, the Draft CAOs would impose a substantial burden on Atlantic Richfield. The Draft CAOs contemplate a remediation project of unknown magnitude and cost occurring over multiple years on Sites covering more than 900 acres. The Board claims to have already spent \$2.6 million at the Mine Site. Atlantic Richfield provided \$2.5 million to the United States Forest Service (the "USFS") pursuant to the terms of the 2004 Consent Decree. What additional work Board staff contemplates for the Sites and the costs associated with that work are entirely unknown (the Board has provided Atlantic Richfield no opportunity to investigate the Sites beyond a single site visit).²

B. The Board's Procedures Pose a Great Risk for Error.

In *Mathews*, the Supreme Court recognized that the risk of error is greater in cases involving more complicated legal and factual questions. See *Mathews* (contrasting cases with "sharply focused and easily documented" facts to those where "a wide variety of information may be deemed relevant").³ 424 U.S. at 343. Few substantive areas are more factually and legally complex than those in the environmental arena and, in particular, those where issues under *Bestfoods* arise. As detailed above, the Board's decision applying *Bestfoods* in this case will require it to consider facts that are more than a hundred years old, that involve historical mining practices, and that call upon the Board to understand multiple aspects of geology and modern environmental sciences. With only a few months for Atlantic Richfield to develop evidence in its defense and only 45 minutes for Atlantic Richfield to present that evidence to the Board, the risk of the Board erring is high.

The risk of error here is especially great because the Board denied Atlantic Richfield's request to bifurcate the hearing on the Draft CAOs to allow separate testimony and argument as to what, if any, apportioned share of liability Atlantic Richfield should bear. Under applicable law, Atlantic Richfield has a right to prove that any liability it has for the Sites is divisible from the shares of liability borne by other parties, including the Board itself and also USFS. (See Prehearing Motion No. 7.)

C. The Board has No Legitimate Interest in Such Minimal Procedures.

Having allowed the alleged pollution at the Sites to continue since at least 1958, having decided once already not to take enforcement action against Atlantic Richfield and, more recently, having spent more than three years investigating Atlantic Richfield, the Board has no legitimate argument for not allowing Atlantic Richfield additional time

² Upon receiving notice that prosecution of the Draft CAOs would go forward in December 2013, Atlantic Richfield was able to visit the sites only one time. The Sites are located in a remote mountainous area that cannot be accessed during the winter, which can last as long as six months.

³ In simple cases, less robust procedures may satisfy due process. See, e.g., *Machado v. State Water Resources Control Board*, 90 Cal. App. 4th 720 (Cal. App. 2001) (when there was only one potentially liable party, the ownership of that party was not in dispute, and there was an eye witness to the pollution at issue, a full hearing was unnecessary).

to prepare. Likewise, the Board has offered no explanation for giving Atlantic Richfield only 45 minutes to present its evidence and legal arguments at the hearing.

II. The Board Is Biased And May Not Constitutionally Adjudicate Any Claim Related To These Sites.

"[A] fair trial in a fair tribunal is a basic requirement of due process." *Withrow v. Larkin*, 421 U.S. 35, 46 (1975). This case requires the Board to determine whether to shift all or a portion of its own liability onto the Dischargers named in the Draft CAOs. While the Board will not likely consciously act on its bias, the chance of its bias unconsciously impacting its decision remains too great. When a tribunal's members have a financial interest in the outcome of a case, "experience teaches that the probability of actual bias on the part of the [tribunal] is too high to be constitutionally tolerable." *Id.* The financial interest need not be personal to the tribunal members; instead, a decision-maker's interest in maintaining the funds in a public account is sufficient to disqualify that person from serving as an adjudicator. See *Ward v. Village of Monroeville*, 409 U.S. 57, 59 (1972) (holding that a mayor could not be an impartial adjudicator where the revenue produced by fines in his court provided a "substantial portion of [the] municipality's funds"); *Esso v. Lopez*, 522 F.3d 136, 147 (1st Cir. 2008) (holding that the Puerto Rican Environmental Quality Board was not impartial where it sought to impose a fine that would be paid into an account it administered).

The risk of Board bias in considering the Draft CAOs is unconstitutionally high. The Prosecution Team has failed to acknowledge and fairly represent in its case-in-chief that the Board bears a substantial share of the liability for the Sites. The Board's liability arises not only from taking on the remediation of the Mine Site, but also from stepping into the shoes of former Mine Site owners by settling with, releasing, and holding harmless those parties. Indeed, according to its own documents, the Board staff has prepared the Draft CAOs with findings against Atlantic Richfield in the hopes of offloading its liability. The Board's own liability is too great for the Board to provide the constitutionally required fair tribunal.

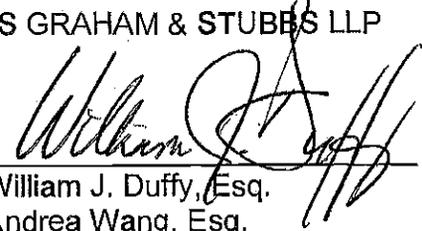
CONCLUSION

Given the constitutional inadequacies of the Board's procedures in this case and the risk of Board bias in ruling on the Draft CAOs, Atlantic Richfield respectfully requests that the Board rule, as a matter of law, that the Board must recuse itself from ruling on the Draft CAOs.

Dated this 20th day of February, 2014.

DAVIS GRAHAM & STUBBS LLP

By:


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Attorneys for Atlantic Richfield Company

Exhibit 88

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

CLEANUP AND ABATEMENT ORDER NO. R5-2014-XXXX

**ATLANTIC RICHFIELD COMPANY
UNITED STATES DEPARTMENT OF AGRICULTURE,
UNITED STATES FOREST SERVICE**

**WALKER MINE TAILINGS
PLUMAS COUNTY**

**CLEANUP AND ABATEMENT ORDER NO. R5-2014-YYYY
ATLANTIC RICHFIELD COMPANY**

**WALKER MINE
PLUMAS COUNTY**

**ATLANTIC RICHFIELD COMPANY'S PREHEARING MOTION NO. 9 REQUESTING A
REGIONAL BOARD RULING THAT CERTAIN OPINIONS OF DR. FREDRIC QUIVIK
ARE EXCLUDED AND STRICKEN FROM THE RECORD**

Atlantic Richfield Company ("Atlantic Richfield") moves the California Regional Water Quality Control Board for the Central Valley Region (the "Board") for a ruling that certain testimony of the Prosecution Team's expert, Dr. Fredric Quivik, must be excluded and stricken from the record. Atlantic Richfield does not object to the majority of Dr. Quivik's report.¹ Rather, this Motion is a focused challenge to certain of Dr. Quivik's opinions that are predicated on speculation and irrelevant matters.

ARGUMENT

The Board must exclude from this proceeding any expert testimony that fails to meet the requirements of California Evidence Code sections 801 and 802. Under California Code of Regulations Title 23, Section 648(b), California Evidence Code sections 801-805 govern the admissibility of expert opinion in this proceeding. Under Evidence Code sections 801 and 802, the Board, as the adjudicative body, "acts as a gatekeeper to exclude expert opinion testimony that is (1) based on matter of a type on which an expert may not reasonably rely, (2) based on reasons unsupported by the material on which the expert relies, or (3) speculative." *Sargon Enterprises, Inc. v. Univ. of Southern California*, 55 Cal.4th 747, 771-72 (2012).

As the California Supreme Court has explained, "irrelevant or speculative matters are not a proper basis for an expert's opinion" and must be excluded. *Id.* at 770 (citation and quotation marks omitted). Evidence Code section 801(b) requires that experts only rely on matters that may "reasonably be relied upon" in "forming opinions on the subject." Under this provision, the court or administrative hearing body "must simply determine whether the matter relied on can provide a reasonable basis for the opinion or whether that opinion is based on a leap of logic or conjecture." *Sargon Enterprises, Inc.*, 55 Cal.4th at 772. This is because,

"The chief value of an expert's testimony . . . rests upon the *material* from which his opinion is fashioned and the *reasoning* by which he progresses from his material to his conclusion; . . . it does not lie in his mere expression of conclusion. . . . In short, [e]xpert evidence is really an argument of an expert to the court, and is valuable only in regard to the proof of the *facts* and the validity of the *reasons* advanced for the conclusions."

People v. Lawley, 27 Cal. 4th 102, 132 (2002) (emphasis in original; additional internal quotation marks omitted) (quoting *People v. Bassett*, 69 Cal. 2d 122, 141 (1968)).

In addition, an expert opinion that is purely conclusory is without evidentiary value. *Jennings v. Palomar Pomerado Health Systems, Inc.*, 114 Cal. App. 4th 1108, 1117 (2003).

Expert opinions that fail to meet these requirements should be excluded under Evidence Code section 803. Cal. Evid. Code § 803; see also *In Re Lockheed Litigation Cases*, 115 Cal. App. 4th 558, 564 (2004) (experts "must provide a reasonable basis for

¹ Although Atlantic Richfield is not objecting to the admissibility of all of Dr. Quivik's opinions, Atlantic Richfield does not concede that Dr. Quivik's other opinions are entitled to any weight.

the particular opinion offered"; "an expert opinion based on speculation or conjecture is inadmissible").

As described below, certain of Dr. Quivik's opinions fail to meet these predicates for admissibility; ultimately they mislead the trier of fact, rather than assist, because they lack a sound basis in logic and fact.

Opinions derived from unrelated cases. Dr. Quivik's opinions about Walker Mining Company's relationship with Anaconda / IS&R are admittedly derived from what he has observed in unrelated cases in which he has worked as an expert witness. (See, e.g., Quivik Expert Report at p. 8, Paragraph E.) Such opinions are wholly irrelevant and speculative, and therefore these opinions should be excluded and stricken from the record.

None of Dr. Quivik's observations in these unrelated cases are at all relevant to this case. First, none of the unrelated cases involved the issue of the relationship between Anaconda (or IS&R) and the Walker Mining Company. Second, there is absolutely no overlap between the companies at issue here (Anaconda, IS&R, and Walker Mining Company), and the companies whose relationship was at issue in the main case Dr. Quivik relies on, *United States v. Newmont*. (See Quivik Expert Report at pp. 15, 17, and 22.) Dr. Quivik's opinion in *Newmont* related to the relationship between Newmont Mining Corporation and Dawn Mining Company, LLC in the 1950s and 1960s with respect to a mine in Montana—different parties, different time, different mine (among myriad other differences). See Conclusions of Law and Findings of Fact, *United States v. Newmont USA Ltd.*, No. CV-05-020 (E.D. Wash. Oct. 17, 2008). Thus, Dr. Quivik must be prohibited from offering testimony about *Newmont*, and any opinions based on his observations in that case should be excluded and stricken from the record.

Because cases involving different parties and different sites are irrelevant to the relationship between Anaconda / IS&R and the Walker Mining Company, it is pure speculation to assume as Dr. Quivik does, that what happened in these unrelated cases also happened here. For example, Dr. Quivik asserts that one of the most compelling sources he relied on to understand the "exact nature of the management relationship between the Walker mine and the Anaconda / IS&R organization" is a 1920 newspaper article that states "[t]he Anaconda company is under contract with the Walker Copper people to operate the mine for the best interest of the Walker Copper." (Quivik Expert Report at p. 15 (quoting a 1920 article from the *Salt Lake Mining Review*.) Based on this newspaper article, Dr. Quivik appears to conclude there was a contract between the two companies. (See *id.* at p. 15-16.) Dr. Quivik admits he "has not seen a contract between Anaconda and the Walker Mining Company," and yet he inexplicably assumes that the contract would have been just like a contract he saw in another case in which he was an expert (*Newmont*). (See *id.*) Conveniently, the contract in that case gave "Newmont the means to participate directly in the management of Dawn's operations." (*id.* at p. 15.)

Such speculation is improper: "an expert's opinion that something *could* be true if certain assumed facts are true, without any foundation for concluding those assumed

facts exist *in the case before the [factfinder]*, does not provide assistance to the [factfinder] because the [factfinder] is charged with determining what occurred in the case before it, not hypothetical possibilities." *Jennings*, 114 Cal. App. 4th at 1117 (emphasis added). In sum, to assume that what happened in an unrelated case probably also happened in this case is an error of reasoning that fails to meet the requirements for expert opinions.²

For each of these reasons, Dr. Quivik's opinions based on his observations in unrelated cases must be excluded and stricken from the record. This includes opinion E on page 8 of Dr. Quivik's report and the discussion on pages 18 – 25 of his report.

Opinions based on speculation. Dr. Quivik's opinions that Anaconda / IS&R "directed the operations" of Walker Mine in general and "managed the Walker mine concurrently with the Walker Mining Company" (Quivik Expert Report at pp. 47 and 8, Paragraph F), are based on conjecture and thus should be excluded and stricken from the record.

Dr. Quivik's report cites in support of his opinions documents from the Anaconda Collection related to the Walker Mine and the Walker Mining Company. Rather than simply report what these documents state, however, Dr. Quivik interprets them. And although Dr. Quivik has no first-hand experience with mining, he "interprets" the documents to conclude that Anaconda / IS&R directed the areas of "geology, mining, and metallurgy" at the mine.³

It is the next step in Dr. Quivik's analysis, however, that is most objectionable and must be stricken in its entirety under California law. After making conclusions about Anaconda / IS&R's involvement with geology, mining and metallurgy, Dr. Quivik makes the giant and completely unexplained leap that Anaconda / IS&R was involved in *all* aspects of the mine and in fact "managed the Walker mine concurrently with the Walker Mining Company from 1918 to 1941." (See Quivik Expert Report at 8, Paragraph F.) Dr. Quivik provides no rationale for equating involvement in *some* aspects of the mine to involvement in *all* aspects of the mine. Nor does Dr. Quivik explain how he arrived at the striking conclusion that Anaconda / IS&R "managed" the mine when he also concluded that "[t]he overall plan for exploration, development, and mining at the Walker mine was being overseen by the ACM's top officials, ..." (Quivik Expert Report at p. 30 (emphasis added).) Dr. Quivik's own language ("overseen") suggests there is a gap between the evidence and his ultimate opinion ("managed"); even assuming for the

² Dr. Quivik himself admits that it is improper to rely upon evidence from other mining companies or even from secondary sources. He claims that his "historical method" is based on review of primary documents involving the relevant companies—not primary documents involving *other* companies. (See Quivik Expert Report at p. 7; see also *id.* at p. 2-3 (explaining "the historical method," which he describes as a method for creating "a coherent and verifiable narrative recitation of the past").)

³ In contrast, Atlantic Richfield's expert, Dr. McNulty, has extensive first-hand expertise with mining and can help translate the technical terms contained in the historical records to explain what type of work was involved. Dr. McNulty explains in his report that the Anaconda Companies were mostly involved with exploration and development of ore reserves; in other words, prospecting, finding and quantifying ore reserves for future mining.

sake of argument that Company A "oversees" Company B's plan for exploration and development, it does not mean that Company A actually "manages" the implementation of the plan much less that it "manages" Company B in general.

The unexplained and unsubstantiated conclusion that Anaconda / IS&R actually managed the entire Walker Mine, and for the entire duration of their investment in the mine, is even more suspect because Dr. Quivik makes this leap based on a partial record of events that occurred between 100 and 65 years ago, and because Dr. Quivik makes no attempt to account for contemporaneous findings that Anaconda / IS&R did *not* control the Walker Mining Company.

After an eight-day hearing in the 1945 bankruptcy proceeding of Walker Mining Company, when witnesses who had relevant first-hand personal knowledge were still available to testify and more documentary evidence would have been available, the U.S. Bankruptcy Court held that no act or omission of Anaconda / IS&R "established by any evidence, constitutes or proves any domination or control by them of any of them over Debtor or any of Debtor's acts, business or affairs. . . ." (Exhibit No. 131.) Dr. Quivik does not attempt to explain this contradictory finding; nor can he.

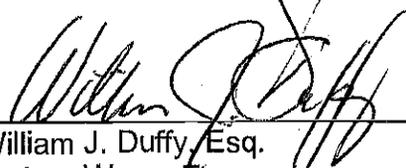
Because Dr. Quivik's conclusion that Anaconda / IS&R "managed the Walker mine" is unexplained and unsubstantiated, it does not meet the threshold requirements of Evidence Code sections 801 and 802, and therefore must be excluded. See *Jennings*, 114 Cal. App. 4th at 1117.

CONCLUSION

For the foregoing reasons, Atlantic Richfield requests a ruling from the Board that, as a matter of law, Dr. Quivik's conclusions based on other cases and other mining companies (including opinion Paragraph E on page 8 and pages 18-25) and his conclusion that Anaconda or IS&R "managed the Walker mine" (including opinion Paragraph F on page 8) are excluded and stricken from the record.

Dated this 20th day of February, 2014.

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Exhibit 89

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

CLEANUP AND ABATEMENT ORDER NO. R5-2014-XXXX

**ATLANTIC RICHFIELD COMPANY
UNITED STATES DEPARTMENT OF AGRICULTURE,
UNITED STATES FOREST SERVICE**

**WALKER MINE TAILINGS
PLUMAS COUNTY**

CLEANUP AND ABATEMENT ORDER NO. R5-2014-YYYY

ATLANTIC RICHFIELD COMPANY

**WALKER MINE
PLUMAS COUNTY**

**PROSECUTION TEAM'S RESPONSE TO ATLANTIC RICHFIELD COMPANY'S
PREHEARING MOTION NO. 9**

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I. Introduction

Discharger Atlantic Richfield's (ARCO's) Prehearing Motion No. 9 seeks a ruling excluding and striking portions of the expert witness statement and conclusions submitted by the Prosecution Team's expert witness, Dr. Fredric Quivik, on the grounds that Dr. Quivik's testimony regarding the corporate structure of Newmont USA Limited is irrelevant and that other portions of his testimony are speculative as to the activities of ARCO's predecessors at the Walker Mine facility.

ARCO's motion should be denied. Dr. Quivik's testimony regarding the Newmont matter is relevant to the Board's examination of ARCO's liability as a successor to Anaconda Copper Company (Anaconda) and International Smelting and Refining Company (International) under the direct operator liability theory. Furthermore, the information Dr. Quivik relies on to form the basis of his expert opinion regarding Anaconda and International's control and direct involvement over mining operations at Walker Mine provides a reasonable basis for his conclusions and is not based on a leap of logic or conjecture.

II. Dr. Quivik's testimony regarding Newmont USA Limited's corporate structure is relevant to the direct operator liability theory

ARCO argues that Dr. Quivik's observations regarding corporate structure and management derived from his experience serving as an expert witness in the *United States v. Newmont* matter are irrelevant in the present matter and cannot be considered by the Board in determining whether the *Bestfoods* direct operator theory of liability applies to ARCO.

While it is true that the Newmont USA Limited (Newmont) and Walker Mine matters involve different companies, the theory of liability at issue in each of the matters is identical. The threshold for determining what constitutes relevant evidence in an administrative proceeding is specified in Government Code section 11513 subdivision (c) which states, "[a]ny relevant evidence shall be admitted if it is the sort of evidence on which responsible persons are accustomed to rely in the conduct of serious affairs, regardless of the existence of any common law or statutory rule which might make improper the admission of the evidence over civil objection."

As an general matter, Dr. Quivik's testimony regarding the *Newmont* case tends to show Dr. Quivik's special knowledge, skill, experience, training or education sufficient to qualify him as an expert on the *Bestfoods* direct operator legal theory and its application in legacy mine cases similar to the Walker Mine and Tailings matter. (See California Evidence Code, §§ 720, 801.)

Furthermore, Dr. Quivik's testimony sheds light on specific facts surrounding Newmont's corporate structure, management, and operation of its subsidiaries which established Newmont's management and control over its subsidiary, Dawn Mining Company, LLC,

triggering Newmont's liability as the parent corporation in *United States v. Newmont*. (cited as E.D. Wash., Oct. 17, 2008, CV-05-020-JLQ) 2008 WL 4621566.) This testimony is relevant to answering the threshold question as to whether ARCO is liable as a successor corporation to parent companies Anaconda and International due to the parent companies' operation and control over subsidiary Walker Mining Company.

ARCO has already lost a challenge like this involving Dr. Quivik. In *Pinal Creek Group v. Newmont Mining Corporation*, ARCO similarly objected to Dr. Quivik's expert testimony in that matter on the basis that his proffered testimony was not relevant to the issue of direct operator liability. (352 F.Supp.2d 1037, 1047.) Dr. Quivik's expert report in *Pinal Creek Group* discussed Anaconda's involvement in geology, engineering, metallurgy, exploration and mine planning, purchasing, and transportation activities at the Inspiration mining facility. (*Id.*) The Court determined that the operator analysis set forth in *Bestfoods* allowed the consideration of evidence of Anaconda's involvement in these types of activities in determining operator liability, and thus, found Dr. Quivik's proposed testimony relevant. (*Id.*)

Dr. Quivik's proposed testimony in this matter covers similar topics including, but not limited to, how Anaconda and International made decisions about exploration and development at Walker Mine (Quivik Declaration, at p. 26, et seq), authorized work such as sequencing of the excavation winzes and/or raises linking levels of mine workings (Quivik Declaration, at p. 29), made decisions and rendered advice on implementing land acquisitions (Quivik Declaration, at p. 31), and specified actions to be taken at the mine including driving drifts and crosscuts (Quivik Declaration at p. 37). This testimony is relevant in determining Anaconda and International's degree of involvement and control over such activities and decision making at the Walker Mine facility in order to determine operator liability under *Bestfoods* and should not be excluded from the record.

ARCO's objection to Dr. Quivik's testimony on the basis of relevance should be denied.

III. Dr. Quivik's testimony regarding analogous cases and his knowledge and experience on corporate structures and mine management hierarchies does not rely on speculative or unsupported opinions and conclusions regarding Anaconda and International's activities at Walker Mine

ARCO argues that Dr. Quivik's proposed testimony regarding the Newmont USA Limited matter, Anaconda and International's corporate structure and mine management and communication through hierarchies including correspondence between key individuals within the Anaconda, International, and Walker Mining Companies results in opinions regarding their control and direct involvement over mining operations at Walker Mine that are speculative and unsupported by evidence in the record. ARCO is incorrect.

Under Evidence Code sections 801 and 802, the trial court acts as a gatekeeper to exclude expert opinion testimony that is (1) based on matter of a type on which an expert may not reasonably rely, (2) based on reasons unsupported by the material on which the expert relies, or (3) speculative. (*Sargon Enterprises, Inc. v. Univ. of Southern California* (2012) 55 Cal.4th 747, 771-772.)

To determine whether the expert's opinion is based on sound logic, a court must simply determine whether the matter relied on can provide a reasonable basis for the opinion or whether that opinion is based on a leap of logic or conjecture. (*Sargon Enterprises, Inc.*, at 772.) The court conducts a "circumscribed inquiry to determine whether, as a matter of logic, the studies and other information cited by experts adequately support the conclusion that the expert's general theory or technique is valid." (*Id.* citing Imwinkelried & Faigman, *Evidence Code Section 802: The Neglected Key to Rationalizing the California Law of Expert Testimony* (2009) 42 Loyola L.A.L.Rev. 427.)

Based on the evidence and Dr. Quivik's expert testimony regarding that evidence, there is a reasonable basis for Dr. Quivik's opinion that "ACM and International officials and managers were directing operations at the Walker mine" (Quivik Declaration, at p. 47) and "ACM and its subsidiary International managed the Walker mine concurrently with the Walker Mining Company from 1918 to 1941" (Quivik Declaration, at p. 8), with respect to geology, mining operations, metallurgy and other areas (see the above section and illustrative examples demonstrating the extent of Anaconda and International's involvement in operations at Walker Mine.)

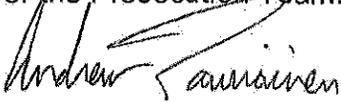
Dr. Quivik's declaration is replete with references to documents and correspondence between officials and managers of Anaconda, International, and Walker Mining Company, as referenced above, where employees of Anaconda and International direct, manage and conducted geological, mining, metallurgical and other operations at the Walker Mine facility. This evidence is bolstered by Dr. Quivik's testimony regarding the two typical corporate structures of mining operations during the early twentieth century (Quivik Declaration, at pp. 20-24), which describes the degree to which the activities of Anaconda and International went beyond the norms of corporate behavior befitting a parent's status as an investor in a subsidiary.

This information is the foundation upon which Dr. Quivik rests upon to fashion his opinion which is the result of a logical step-wise approach towards his ultimate opinion and conclusion. (see *People v. Lawley* (2002) 27 Cal. 4th 102, 132.) Collectively, the evidence and proposed testimony based on Dr. Quivik's special knowledge and experience adequately and logically support his conclusion that Anaconda and International officials directed operations at Walker Mine and do not involve leaps of logic or conjecture. Therefore, Dr. Quivik's testimony is admissible and should be considered by Board.

IV. Conclusion

For the reasons state above, the Central Valley Water Board should deny Atlantic Richfield's Prehearing Motion No. 9.

For the Prosecution Team:

A handwritten signature in black ink that reads "Andrew Tauriainen". The signature is written in a cursive style with a large, sweeping initial "A".

ANDREW TAURIAINEN
Senior Staff Counsel
MAYUMI OKAMOTO
Staff Counsel
Office of Enforcement

Exhibit 90

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

CLEANUP AND ABATEMENT ORDER NO. R5-2014-XXXX

**ATLANTIC RICHFIELD COMPANY
UNITED STATES DEPARTMENT OF AGRICULTURE,
UNITED STATES FOREST SERVICE**

**WALKER MINE TAILINGS
PLUMAS COUNTY**

CLEANUP AND ABATEMENT ORDER NO. R5-2014-YYYY

ATLANTIC RICHFIELD COMPANY

**WALKER MINE
PLUMAS COUNTY**

**PROSECUTION TEAM'S RESPONSE TO ATLANTIC RICHFIELD COMPANY'S
PREHEARING MOTION NO. 7**

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I. Introduction

Atlantic Richfield Company's (ARCO's) Prehearing Motion No. 7 seeks a ruling that liability under Water Code section 13304 is several only, and if it joint and several liability can be assigned, then a reasonable theory for apportionment exists (Atlantic Richfield's Prehearing Motion No. 7, pp. 4-5).

ARCO's arguments are without merit, given the deference that must be paid to the Water Board's long-standing interpretation of Section 13304, public policy reasons, and because ARCO (like all dischargers) may seek redress in another forum. Moreover, ARCO has failed to demonstrate any basis for allocation.

II. Liability under Water Code Section 13304 has consistently been joint and several

The State Water Resources Control Board (State Water Board) has consistently found that liability under the Water Code is joint and several:

The State Water Board has a long-standing policy of assessing joint and several liability against all responsible parties in cleanup cases...[I]t remains the Board's intent to name all responsible parties jointly and severally liable in cleanup actions.

(*In re: Petition of James Salvatore*, Order WQ 2013-0109, at p. 19; see also *Union Oil company of California*, WQ Order No. 90-2 ["we consider all dischargers jointly and severally liable for discharges of waste"]; and *Ultramar, Inc.*, WQ Order No. 2009-0001-UST, at p. 7, fn 12 ["All of the responsible parties are jointly and severally liable for the unauthorized releases."].)

The State Water Board has consistently applied joint and several liability in cleanup and abatement orders because, in part, doing so conserves time and maximizes limited resources of the agency that must prioritize its actions and act on behalf of all members of the public to address serious water quality issues, while still allowing the private parties the opportunity to seek redress through a contribution action if one is needed.

In *Union Oil Company of California*, WQ Order No. 90-2, the State Water Board stated that the Regional Board is authorized:

To issue either one order, or several orders with coordinated tasks and time schedules, to all persons it finds are legally responsible, requiring any further investigating and cleanup which is necessary.

(WQ Order No. 90-2, at p. 3) The State Water Board went on to say that, "while we consider all dischargers jointly and severally liable for discharges of waste, it is

obviously not necessary for there to be duplication of effort in investigation and remediation." (*Id.* at p. 4 (emphasis added).)

Other provisions of the Water Code support imposition of joint and several liability. For example, Water Code section 13267 requires only that reporting requirements bear a "reasonable relationship" to the need for the report and the benefits to be obtained from the reports," and not any nexus with an individual discharger's purportedly divisible share of liability.

Nothing in the plain language of Water Code section 13304 supports ARCO's assertion that liability should be other than joint and several. The Water Code is focused on providing a cleanup plan and not on apportioning share of liability. Applicable regulations likewise do not require several only liability. (See 23 Cal. Code Regs., section 2907-2910.) In addition, the California Environmental Protection Agency's State Auditor Report for 2004 found that the "nine regional water boards apportion liability for cleanup using a strict application of joint and several liability" so that orphan shares do not exist. (2004 Auditor Report, available at <http://www.bsa.ca.gov/pdfs/sr2004/2002-121.pdf>, at p.2 ["even though some share of the cleanup costs is not attributable to a responsible party, each must assume full responsibility for those costs.].)

The State Water Board has an interpretive advantage over the courts regarding provisions of the Water Code, including expertise and technical knowledge regarding groundwater contamination, sources and cleanup thereof and policy and discretion issues regarding naming of dischargers in Cleanup and Abatement Orders. Thus, State Water Board Orders and Resolutions are entitled to heightened deference:

An agency interpretation of the meaning and legal effect of a statute is entitled to consideration and respect by the courts ... the binding power of an agency's *interpretation* of a statute or regulation is contextual: Its power to persuade is both circumstantial and dependent on the presence or absence of factors that support the merit of the interpretation ... An "administrative interpretation ... will be accorded great respect by the courts and will be followed if not clearly erroneous...."

(*Yamaha Corp. of America v. State Bd. Of Equalization* (1998) 19 Cal.4th 1, 7 (emphasis in original).) Accordingly, although courts independently review the text of a statute, they must "tak[e] into account and respect[t] the agency's interpretation of its meaning, of course, whether embodied in a formal rule or less formal representation." (*Id.*)

Relevant factors for deference include "the particular agency offering the interpretation ... [factors] 'indicating that the agency has a comparative interpretive advantage over the courts' [e.g., factors that "assume the agency has expertise and technical knowledge, especially where the legal text to be interpreted is technical, obscure, complex, open-ended, or entwined with issues of fact, policy, and discretion"] and [factors] 'indicating that the interpretation in question is probably correct' [e.g., "careful consideration by

senior agency officials ... evidence that the agency 'has consistently maintained the interpretation in question, especially if [it] is long-standing' ...]. (*Id.* at 7-13.)

Similarly, under the primary jurisdiction doctrine, where issues are placed within the "special competence of an administrative body, limited review is more rationally exercised by "preliminary resort for ascertaining and interpreting the circumstances underlying legal issues to agencies that are better equipped than courts by specialization, by insight gained through experience, and by more flexible procedure." (*Palmer v. University of California*, 107 Cal.App.4th 899, 906-07 (2003).)

ARCO has not demonstrated any basis for going against well-established State Water Board precedent applying joint and several liability to cleanup orders, and thus ARCO's motion should be denied.

III. Joint and several liability remains appropriate even if the harm is capable of apportionment

As evidenced by *Union Oil*, the regional boards have an almost twenty-five year history of imposing joint and several liability on dischargers named to a cleanup order. Notwithstanding this, ARCO argues that joint and several liability is inappropriate when the harm is reasonably capable of apportionment. (Prehearing Motion No. 7, at pp. 2-5.) ARCO's reliance on CERCLA for this conclusion is misplaced, since the Mine and Tailings CAOs are issued pursuant to California law, not CERCLA.

California's environmental laws are allowed to be more protective, and therefore broader, than federal laws like CERCLA. Section 9652(d) of CERCLA makes clear that "CERCLA is not intended to alter in any way the liabilities of any person under state law with respect to the release of hazardous substances." (*City of Merced v. Fields*, 997 F.Supp. 1326, 1335-36 (E.D. Cal. 1998) [recognizing that CERCLA does not preempt state law causes of action.]) Furthermore, defenses to CERCLA are to be construed narrowly to further CERCLA's broad remedial purposes. (*United States v. Honeywell Intern., Inc.* (E.D. Cal. 2008) 542 F.Supp.2d 1188, 1199; *Kelley v. Thomas Solvent Co.* (W.D. Mich. 1989) 727 F.Supp. 1532, 1540.)

Just as with the application of joint and several liability, the boards' policy of declining to apportion liability arises out of the desire to address serious water quality issues and place the responsibility for the cleanup on those creating the concern, rather than the public at large. In many instances, there will be so-called "orphan shares" when a company has changed corporate structure or has no assets to respond to the regional board's order. In these cases, the boards have made the public policy decision to institute joint and several liability to spread the liability across the responsible parties rather than have some portion be borne by the public at large.

This method also conserves significant staff and board resources in making determinations regarding apportionment, corporate history, and the remaining

dischargers' available funds to respond to cleanup and abatement orders, which would necessarily be presented in every cleanup and abatement order hearing should ARCO's position prevail. Such arguments are better saved, as they are in the case of the Mine and Tailings CAOs, for a separate action by and among the dischargers for contribution.

Cleanup and abatement orders are intended to be nimble instruments, and are often accompanied by a Water Code 13267 investigative order seeking information about the site to determine the appropriate method of cleanup. As discussed above, liability under section 13267 orders is likewise joint and several, even if only issued to a single party and not all suspected responsible parties.

Finally, the obligations of a cleanup and abatement order must be fulfilled even if petitioned to the State Board. Adoption of ARCO's position here would transition a complicated legal analysis regarding corporate succession and financial standing from a courtroom after the CAO has been ordered, environmental work is underway, and the proper parties have been determined, into an administrative process with more relaxed evidentiary standards and at a time when the parties are still debating who should be named to the CAO. (See for example, *U.S. Cellulose and Louis J. and Shirley D. Smith*, WQ Order No. 92-04.) This would add a significant burden to Water Board staff, delay remediation, and likely result in many sites having orphan shares, and therefore the need for state participation. These public policy reasons serve to continue with the long-standing practice against apportioning liability.

IV. ARCO's position on apportionment is not reasonable or supported by public policy

ARCO argues that apportionment can be made based on the time that Anaconda and International operated the Walker Mine facility (temporal basis) and on the fact that other parties (namely Walker Mining Company before 1918) conducted limited activities on the site (nature of activities). As an initial matter, allocation based on the amount of time that ARCO's predecessors operated the site can be unfair both in general and in this specific matter. (*Summers v. Tice* (1948) 33 Cal.2d 80; Restatement of Torts Section 433B(3).)

Moreover, ARCO's reliance on *Burlington Northern* is misplaced, because that case involved account many more factors than simply the number of years a company had owned the property or the nature of the discharger's activities. In *Burlington*,

The District Court calculated the Railroads' liability based on three figures. First, the court noted that the Railroad parcel constituted only 19% of the surface area of the Arvin site. Second, the court observed that the Railroads had leased their parcel to B&B for 13 years, which was only 45% of the time B&B operated the Arvin facility. Finally, the court found that the volume of hazardous-substance-releasing activities on the B&B property was at least 10 times greater than the releases that occurred on

the Railroad parcel, and it concluded that only spills of two chemicals, Nemogon and dinoseb (not D-D), substantially contributed to the contamination that had originated on the Railroad parcel and that those two chemicals had contributed to two-thirds of the overall site contamination requiring remediation. The court then multiplied .19 by .45 by up .66 (two-thirds) and rounded up to determine that the Railroads were responsible for approximately 6% of the remediation costs. Allowing for calculation errors up to 50%, the court concluded that the Railroads could be held responsible for 9% of the total CERCLA response costs for the Arvin site.

(*Burlington Northern and Santa Fe Railway Company v. United States*, (2009) 556 U.S. 599, 616-17 (internal quotations omitted).)

Burlington Northern does not support ARCO in this case. The record here demonstrates that Anaconda and International operated the Walker Mine facility concurrently with the Walker Mining Company from 1918 through 1941, when the vast majority (essentially all) of the pollution-causing activities took place on the Mine and Tailings sites. ARCO's apportionment argument is too simplistic under the *Burlington Northern* approach, and fails to consider the strong public policy reasons against apportionment here.

Moreover, the type of scientific and factual evidence necessary to entertain ARCO's arguments would result in the CAO process grinding to a halt. Indeed, the apportionment in *Burlington Northern* had to be conducted by the District Court, because "the Railroads [took] a scorched earth, all-or-nothing approach to liability, failing to acknowledge any responsibility for the release of hazardous substances that occurred on their parcel throughout the 13-year period of B&B's lease." (*Id.* at 615.) This is not what the Water Code intends. Instead, cleanup and abatement orders are designed to protect, remediate, and even offer prospective relief (Section 13304 applies where a party "threatens to cause or permit" and "threatens to create a condition of pollution or nuisance" ... "shall upon order of the regional board ...").

Simply put, liability under the Water Code is broader than liability under CERCLA and purposely designed to pass the costs of remediation onto those who discharge into waters of the state, or who act in a way that causes waste to discharge. This public policy underlies the application of joint and several liability, and the general refusal to apportion liability at the regional board level. Nothing by way of this practice prevents a discharger from recovering more than its fair share of costs or expenditures from other responsible and solvent parties from a later contribution action; it simply prevents the state from bearing the burden and costs of such orphan shares.

Finally, ARCO has made no attempt to distinguish this case from those described in the Prosecution Team's Opening Brief, at page 20 and footnote 12, which demonstrate that even if allocation were somehow appropriate in this context, ARCO itself should be

allocated primary responsibility for the Mine and Tailings sites given its predecessors' operation of the Walker Mine facility.

V. Conclusion

For the reasons stated above, the Central Valley Water Board should deny Atlantic Richfield's Prehearing Motion No. 7.

For the Prosecution Team:



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Exhibit 91

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

—
CLEANUP AND ABATEMENT ORDER NO. R5-2014-XXXX

**ATLANTIC RICHFIELD COMPANY
UNITED STATES DEPARTMENT OF AGRICULTURE,
UNITED STATES FOREST SERVICE**

**WALKER MINE TAILINGS
PLUMAS COUNTY**

—
CLEANUP AND ABATEMENT ORDER NO. R5-2014-YYYY

ATLANTIC RICHFIELD COMPANY

**WALKER MINE
PLUMAS COUNTY**

—
**ATLANTIC RICHFIELD COMPANY'S PREHEARING MOTION NO. 7 REQUESTING A
REGIONAL BOARD RULING THAT ATLANTIC RICHFIELD CANNOT BE
JOINTLY AND SEVERALLY LIABLE FOR CLEAN UP AND ABATEMENT OF THE
MINE AND/OR MINE TAILINGS SITES**

INTRODUCTION

The Prosecution Team contends that Atlantic Richfield Company ("Atlantic Richfield") is liable for conditions at the Sites because Anaconda Copper Mining Company ("Anaconda") and International Smelting & Refining Company ("IS&R") allegedly directed specific pollution-causing activities there. The Prosecution Team does not dispute that Anaconda and IS&R at all times were separate corporate entities from the Walker Mining Company and that corporate formalities were followed. In sum, the Prosecution Team does not seek a ruling from the Regional Board (the "Board") upon an alter-ego theory of liability against Atlantic Richfield. Even if the Board were to find Atlantic Richfield liable – a finding which Atlantic Richfield believes is not supported by the evidence – then Atlantic Richfield's liability extends only to the quantum of harm that may arise from the pollution-causing activities in which the Board finds that Anaconda and IS&R were involved. In other words, liability under Water Code Section 13304 and *United States v. Bestfoods* is several only, not joint and several. Moreover, even if joint and several liability were the rule here, traditional tort law principles and multiple environmental statutes show that Atlantic Richfield should have the opportunity to prove that the harm at issue is reasonably capable of apportionment. Because the harm from Walker Mining Company's mining operations as a whole *is* reasonably capable of apportionment, any finding of liability against Atlantic Richfield would have to be apportioned among Atlantic Richfield and other liable parties.

Atlantic Richfield therefore moves the Board for a ruling that liability under Water Code § 13304 is several only or, in the alternative, even if liability were joint and several, the Board would have to apportion responsibility for conditions at the Sites among Atlantic Richfield, the Board itself, and all other liable parties.

ARGUMENT

I. Water Code Section 13304 Liability Is Several Only.

Water Code Section 13304's plain language establishes that liability is several only. In relevant part, Water Code Section 13304 provides that,

Any person . . . who has caused or permitted . . . any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board, clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including, but not limited to, overseeing cleanup and abatement efforts.

Cal. Water Code §13304(a) (emphasis added).

Thus, Section 13304 refers specifically to "the waste" a discharger has "caused or permitted." Section 13304 does not provide that a discharger shall be liable for

cleaning up all waste or abating the effects of all waste. See *id.* Imposing joint and several liability therefore would be inappropriate under Water Code Section 13304.

Section 13304's plain language comports with the *United States v. Bestfoods* legal standard the Prosecution Team identified as governing this case. "Under *Bestfoods*, operator liability occurs where" a corporate shareholder "operated the [corporation's] facility and directed the activities that caused the pollution." (Prosecution Team Opening Brief ("Pros. Op. Br.") at p. 12.) As with the Water Code, direct operator liability pursuant to *Bestfoods* is limited in scope to the harm arising from the particular activities the shareholder caused. The reason for this is that a direct operator liability finding under *Bestfoods* does not mean the shareholder stepped into the shoes of the corporation; to the contrary, a direct operator liability finding recognizes that the shareholder is liable only because of, and only to the extent of, specific pollution-causing activities in which the shareholder participated.

The Prosecution Team ignores Section 13304's plain language, instead claiming that the legislative "intent" behind the provision is for any clean-up and abatement liability to be joint and several. It is telling that the Prosecution Team completely fails to cite any portion of the legislative history of this supposed intent. (Pros. Op. Br. at p. 20.) Indeed, to support joint and several liability, the Prosecution Team cites a single sentence from a decision by the State Water Resources Control Board (the "State Board"), *In the Matter of Union Oil Company of California*, Order No. WQ 90-2. (See Pros. Op. Br. at p. 20.) That decision contains only the State Board's 1990 passing observation that liability should be joint and several under Section 13304. See Order No. WQ 90-2 at 4. Twenty-four years ago, the then-sitting members of the State Board presented this observation without a single citation to the statutory language, the legislative history or any precedential court opinion. See *id.* Moreover, the arguments and authorities that Atlantic Richfield presents here were not before that *Union Oil State Board*. Furthermore, that Board did not decide the issues raised in Union Oil's petition, but remanded the matter to the Board to issue either a consolidated order or a coordinated order to the various alleged dischargers, rather than proceed in a piecemeal manner. See Order No. WQ 90-2 at 4. Consequently, the *Union Oil* order can hardly be dispositive, or even relevant, to determining the Water Code's application to this case.

II. Joint and Several Liability Is Inappropriate When The Harm At Issue Is Reasonably Capable of Apportionment.

Even in contexts where joint and several liability is sometimes appropriate, both traditional tort law and modern environmental law provide a defense where the harm is reasonably capable of apportionment.

Under traditional tort law regarding joint and several liability:

Damages for harm are to be apportioned among two or more causes where (a) there are distinct harms, or (b) there is a reasonable basis for determining the contribution of each cause to a single harm.

And

If two or more persons, acting independently, tortiously cause distinct harms or a single harm for which there is a reasonable basis for division according to the contribution of each, *each is subject to liability only for the portion of the total harm that he has himself caused.*

Restatement (Second) of Torts §§ 433A, 481 (emphasis added).

The United States Supreme Court incorporated these Restatement sections in its interpretation of CERCLA. The Court observed that "Congress intended the scope of liability to 'be determined from traditional and evolving principles of common law.'" *Burlington Northern & Santa Fe Ry. v. United States*, 556 U.S. 599, 613-15, 619 (2009), quoting *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802, 808 (1983); see also *id.* at 614 ("[T]he universal starting point for divisibility of harm analyses in CERCLA cases' is § 433A of the Restatement (Second) of Torts."), quoting *United States v. Hercules, Inc.*, 247 F.3d 706, 717 (8th Cir. 2001). The Prosecution Team has offered no reason to think the California legislature intended to depart from these common law principles in crafting the Water Code.

Indeed, in drafting California's state law equivalent to CERCLA, the legislature specifically included the reasonable apportionment defense to joint and several liability. California Health & Safety Code Section 25363(a), the Hazardous Substance Account Act ("HSAA"), states that:

Except as provided in subdivision (f), any party found liable for any costs or expenditures recoverable under this chapter who establishes by a preponderance of the evidence that only a portion of those costs or expenditures are attributable to that party's actions, shall be required to pay only for that portion.

Cal. Health & Safety Code § 25363(a).

The Prosecution Team appears to concede that the Board may apportion liability, but contends that apportionment is discretionary. (See Pros. Op. Br. at p. 20 & n.12.) The Prosecution Team is simply wrong on the law. For the Board to deny Atlantic Richfield a defense despite Atlantic Richfield's ability to prove reasonable apportionment would be a departure from both common law and modern environmental law.

III. The Harm At Issue Here Is Reasonably Capable of Apportionment.

There is a reasonable basis for apportionment in this case, which inquiry is fact-specific to a particular case. Courts look to various factors and rely on estimates in determining whether harm is reasonably capable of apportionment. For example, in *Burlington Northern*, the Supreme Court recognized that "divisibility may be established by 'volumetric, chronological, or other types of evidence,' including appropriate geographic considerations." 556 U.S. at 617-18 (citation and internal quotation marks omitted). The Supreme Court held that the trial court's allocation of liability was supported by evidence that comported with general principles of apportionment, even though the evidence presented to the trial court by the parties might not permit precise calculation of the defendant's particular contribution to the contamination. *Id.* at 617-19. In so holding, the Supreme Court recognized that apportionment does not require "specific and detailed records" or precise figures demonstrating a particular defendant's contribution to the contamination. *Id.* at 617-18.

Here, the factors identified in *Burlington Northern* and the *Bestfoods* liability standard provide a reasonable basis for apportionment. The evidence shows the limited duration of IS&R's and Anaconda's connection to the Sites, the narrow scope of IS&R's and Anaconda's activities and lack of involvement in pollution-causing activities, and IS&R's and Anaconda's remote potential for contributing to any discharge.¹

There is a temporal basis for apportionment:

1. During the 107-plus years since the Walker Mining Company began operating the mine and appurtenant facilities, Atlantic Richfield itself has had absolutely no ownership, control, or other involvement, with either the Mine Site or the Mine Tailings Site beyond its participation as a party to the consent decree with the United States Forest Service in 2005.

2. IS&R had no ownership or control over either Site. It acted as a shareholder, at one point holding 51% of the shares, of Walker Mining Company, as a publicly-traded corporation.

3. Walker Mining Company operated the mine and mine property from 1906 to 1941.

4. However, IS&R was not a shareholder of Walker Mining Company until 1918. Therefore, IS&R was the shareholder of the publicly-traded Walker Mining Company for 26 years during which Walker Mining Company operated the mine.

5. Neither Walker Mining Company, nor anyone else, operated the mine for significant portions of the 1916-1945 period (1932-1935, June 1, 1938 to October 31,

¹ Based on all these factors, Atlantic Richfield has provided in its Prehearing Brief an estimate of the amount of harm reasonably apportionable to Atlantic Richfield compared to the amounts apportionable to other parties.

1938, and 1941-1945). The mine operated on a curtailed basis from January 1, 1938 to May 31, 1938. Thus the mine was silent for 8 of the 28 years Walker Mining Company operated the Mine and curtailed for roughly a half year during the 28 years. Walker Mining Company operated the mine while IS&R held stock. The 28-year operational period should thus be adjusted to 19 ½ years.

6. From 1945-2014, various other parties caused and/or contributed to the contamination at issue. These parties include –

- a. Subsequent property owners and operators such as Robert Barry, Calicopia Corporation, Cedar Point Properties, Daniel Kennedy, AMAX, Inc., Sierra Mineral Management, Conoco, and Noranda Exploration; and
- b. The Board itself—both indirectly, based on the Board having stepped into the shoes of other responsible parties pursuant to settlement/indemnification agreements, and directly, as a site operator for releases attributable to insufficient response actions the Board implemented at the Walker Mine Site.

There is also a basis for apportionment based upon the nature of the parties' activities at a given site.

1. IS&R, at most, might theoretically be liable for any action that meets *Bestfoods* criteria relating to its direct participation in Walker Mining Company's waste handling and disposal activities (if any). *United States v. Bestfoods*, 524 U.S. 51, 66-67 (1998). This issue is discussed in depth in Atlantic Richfield's Prehearing Brief. See Atlantic Richfield's Prehearing Brief at pp. 30-32.

2. Walker Mining Company is and other mine owners and operators could be liable for their respective activities in owning, operating and disposing of waste at the Mine and Mine Tailings Sites.

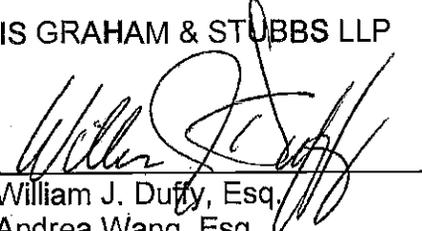
Despite the potential temporal allocation and nature of activity allocation evidence, the Prosecution Team appears to argue that apportionment is not available here because there are no "equitable reasons" for either type of allocation here. (Pros. Op. Br. at p. 20 n.12.) The Prosecution Team seems to add that, in any event, "Atlantic Richfield is the only remaining responsible party at the Mine." (*Id.* at 20.) As detailed in Atlantic Richfield's Prehearing Motion No. 2, the Prosecution Team is simply incorrect in asserting that Atlantic Richfield is the only remaining viable party with a relationship to the Sites. In any event, however, the Prosecution Team's equitable argument to expand Atlantic Richfield's liability in the absence of another deep pocket simply cannot override the applicable law and relevant evidence.

CONCLUSION

Based on Water Code Section 13304's plain language and other analogous laws, Atlantic Richfield respectfully requests a ruling from the Board that, as a matter of law, any liability the Board imposes for the Draft CAOs must be several only. Alternatively, any ruling made by the Board that liability under Water Code Section 13304 is joint and several must also allow apportionment, as a matter of law, because the harm is reasonably capable of apportionment.

Dated this 20th day of February, 2014.

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Exhibit 92

ATLANTIC RICHFIELD COMPANY'S PREHEARING BRIEF

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

—
CLEANUP AND ABATEMENT ORDER NO. R5-2014-XXXX

**ATLANTIC RICHFIELD COMPANY
UNITED STATES DEPARTMENT OF AGRICULTURE,
UNITED STATES FOREST SERVICE**

**WALKER MINE TAILINGS
PLUMAS COUNTY**

—
**CLEANUP AND ABATEMENT ORDER NO. R5-2014-YYYY
ATLANTIC RICHFIELD COMPANY**

**WALKER MINE
PLUMAS COUNTY**

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The Prosecution Team has presented the Regional Board with an extraordinary case. The Regional Board is admittedly liable for the conditions at these Sites, there is an ongoing federal CERCLA remedy on a portion of the Sites, and the Prosecution Team seeks to hold Atlantic Richfield Company ("Atlantic Richfield") liable despite Atlantic Richfield never having owned or operated any part of the Sites at issue. The Prosecution Team not only lacks the evidence to prove such a case, but the Regional Board lacks legal authority for even considering the case. For all of the reasons explained in this Prehearing Brief and the nine Prehearing Motions Atlantic Richfield attaches as appendices hereto, the Board must reject the Draft CAOs.¹

INTRODUCTION

Atlantic Richfield and its predecessors,² International Smelting and Refining Company ("IS&R") and Anaconda Copper Mining Company ("Anaconda") were never owners of the Sites. Nor were these companies among the many successive entities which operated one or both of these Sites. Indeed, Atlantic Richfield's only connection to the mining property at issue here is from a long-ago predecessor's ownership of stock from 1918 to 1945, in a publicly traded company — the Walker Mining Company ("Walker Company") — that itself owned and operated a copper mine and associated facilities located at the Mine Site for a brief portion of the history of these sites ("Walker Mine"). Having spent decades pursuing the Sites' owners (and, through settlements, assuming the liability of some of these owners), the Prosecution Team has come to Atlantic Richfield as the only solvent party left. But the Prosecution Team is wrong: there are others, including this Regional Board, which are liable to pay for

¹ This brief addresses proposed Cleanup and Abatement Order No. R5-2014-XXXX ("Tailings Site CAO") and proposed Cleanup and Abatement Order No. R5-2014-YYYY ("Mine Site CAO," and together the "Draft CAOs"). Together the Mine Site and the Tailings Site are referred to in Atlantic Richfield's brief as "the Sites".

² Atlantic Richfield Company does not dispute that Atlantic Richfield is the successor to Anaconda and IS&R through a series of corporate transactions. Together, IS&R and Anaconda are referred to as the "Anaconda Companies" in this brief.

some or all of any needed investigation and remediation. And more importantly, Atlantic Richfield cannot be liable for these Sites.

A foundational principle of corporate law is that shareholders are not liable for the debts and liabilities of the corporations in which they invest. In fact, the corporate veils of publicly traded corporations like the Walker Company have never been pierced. Perhaps recognizing this reality, the Prosecution Team has abandoned its originally pleaded effort to establish the Walker Company was the alter ego of IS&R. The Prosecution Team is left attempting to prove liability by showing that IS&R controlled the waste disposal activities of Walker Mine. The problem is that they have no such evidence because there was no such control. The Prosecution Team then drifts back to where it started: alleging IS&R managed the Walker Mine alongside the Walker Company, apparently as the Walker Company's alter ego.

Of course, a United States Bankruptcy Court ruled on this very question nearly 70 years ago – at a time when witnesses were still around to testify and the events were relatively fresh in human memory. The decision:

“Debtor is not and has never at any time been an alter ego or instrument or department of [Anaconda] or of [IS&R];

“Debtor’s business and affairs have at all times been carried on and conducted in the manner and according to the methods and practice usually employed by corporations free of any domination or control by others”; and

“[N]o act or omission of [Anaconda] or of [IS&R], their officers, agents and employees, or any of them, establishes any evidence, constitutes or proves any domination or control by them or any of them over Debtor or any of Debtor’s acts, business or affairs, or constituted fraud, or occasioned damage or prejudice to or violated any right of Debtor or any of its stockholders.”

(Ex. 131.)

The evidence of record and pre-filed materials show that the Prosecution Team has not and cannot meet its burdens of production and persuasion by a preponderance of the evidence.

To provide the Regional Board with a framework for addressing preliminary jurisdictional and liability issues that must be resolved first, and to highlight the relevant facts and law it will need to decide before issuing any CAO here, Atlantic Richfield has included nine prehearing motions as

Appendix 1 to this Brief:

1. Atlantic Richfield Company's Prehearing Motion No. 1 Requesting A Regional Board Ruling That CERCLA Prohibits The Regional Board From Issuing The CAOs
2. Atlantic Richfield Company's Prehearing Motion No. 2 Requesting A Regional Board Ruling That The Regional Board Is A Discharger At The Sites
3. Atlantic Richfield Company's Prehearing Motion No. 3 Requesting A Regional Board Ruling That The Doctrine Of Laches Precludes The Board From Issuing The Draft CAOs
4. Atlantic Richfield Company's Prehearing Motion No. 4 Requesting A Regional Board Ruling That Due Process Requires The Board To Recuse Itself
5. Atlantic Richfield Company's Prehearing Motion No. 5 Requesting A Regional Board Ruling That The Prosecution Team's Claim For Contribution Cannot Be Adjudicated In An Administrative Hearing
6. Atlantic Richfield Company's Prehearing Motion No. 6 Requesting A Regional Board Ruling That The Prosecution Team Has The Burden To Prove Each Element Of Its Case Seeking Each Proposed Clean Up And Abatement Order By A Preponderance Of The Evidence
7. Atlantic Richfield Company's Prehearing Motion No. 7 Requesting A Regional Board Ruling That Atlantic Richfield Cannot Be Jointly And Severally Liable For Clean Up And Abatement Of The Mine And/Or Mine Tailings Sites
8. Atlantic Richfield Company's Prehearing Motion No. 8 Requesting A Regional Board Ruling That Past Costs Are Not Recoverable In This Proceeding
9. Atlantic Richfield Corporation's Prehearing Motion No. 9 Requesting A Regional Board Ruling That Certain Opinions Of Dr. Fredric Quivik Are Excluded And Stricken From The Record

Before the hearing commences, Atlantic Richfield respectfully requests separate written rulings on each of these motions.

FACTUAL BACKGROUND³

I. THE FIRST 38 YEARS: THE WALKER MINING COMPANY AND THE WALKER MINE

Before IS&R purchased stock in the Walker Company, the Walker Mine property, including a mill, concentrator and tailings pond, were developed and operating through the efforts of the Walker Company's original investors. As early as 1909, J.R. Walker had located and begun work on the mining claims comprising the Mine Site, (Ex. 136), had sunk a shaft on the Site by 1910, (Ex. 198), and had two operating tunnels with crosscuts by 1915, (Ex. 4.) Mr. Walker and others incorporated the Walker Company in Arizona in 1913. (Ex. 61.) The Walker Company built its first mill at the Sites in 1915, (Ex. 137), and during those early years, disposed of its tailings at a site near the mill, (Lombardi, at p. 10.) Before IS&R took any investment interest in the Walker Company, the Walker Company had already produced over 67,000 tons of ore, 23,340 tons of concentrate and 44,740 tons of tailings. (McNulty, at p. 16, Table 1.)

IS&R later purchased stock in the Walker Company, and IS&R's involvement with the Walker Mine was at all times consistent with corporate norms. In 1918, IS&R acquired 600,020 shares of the Walker Company's stock, a 50.4% interest in the Walker Company. (Ex. 29.) The Walker Company continued to operate as a fully functioning separate enterprise and all corporate formalities were followed. (Haegele, at pp. 5-8.) All loans and services provided by IS&R and its parent, Anaconda, were appropriately accounted for and all sales contracts from the Walker Company to IS&R were market based. (*Id.* at pp. 7-8.) It is undisputed that IS&R's investment in the Walker Company was beneficial to the Walker Company and the minority shareholders, and there is no evidence that the Anaconda

³ Atlantic Richfield includes here the factual backdrop for this matter. Additional facts are described in the balance of this brief and in the reports of Atlantic Richfield's experts. Atlantic Richfield hereby incorporates all Exhibits included in Appendix 2 to this Prehearing Brief. Atlantic Richfield also incorporates the expert reports of William Haegele, Terry McNulty and Marc Lombardi, attached as Appendix 3, Appendix 4 and Appendix 5, respectively.

Companies ever advanced their own interests to the detriment of the Walker Company. (*Id.* at pp. 8-9, 10.)

The Anaconda Companies direct involvement in the Walker Mine was limited to certain administrative and procurement services and to providing geological expertise, primarily for long-range planning and ore prospecting. (McNulty, at pp. 9-10; Haegele, at pp. 11-14.) The Anaconda Companies had special expertise in geology. (McNulty, at p. 9.) Its exploration geologists served as consultants to the Walker Company in support of exploration and development activities at the Walker Mine, which is the search for ore deposits to book reserves and plan for future mining. (McNulty, at p. 9.) The Anaconda Companies were compensated for these consulting services and the Walker Company employees performed all of the underground work related to prospecting, exploration and development. (Haegele, at p. 11; McNulty, at p. 5.)

Ore prospecting is not waste disposal. After the operator locates the ore, it must physically remove that ore from the mine. Once the operator removes the ore from the mine, it must mill and process that ore in a concentrator to separate the ore from the rock. After this process is complete, the operator ships the now enriched copper for sale and disposes the mill tailings as waste. (McNulty, at p. 15.) At the Walker Mine, the Walker Company originally disposed of these tailings at a tailings pile near the mill. (Lombardi, at p. 10.) The Walker Company later established a tailings impoundment at what is now known as the Tailings Site.

There is no evidence that Anaconda directed or controlled those core mining activities of the Walker Company, and important to this proceeding, there is no evidence of Anaconda's involvement in waste disposal decisions. (McNulty, at p. 15; Haegele, at pp. 14-16.) The Walker Company had hundreds of employees who ran the operations at the Walker Mine. The Anaconda Companies neither operated nor managed the Walker Mine. (McNulty, at p. 10; Haegele, at p. 16.)

With respect to the Tailings Site, the Walker Company and the United States Government alone arranged for permitting and development of the tailings impoundment. In 1919, the Walker Company applied to the U.S. Department of Interior ("DOI") for permission to build a tailings reservoir downstream from the Mine Site at what is now known as the Tailings Site. (Ex. 9.) The United States Government owns the Tailings Site. After imposing certain requirements, including the construction of a tailings dam to government standards, the DOI approved the Walker Company's application in 1920. (Ex. 24.) Thereafter, the tailings were carried by water from the Mine Site to the Tailings Site by a wooden trough. (Ex. 137.)

The Walker Company mine operated for less than twenty-three years. With the Depression came low copper prices, decreasing the Walker Company's profitability and sometimes forcing it to suspend mining or cut back its operations. For instance, low copper prices forced the mine to shut down from 1932 to 1935. (Ex. 133.) Even after the mine reopened, copper prices remained low and the Walker Company lost money. The copper content of the known ore bodies began to decline at the same time. An extensive search for additional ore was conducted in 1939 to 1941, with disappointing results. The mine closed in October 1941, and the Walker Company filed for bankruptcy in 1944. (Ex. 128.)

At the time of the bankruptcy, a United States Judge determined that the Anaconda Companies did not control the Walker Company. When IS&R filed a claim for an outstanding loan to the Walker Company, the minority shareholders in the Walker Company challenged the claim. After an eight day hearing on this challenge, the special master allowed IS&R's claim. (Ex. 132.) The bankruptcy judge adopted the special master's findings, concluding that "no act or omission of [Anaconda] or of [IS&R], their officers, agents and employees, or any of them . . . proves any domination or control by them or any of them over Debtor or any of Debtor's acts, business or affairs . . ." (Ex. 131.)

II. THE NEXT 70 YEARS: SUBSEQUENT OWNERS AND THE REGIONAL BOARD

The Mine Site has had several owners from 1945 to the present. Safeway Signal purchased the Mine Site out of the Walker Company bankruptcy estate. (Ex. 140.) There appear to be no records remaining that describe what operations Safeway Signal conducted and whether it altered the Mine Site. From at least the mid 1940's until the mid-1990's Robert Barry and entities which Barry controlled owned the Mine Site. (Ex. 175.) Barry leased or otherwise allowed several mining companies to conduct operations on the Mine Site. (Exs. 142, 141.) In 1997, Daniel Kennedy purchased the property and transferred it to an entity he controlled, Cedar Point Properties ("CPP"), shortly thereafter. (Ex. 238.) These owners logged the site.

The Regional Board has, through settlement, assumed the obligations of Barry, Kennedy, and their respective companies, releasing them from further liability and holding them harmless. In 1958, the Regional Board issued Waste Discharge Requirements for the Mine Site to Robert Barry. (Ex. 180.) After multiple attempts to enforce various Water Code requirements against Barry, in 1991, the Board settled with Barry, the Calicopia Corporation he controlled and others apparently affiliated with the Mine Site's ownership. (Revised Draft CAO No. R5-2014-YYYY at ¶ 28.) Pursuant to this settlement, Barry and the others paid \$1.5 million to the Board; in return, the Regional Board released and agreed to hold harmless all the settling parties. (*Id.*) When Kennedy later purchased the Mine Site, the Regional Board issued a Cleanup and Abatement Order to CPP and imposed a lien against the Mine Site property for \$238,334. (Revised Draft CAO No. R5-2014-YYYY at ¶ 29; Ex. 147.) The amount of the lien apparently corresponded to the amount the Board had spent at the Mine Site by that time, less the \$1.5 million obtained from Barry. Like Barry, Kennedy and CPP were able to settle their liability with the Board. (Revised Draft CAO No. R5-2014-YYYY at ¶ 29.) In exchange for the proceeds of a timber harvest, which eventually netted an additional \$102,370.60 beyond the amount of the lien, the Board agreed to release and hold harmless Kennedy. (*Id.*; Ex. 154.) Although the Board did not release CPP, CPP's

corporate status appears to have been suspended by the time the agreement was reached. (Revised Draft CAO No. R5-2014-YYYY at ¶ 29.)

The Regional Board began conducting remedial activities in at least 1984. (Ex. 202.) The cleanup has not successfully remediated the site and it is unclear whether incomplete response efforts to date have increased the future costs to clean up the Mine Site. (Lombardi, at pp. 13-14.)

In 1991, USFS began conducting its own investigation of the Tailings Site pursuant to USFS's delegated authority to take action pursuant to CERCLA on lands within its jurisdiction. (Ex. 145, at pp. 4-5.) In 1994, USFS issued its Record of Decision ("ROD") selecting a remedy to implement on the Tailings Site, (*see generally id.*), and in 2001, the USFS issued an amended ROD. (Ex. 153.) The USFS has begun implementing the remedy, but work remains unfinished. (Lombardi, at p. 21.) Much of USFS's work has been funded by the settlement it reached with Atlantic Richfield in 2005, in which Atlantic Richfield admitted no liability for the acts of its predecessors. Pursuant to that agreement, which the parties formalized in a judicially approved Consent Decree, USFS granted contribution protection to Atlantic Richfield in exchange for \$2.5 million to use in remediating the Tailings Site. (Ex. 155.) That judicially approved settlement and contribution protection shields Atlantic Richfield from any further responsibility for the Tailings Site.

BURDEN OF PROOF

The Prosecution Team has the twin burdens of producing evidence and persuading the Board that Atlantic Richfield's long-ago predecessors: (1) operated or directed pollution causing activities at each of the two sites; (2) which caused the environmental harm the Draft CAOs seek to address. The second requirement — that Atlantic Richfield's actions and activities it directed are responsible for the pollution conditions the Prosecution Team seeks to abate — is particularly important here, as the Walker Mine (along with a mill, tailings pond and other mine infrastructure) was established and producing ore before IS&R invested in the Walker Company and because the record evidence shows

that the Walker Company alone directed all of the pollutant generating operations through the acts of its own employees. Further, several owners and operators of the Mine Site followed Walker Company to span its hundred-year history. The Regional Board approved settlements with some of these owners and in so doing has assumed the liabilities of those persons for conditions at the Sites.

As discussed more fully in Atlantic Richfield's Prehearing Motion No. 6, filed herewith, the prosecution must prove each element of its claim by a preponderance of the evidence. In other words, the Prosecution Team must introduce evidence showing each element is more likely than not. If the Prosecution Team does not affirmatively establish evidentiary proof for any element of its case, or if the evidence equally supports a circumstance that would not lead to Atlantic Richfield's liability, the Prosecution Team has not met its burden and the Regional Board must reject the Draft CAOs.

SUMMARY OF THE ARGUMENT

Several of the prehearing motions listed above show that this matter must be dismissed, in its entirety, for substantial jurisdictional and procedural reasons. Because the Regional Board waited too long to bring this action, and only after representing to Atlantic Richfield that Atlantic Richfield would not be named as a discharger, the doctrine of laches precludes issuance of the Draft CAOs to Atlantic Richfield. Further, because the Regional Board is itself admittedly a responsible party with a financial interest in the outcome of this hearing, it is improper for the Regional Board to serve as the finder of fact and law in this proceeding, and the Regional Board should recuse itself. The Regional Board may bring an action for monetary damages, if at all, only as a contribution action in federal or state court. This, and additional deficiencies in the hearing procedures, require dismissal of this case. Moreover, the ongoing CERCLA⁴ cleanup at the Tailings Site, vests jurisdiction with the federal court and precludes the Regional Board's issuance of both CAOs.

⁴ Comprehensive Environmental Response Compensation and Liability Act of 1980, 42 U.S.C. § 9601.

In this brief, Atlantic Richfield shows why the Regional Board falls short of meeting its burden of proving that IS&R or Anaconda are directly liable for the conditions the draft CAOs seeks to address. To the contrary, the available evidence indicates that the Anaconda Companies' role with the Walker Company was consistent with the typical and expected role of a majority investor, and there is nothing to warrant the extraordinary step of disregarding the liability protections the American legal system affords to shareholders. Direction of where to explore and recover ore reserves based upon an understanding of the geology is not legally sufficient to create liability; rather, the Prosecution Team must show the Anaconda Companies directed "operations having to do with the leakage or disposal of hazardous waste, or decisions about compliance with environmental regulations." The Prosecution Team cannot cure its lack of evidence by making unsupported *assumptions*, nor by offering speculation from its expert.

Atlantic Richfield concludes by showing that even if predecessors' direction of exploration and development could give rise to liability for the waste generated from that activity (and, it does not) that the environmental conditions the Draft CAOs seek to address do not arise from that activity. Instead, they arise from activity of the Walker Company itself, and subsequent owners and operators of the properties, including the United States Forest Service and the Regional Board, that have created the conditions at issue here.

ARGUMENT

I. ATLANTIC RICHFIELD IS NOT LIABLE FOR EITHER SITE

For the Prosecution Team to succeed, it must prove that Anaconda or IS&R "caused or permitted . . . waste to be discharged . . . into the waters of the state and create[d] . . . a condition of . . . nuisance."⁵ Cal. Water Code § 13304(a). Of course, neither Anaconda nor IS&R owned or operated the

⁵ The Prosecution Team's case depends on its ability to avoid the lawful activities bar to Water Code liability. See Cal. Water Code § 13304(j) (the Water Code "does not impose any new liability for acts occurring before January 1,

Sites. Rather, IS&R was merely a shareholder in one of several entities which have owned or operated the Mine Site since the early 1900s. Consequently, the Prosecution Team's only means to hold Atlantic Richfield liable for these Sites is to prove Atlantic Richfield's activities qualify for the direct-operator exception to shareholder non-liability approved in the U.S. Supreme Court's decision in *United States v. Bestfoods*.

The Prosecution Team's burden is to produce evidence and prove its case by a preponderance of the evidence, i.e., to prove that the facts supporting liability are more likely than not. The Prosecution Team fails to sustain the burdens of production of the evidence and persuasion by the evidence as to either Site. Indeed, the Prosecution Team expressly requests that the Board "assume" the existence of the very evidence the Prosecution Team lacks. (Pros. Op. Br. at 13.)

A. *United States v. Bestfoods* Permits Only Two Narrow Exceptions To The Ordinary Rule of Shareholder Non-Liability.

In *United States v. Bestfoods*, the United States Supreme Court affirmed the "bedrock principle" of corporate law that protects a shareholder from liability for the conduct of a company in which it owns shares. 524 U.S. at 62. *See also Sonora Diamond Corp. v. Superior Ct.*, 99 Cal. Rptr. 2d 824, 836 (Cal. Ct. App. 2000) ("Ordinarily, a corporation is regarded as a legal entity, separate and distinct from its stockholders, officers and directors, with separate and distinct liabilities and obligations."). The policy behind this limited liability is to encourage investment. *Dietel v. Day*, 492 P.2d 455, 457 (Ariz. Ct. App.

1981, if the acts were not in violation of existing laws or regulations at the time they occurred."). Atlantic Richfield here renews its objection to the Prosecution Team's interpretation of the lawful activities bar as permitting the Board to hold Atlantic Richfield liable based upon a finding that one of Atlantic Richfield's predecessors contributed to a public nuisance. (See Pros. Open. Br. at 18-19 (relying on State Board decisions rejecting Section 13304(j) defenses upon concluding that a public nuisance constitutes a "violation of existing laws" for purposes of Section 13304(j)).) Water Code Section 13304(j)'s reference to "violation of existing laws or regulations" clearly refers only to statutory or regulatory law, not common law doctrines such as public nuisance. Even if the Prosecution Team's interpretation of Section 13304(j) is correct, however, the Prosecution Team can avoid the lawful activities bar to Water Code liability only if the Prosecution Team proves a nuisance; the Prosecution Team cannot rely on the language in Section 13304(a) imposing liability for "a condition of pollution." *See* Water Code § 13304(a) (imposing liability for either "a condition of pollution or nuisance").

1972). Accordingly, only under two "exceptional circumstances" can the corporate separateness be disregarded. *Burnet v. Clark*, 287 U.S. 410, 415 (1932); see also *NLRB v. Greater Kansas City Roofing*, 2 F.3d 1047, 1051 (10th Cir. 1993) ("The insulation of a stockholder from the debts and obligations of his corporation is the norm, not the exception.") (quoting *NLRB v. Deena Artware, Inc.*, 361 U.S. 398, 402-03 (1960)). The Prosecution Team has not and cannot prove one "exceptional circumstance" for supporting shareholder liability and fails to meet its burden of proof in attempting to prove the other.

The first exceptional circumstance justifying a departure from the general rule of shareholder non-liability is variously referred to as corporate veil piercing, alter-ego liability, and indirect or derivative liability. Arizona (the state in which the Walker Company was incorporated) and California apply the generally accepted two-prong test for piercing the corporate veil: (1) there must be such unity of interest and ownership that the separate personalities of the corporation and the shareholder no longer exist, and (2) failure to disregard the corporations' separate identities must result in fraud or injustice. *Sonora Diamond Corp.*, 99 Cal. Rptr. 2d at 836; *Gatecliff v. Great Republic Life Ins. Co.*, 821 P.2d 725, 728 (Ariz. 1991). It is extremely difficult to establish a unity of interest between legitimate and conscientious companies. In fact, it is unheard of with publicly traded companies, such as the Walker Company. Atlantic Richfield is unaware of *any* case in the history of American law in which an attempt to pierce the corporate veil of a publicly traded company has succeeded.⁶ Unsurprisingly, then, the Prosecution Team has indicated that it will not pursue a corporate veil piercing (*i.e.*, alter-ego) theory of liability in this proceeding. (Pros. Open. Br. at 21, § VIII.b.)

The second exceptional circumstance in which the Supreme Court allowed shareholder liability – and which the Prosecution Team says it intends to prove here – is known as direct operator liability. In

⁶ See Robert B. Thompson, *Piercing the Corporate Veil: An Empirical Study*, 76 Cornell L. Rev. 1036, 1039 (1991) (noting that study of 1600 veil-piercing cases revealed that piercing "does not occur in public corporations") (emphasis added). See also Robert B. Thompson, *Piercing the Veil Within Corporate Groups: Corporate Shareholders as Mere Investors*, Conn. J. of Intern. L. 379, 384-85 (Spring 1999) (observing that study of an additional 2200 veil-piercing cases leads to same conclusion).

Bestfoods, the Court held that direct-operator liability may be imposed upon a shareholder for pollution caused by a facility owned by a corporation in which the shareholder invested, but only if that shareholder itself engaged in pollution-causing activities. The shareholder itself must “manage, direct, or conduct operations specifically related to pollution, that is, operations having to do with the leakage or disposal of hazardous waste, or decisions about compliance with environmental regulations.” *Id.* at 66-67. Thus, the Prosecution Team has adopted the burden of proving that Atlantic Richfield’s predecessors (1) directed or conducted pollution-causing activities at each of the two Sites; (2) which cause the environmental harms the Draft CAOs seek to address. *Accord* Cal. Water Code § 13304(a) (imposing liability only on those who “caused or permitted . . . waste to be discharged . . . into the waters of the state and create[d] . . . a condition of . . . nuisance”) and § 13304(n) (defining a “nuisance” as a condition that “occur[red] during, or as a result of, the treatment or disposal of wastes”).

In establishing these two narrow exceptions to shareholder non-liability, the *Bestfoods* Court specifically rejected a third potential exception based on a shareholder’s “authority to control” or “actual control” over the company in which the shareholder invested. “[I]t is hornbook law,” the Supreme Court said, “that the exercise of the ‘control’ which stock ownership gives to the stockholders will not create liability” for the shareholder. *Bestfoods*, 524 U.S. at 61-62; *see also Craig v. Lake Asbestos of Quebec, Ltd.*, 843 F.2d 145, 151 (3d Cir. 1988) (“It is to be expected that a corporation seeking to acquire majority ownership of another will seek to achieve control.”); *id.* at 150 (“It is assumed to be the norm that a parent will have ‘not only . . . the potential to exercise control [over the subsidiary], but to exercise it to a substantial degree.’”) (quoting P. Blumberg, *The Law of Corporate Groups: Tort, Contract, and Other Common Law Problems in the Substantive Law of Parent and Subsidiary Corporations* § 10.02, at 187 (1987)). Thus, because *all* majority shareholders and parent companies exercise control over the companies in which they invest, allowing a “control” exception to limited liability would create an exception that would swallow the rule.

B. The Prosecution Team Misapplies The *Bestfoods* Standard And Much Of Its Evidence Is Therefore Irrelevant.

Despite acknowledging that *Bestfoods* governs its attempt to prove an exception to shareholder non-liability,⁷ and despite citations to some of the same passages from *Bestfoods* that are quoted above, the Prosecution Team repeatedly asserts that IS&R exercised “pervasive control” over the Walker Company and “operated the Walker Mine and Tailings concurrently” with the Walker Company. See, e.g., Opening Brief at 3, 13, 15 & 18; Quivik Report at 2; 20.⁸ However, this “concurrent operation/pervasive control” theory is the very same strategy the Supreme Court rejected in *Bestfoods*.

In support of its control theory, the Prosecution Team cites the Board to two pre-*Bestfoods* cases that are no longer good law. The Prosecution Team first cites to *Kaiser Alum. & Chem. Corp. v. Catellus Dev. Corp.*, 976 F.2d 1338, 1341-42 (9th Cir. 1994) for the proposition that liability attaches when a shareholder “actually exercised . . . control.” (Pros. Open. Br. at 12.) This “actual control” test is the same test the lower court had applied in *Bestfoods*, the same test the Supreme Court overruled. 524 U.S. at 67 (explaining that “[t]he well-taken objection to the actual control test . . . is its fusion of direct and indirect liability”). Likewise, the Prosecution Team’s citation to *Long Beach Unified Sch. Dist. v. Dorothy B. Godwin Cal. Living Trust*, is equally inapposite. 32 F.3d 1364, 1367 (9th Cir. 1994) (requiring “active control . . . before someone will be held liable as an ‘operator’”).

Given its misunderstanding of the *Bestfoods* standard, much of the Prosecution Team’s evidence is irrelevant. Evidence that IS&R personnel also served as officers or directors of Walker – or even that IS&R controlled or was active in the management of Walker, as the Prosecution Team alleges – is wholly irrelevant to an allegation of “direct” liability. *Id.* at 70. So, too, Dr. Quivik’s extensive discussion of

⁷ The Prosecution Team acknowledges, as it must, that the Board must apply the law from *Bestfoods*. (See *Open. Br.* at p. 12.)

⁸ The Prosecution Team cites Dr. Quivik for its conclusion that the Anaconda Companies “operated” the mine. Pros. Op. Br. at 4. Dr. Quivik, however, alleges only that the Anaconda Companies “managed” the mine. He finds that the Walker Company “operated” the mine. Quivik at 8, finding A.

Anaconda's management structure is irrelevant, as well as the supposed "integration" of management of the Walker Company into Anaconda, overlapping officers and directors, and the oversight of Walker Company by the Anaconda Companies. All are a red herring that misconstrue or conflate the *Bestfoods* standards.

C. The "Control" Alleged By The Prosecution Team Does Not Meet the Alter Ego Test Required To Establish Derivative Liability.

The Prosecution Team dropped its alter ego claim. (Pros. Op. Br. at p. 21.) Yet, as just discussed, many of the facts on which the Prosecution Team relies are relevant only to a derivative liability claim, and only if they rise to the level of the Anaconda Companies being the "alter ego" of the Walker Mining Company. See *Bestfoods*, 524 U.S. at 68 ("Control of the Subsidiary, if extensive enough, gives rise to indirect liability under piercing doctrine, not direct liability. . . ."). The Prosecution Team's "pervasive control" argument thus appears to be a back-door attempt at establishing derivative liability.⁹ Further, the relief the Prosecution Team seeks — liability for the actions of the Walker Company for the entire time of IS&R's stock ownership — can only be obtained upon a derivative liability finding. Because the Prosecution Team conflates the liability theories and seeks a derivative liability outcome in this case, *Atlantic Richfield* explains here why the facts of this case preclude such relief.

⁹ This theory may also be an attempt to apply a watered-down joint-venture theory. However, under California law, the members of a joint venture must have joint control over the venture, they must share the profits of the undertaking, and the members must each have an ownership interest in the enterprise. *Orosco v. Sun-Diamond Corp.*, 51 Cal. App. 4th 1659, 1666 (1997). The Prosecution Team fails to allege facts supporting these elements, as none exist. (See *Haegle*, at pp. 5-15 (describing the Anaconda Companies relationship with the Walker Company as a typical investor relationship.) Moreover, if stock ownership rights and attendant relationships were sufficient to imply a joint venture agreement, then every stockholder — or at least every allegedly controlling shareholder — would be a joint venturer with the corporation in which it owned shares. See, e.g., *Secor Serv. Sys., Inc. v. St. Joseph Bank and Trust Co.*, 855 F.2d 406, 417 (7th Cir. 1988) (observing that if loaning money, serving on corporate boards, and controlling funds were sufficient to establish a joint venture, then "every parent corporation is a joint venturer with its subsidiaries, and every majority shareholder is a joint venturer with his corporation. This would eliminate, in a great number of instances, the protection from liability afforded by the corporate form.") (emphasis added).

To analyze, among other things, the corporate separateness of the Walker Company from the Anaconda Companies, Atlantic Richfield retained William Haegele, a forensic accountant and expert in business organization, to review all of the historical records, of which Atlantic Richfield is aware, that have survived in the nearly 65 years since the Walker Company's bankruptcy.

Mr. Haegele concludes there is strong evidence of corporate separateness and no evidence to form the basis for piercing the corporate veil. (Haegele, at pp. 5-9.) There is no evidence that the Walker Company and IS&R commingled assets or income. IS&R provided financing to the Walker Company through well-documented loans under which IS&R charged interest at market rates. And the contracts between the Walker Company and IS&R for ore sales were fully documented and market based. (*Id.* at pp. 6-7.)

Among other evidence, Mr. Haegele noted that the Walker Company and IS&R appear to have complied with all corporate formalities as between those entities. And that the Walker Company was incorporated by a separate group that had a large (49.6%) and active group of minority shareholders who were represented on the Board of Directors.¹⁰ (*Id.* at p. 6.) The fact that other members of the Walker Company's Board of Directors overlapped with the Boards for Anaconda and IS&R (*i.e.*, certain directors had positions with both companies) is normal and accepted. (*Id.* at p. 9.) Overlapping boards of directors and officers do not provide grounds for disregarding the separate identities of separate corporate entities. *Sonora Diamond Corp.*, 99 Cal. Rptr. 2d at 843 ("It is considered a normal attribute of ownership that officers and directors of the parent serve as officers and directors of the subsidiary.").

It is also expected that an investor, particularly one with industry expertise, will provide substantial advice and guidance. Accordingly, Mr. Haegele found nothing improper about the Anaconda Companies' direction of exploration and development. (Haegele, at pp. 12-14.) Indeed, it appears the

¹⁰ In any event, *Bestfoods* makes it clear that even ownership of all of the stock of a company will not result in liability beyond the assets of the subsidiary. 524 U.S. at 61-62.

Walker Company had only mine geologists on staff on-site, and utilized resources provided by the Anaconda Companies' exploration geologists as they would a consultant. (McNulty, at p. 11.) It also appears as though the Walker Company paid for this professional advice. (Haegele, at pp. 11-12.)

In any event, given Anaconda's known and recognized expertise in mining, it would have been unusual for IS&R, as an investor in Walker Company, to not share its geological expertise with the Walker Company. *See, e.g., Yankee Gas Servs. Co. v. UGI Utils., Inc.*, 616 F. Supp. 2d 228, 256 (D. Conn. 2009) (it is "only natural" to "want to tap into" the resources and expertise of an investor company, and utilizing these resources is "fully consistent with" with an investor/subsidiary relationship); Haegele, at p. 13.

Also, courts recognize that providing value through cash infusions or the provision of services, and increased control by a majority shareholder, is a reasonable reaction of such a shareholder to its failing investment. *Assoc. of Mill and Elevator Mut. Ins. Co. v. Barzen Intern., Inc.*, 553 N.W.2d 446, 450 (Minn. App. Ct. 1996) ("This increase in control by the parent constitutes a reasonable reaction of a parent to its failing subsidiary."); *Sonora Diamond Corp. v. Superior Ct.*, 83 Cal. App. 4th 523 (Cal. App. Ct. 2000) (recognizing that "it is not unusual for owners of struggling businesses to infuse, as capital contributions, cash into the business as necessary to pay operating and other essential costs").

Viewed in their totality, the contacts between IS&R and the Walker Company do not even approach the level that would justify holding IS&R liable for the Walker Company's obligations. (Haegele, at pp. 3-5.) The Prosecution Team's "pervasive control" rationale fails both because, as a matter of law, it cannot support a finding of direct liability and, as a matter of fact, because there is no evidence of such "control" as would support a finding of indirect alter-ego liability.

D. The Prosecution Team has Failed to Offer Evidence That The Anaconda Companies Directed Pollution-Causing Activities on Either Site.

As the Prosecution Team admits in its Opening Brief, it bears the burden of proving that either Anaconda or IS&R themselves directed or conducted pollution-causing activities at the Walker Mine.

(Pros. Open. Br. at p. 12.) This is not merely the rule of *Bestfoods*, see *Bestfoods*, 524 U.S. at 64, but also a straightforward application of well-accepted tort liability principles that prevail at common law, see 1 William Meade Fletcher, *Fletcher Cyclopaedia of Private Corps.* § 33 (“The shareholders of a corporation are not liable individually for torts committed by the corporation unless they personally participate in them.”). This is also a straight forward application of the Water Code. Cal. Water Code § 13304(a) (imposing liability only on those who “cause[] or permit[] . . . waste to be discharged . . . into the waters of the state and create[] . . . a condition of . . . nuisance”) and § 13304(n) (defining a “nuisance” as a condition that “occur[red] during, or as a result of, the treatment or disposal of wastes”). Thus, IS&R and Anaconda are liable for their own conduct just as they would be at common law, but they have no liability for the Walker Company’s conduct. Because there is nothing in the record to indicate that anyone other than the Walker Company conducted pollution-causing activities while the Walker Company operated the Mine, Anaconda and IS&R cannot be liable for any pollution-causing activities that occurred during those operations.

The Prosecution Team relies heavily on vague assertions that Anaconda and IS&R were involved with the Walker Company’s milling operations. The available primary evidence does not support these assertions, however. All of the correspondence relating to the planning and construction of the tailings impoundment involved the U.S. Government and the Walker Company, not IS&R or Anaconda. The correspondence sent to the U.S. Government relating to the construction of the tailings impoundment was written by Walker Company personnel or attorneys working on their behalf. (*See, e.g.*, Exs. 8-22, 24.) All of the correspondence from the U.S. Government was sent to the Walker Company, not IS&R or Anaconda. (*Id.*) And though, on one occasion, a Walker Company employee used the wrong letter head, he signed the letter as Manager for the “Walker Mining Company.” Further, there was no confusion on the part of the United States about which company it was dealing with. (Haegele, at p. 15 & n.62, including all documents cited therein.)

Indeed, for a majority shareholder, IS&R appears to have had very little correspondence with the Walker Company about milling or waste disposal, and certainly none that could fairly be characterized to represent a preponderance of the evidence that the Anaconda Companies “operated” or “managed” these aspects of the Walker Mine. The entirety of the correspondence of interactions of IS&R relating to the Walker mill or tailings identified by the Prosecution Team’s expert, Fredrick Quivik, is as follows:

- An unsubstantiated 1924 article from a secondary source, which claims that “F. C. Torkelson, of the Anaconda Copper Mining Co., superintended the construction of the milling plant, and Julius Kurtz, of [IS&R] installed the electrical equipment.” (Quivik Report at p. 16.)
- Nov. 4, 1922 Letter from Mr. Torkelson to Frederick Laist “describing conditions at the Walker mine and mill and recommendations that he, Torkelson, had made to Elton and Hart for improvements.” (*Id.* at 27-28.)
- Bernard Morrow, the superintendent of concentration at the Washoe Reduction Works, visited the Walker Mill and generated a report addressing whether it was more economically feasible to increase the capacity of the existing mill or construct a new mill. (*Id.* at 26.)
- Reno Sales, Anaconda’s Chief Geologist, made recommendations concerning a land exchange with the U.S. Forest Service for Walker mining and milling operations. (*Id.* at 31.)
- Wilbur Jurden, Anaconda’s Chief Metallurgist, provided cost estimates for the expansion of the Walker concentrator. (*Id.* at 38.)
- Bernard Morrow reported to Frederick Laist concerning his trip to the Walker Mine, “approving a few minor revisions to the plan for the concentrator.” (*Id.* at 39.)

The most striking thing about these references to the Anaconda Companies’ involvement with this aspect of the Walker Company’s business is how few exist, given that IS&R was the majority owner of Walker for nearly thirty years. In addition, there is a glaring absence of any reference to direction or decision-making related to tailings or tailings disposal, or any evidence that any IS&R personnel actually operated the mill or other mine infrastructure.

More importantly, these, and the Anaconda Companies’ other interactions with the facility, fit squarely within the type of involvement one would expect of a majority shareholder. (McNulty, at p. 9;

Haegeler, at p. 15 (“The type and amount of services and support provided were typical of a majority shareholder . . .”).) This is dispositive of the Prosecution Team’s direct liability allegation. The United States Supreme Court in *Bestfoods* explained that the “critical question” for a direct liability analysis “is whether, in degree and detail, actions directed to the facility by an agent of the parent alone are eccentric under accepted norms of parental oversight of a subsidiary’s facility.” 524 U.S. at 72.¹¹

Even assuming IS&R designed and built the new mill, as the Prosecution Team requests the Regional Board do, the law does not support a finding of direct liability based upon design and/or construction of a facility that eventually discharged hazardous substances. For example, in *Edward Hines Lumber Co. v. Vulcan Materials Co.*, 861 F.2d 155, 157-58 (7th Cir. 1988), the court rejected an attempt to impose direct-operator liability on the designer of a wood-treatment plant. In that case, the consultant designed and built the plant, trained Hines’s employees to operate the machinery, licensed Hines to use its trademark, provided the chemicals used in the wood-treatment process, and received the right of access to the plant to ensure quality control. *Id.* at 156. The court affirmed that CERCLA imposes liability on owners and operators – in contrast, “architects, engineers, construction contractors, and instructors must chip in only to the extent they have agreed to do so by contract.” *Id.* at 157. *See also Bestfoods v. Aerojet-General Corp. (“Bestfoods Remand”)*, 173 F. Supp. 2d 729, 753-54 (W.D. Mich. 2001) (holding that consulting on the production process does not create direct-operator liability); *United States v. Consolidated Rall Corp.*, 729 F. Supp. 1461, 1468 (D. Del. 1990) (finding no direct-operator liability despite defendant “setting up the facility and purchasing the output.”).

Thus, IS&R’s advice in relation to mill technology by knowledgeable and qualified investor representatives does not establish either IS&R or Anaconda as the operator of the off-site tailings impoundment.

¹¹ Even the Prosecution Team’s expert admits that the Anaconda Companies’ relationship with the Walker Mine were consistent with corporate norms and beneficial to the Walker Company. *See, e.g., Quivik* at 17, 18, 19.

The Prosecution Team also relies on the actions of dual officers and directors of IS&R, Anaconda, and the Walker Company. For example, Dr. Quivik cites the involvement of William Wraith and J.O. Elton, both of whom were Vice Presidents and Directors of the Walker Company. These actions include William Wraith conferring with Frederick Laist, Anaconda's chief metallurgist, about the metallurgical report on the Walker mill. (Quivik Report at 26) (PT Ex. 1, at p. 49).

One of the principles emphasized by *Bestfoods*, however, is that "it is entirely appropriate for directors of a parent corporation to serve as directors of its subsidiary" and "directors and officers holding positions with a parent and its subsidiary can and do 'change hats' to represent the two corporations separately, despite their common ownership." 524 U.S. at 69. Moreover, there is a presumption that a dual officer or director is wearing the "subsidiary hat" when supervising activities at the subsidiary's facility. To overcome this presumption, it must be shown that the officer's conduct was "plainly contrary to the interests of the subsidiary yet nonetheless advantageous to the parent." *Id.* at 70 n.13. See also *Raytheon Constructors Inc. v. Asarco Inc.*, 368 F.3d 1214, 1219 (10th Cir. 2003) (holding as a matter of law that actions of dual officer and board member cannot be attributed to shareholder without evidence to overcome *Bestfoods* presumption). Dr. Quivik does not deny that IS&R's investment was beneficial for the minority shareholders of the Walker Mining Company and Mr. Haegele confirms that there is no evidence that any action, by dual-hat, or single-hat IS&R or Anaconda people, for that matter, elevated the Anaconda Companies' concerns to the detriment of the Walker Company. (Haegele, at pp. 8, 9-10.)

In sum, there is simply no evidence that the Anaconda Companies directed or managed "operations having to do with the leakage or disposal of hazardous waste" as required to meet the Prosecution Team's burden in this matter.¹²

¹² In contrast, the Regional Board's assumption of Barry's and Kennedy's legal obligations for cleanup has resulting in pollution that continues to impair surface water quality at both sites. (Lombardi, at pp. 14-16.)

E. The Prosecution Cannot Supplant a Lack of Evidence Of Pollution-Causing Activity With Evidence Related to Exploration and Development Activities.

Notwithstanding the significant portion of Dr. Quivik's report dedicated to chronicling every interaction between the Anaconda Companies and the Walker Company, Dr. Quivik ultimately concludes that the aspect of Walker Company's business enterprise in which the Anaconda Companies' were actually involved, relates to "geology, mining and metallurgy." (Quivik at 8.) The Prosecution Team concludes that the Anaconda Companies were focused on "exploration and development activities." (See, e.g., Pros. Op. Br. at 13.) And Atlantic Richfield's expert, Dr. McNulty, who has a lifetime of expertise and experience in mining operations, explains that the only aspect of Walker Mine in which the Anaconda Companies exercised any control, was exploration and development of ore reserves; in other words, prospecting, finding and quantifying ore reserves for future mining. (McNulty, at p. 6.) Exploration and development however are not mineral pollution-causing activities. (McNulty, at p. 9; Lombardi, at p. 6.) And the Prosecution Team's assertion that direction of activities that indirectly lead to pollution is sufficient to establish liability is simply not the law after *Bestfoods*.

Tellingly, the cases the Prosecution Team cites for support of its argument that directing the activities that later cause pollution is enough, the *Kaiser Aluminum* and *Long Beach* cases, (Pros. Op. Br. at p. 12), both *predate* the *Best Foods* case by several years. And this is precisely the broad exception to limited liability that the Supreme Court rejected in *Best Foods*. Every industrial operation -- mining being no exception -- generates some waste. Thus, a rule imposing liability upon a shareholder who participated in some activity at a waste generating facility would prove too much; any shareholder with any involvement in any activity at any kind of industrial facility would be liable. The Supreme Court recognized this potential pitfall and avoided it by holding that direct operator liability does not turn on general "control" of *any* activity at an industrial operation, but instead attaches only where the shareholder directs or conducts *pollution-causing* activity. The law anticipates that majority shareholders with industry expertise to be involved with the core aspects of a facility in which the

shareholder invests. (Haegele, at p. 12.) As discussed above, parental oversight that is consistent with corporate norms cannot form the bases for a direct liability ruling.

Since *Bestfoods*, Courts have recognized that strong parent involvement in a wide range of industrial activities does not equate to involvement in the pollution-causing activity required for direct liability. For example, on remand from the Supreme Court in the *Bestfoods* case itself, the district court addressed the assertion that the parent company, CPC, operated the pollution-causing facilities of its subsidiary, Ott II. *Bestfoods* Remand, 173 F. Supp. 2d at 751-55. The parent company provided financing to expand operations (thus increasing the discharge of pollutants) and provided guidance on a variety of issues, including advice on environmental matters. *Id.* at 737 – 744. The parent also provided technical advice on process development. *Id.* at 753. The court held that “cooperation” between a company and its major shareholder – even cooperation designed to increase production of the product purchased by that shareholder – “simply does not establish the requisite ability to manage, direct or conduct operations specifically related to pollution” required to establish direct-operator liability under CERCLA. *Id.* at 754-55. The court also concluded that the parent’s desire to keep its “finger on environmental problems’ at Ott II is fully consistent with CPC’s parental oversight role.” *Id.*

United States v. Friedland, 173 F. Supp. 2d 1077 (D. Colo. 2001), also underscores the distinction between providing direction on mining operations and meeting the stringent *Bestfoods* test for operating the pollution source. *Friedland* involved mining facilities similar to those in this case – A.O. Smith Corporation held 67% of the stock of SCMI, which owned a mining facility and associated mill. The trial court found at trial that A.O. Smith had considerable involvement in the management of SCMI in general and with certain kinds of activities that impacted mining operations in particular:

- A.O. Smith engineers frequently visited the mine to review operations and to make operational suggestions. *Id.* at 1097.
- A.O. Smith determined the quantity of ore to be processed by the mine. *Id.* at 1098.

- A.O. Smith shipped ore for analysis to assist in developing improved equipment and methods for mine operations. *Id.* at 1098.
- A member of A.O. Smith's board of directors assumed responsibility for reviewing certain aspects of mine operations. *Id.*
- A.O. Smith ordered SCMI's mine manager to submit frequent reports containing recommendations for modifications to mining operations for review by A.O. Smith. *Id.*

The court found that substantial involvement in the mining operations of SCMI was insufficient to find A.O. Smith an operator of SCMI's facilities. The court emphasized the mandate of *Bestfoods* that "to be liable as an operator under CERCLA, an individual must manage, direct, or conduct operations *specifically related to pollution*, that is, operations having to do with the leakage or disposal of hazardous waste, or decisions about compliance with environmental regulations." *Id.* at 1098 (original emphasis). The court found that A.O. Smith's conduct merely demonstrated a close relationship between SCMI and A.O. Smith, and that A.O. Smith's involvement in SCMI's affairs were "in degree and detail, natural for a parent rather than 'eccentric,' as required for the imposition of direct operator liability under *Bestfoods*." *Id.*¹³

Finally, even if directing mine exploration and development were sufficient to impose direct liability, the Prosecution Team must produce evidence and show by a preponderance of the evidence that the operations directed by the Anaconda Companies have caused the conditions that the Draft CAOs are intended to abate. This the Prosecution Team cannot do. No evidence is offered in the Prosecution's case-in-chief to show the impact of prospecting and exploration upon conditions at the Sites. Atlantic Richfield's experts thus offer the only evidence on this topic and they conclude that

¹³ In *United States v. Sterling Centrecorp Inc.*, No. 2:08-cv-02566-MCE-JFM, 2013 WL 3214384 (E.D. Cal. June 24, 2013), under very different facts from this case, the court held that parent company's involvement with subsidiary's facility was not consistent with corporate norms, the parent company had entered into a de facto merger with the prior owner of the mine, and had contractually assumed the liabilities from the prior mine owner that created the mine waste at issue.

exploration and development at the Walker Mine had little, if any, impact on the conditions the Draft CAOs seek to address. (McNulty, at p. 16; Lombardi, at p. 6.)¹⁴

Exploration and development work produces negligible amounts of marketable ore. Mining and processing of ore produced the concentrate the Walker Company sold and waste tailings that remain on the Sites. (McNulty, at p. 13.) This distinction between exploration and development versus mining is all the more important given the respective functions' varying potential for environmental impact. Exploration and development work occurs primarily in non-mineralized "country rock." (McNulty, at p. 9; Lombardi, at p. 6.) The country rock extracted during exploration and development activities generally is not processed in the mill, does not contribute to the mine's tailings, and does not contain the sulfides potentially contributing to acid mine drainage. (McNulty, at p. 8.) Even when stored on the surface and exposed to rain and snow, country rock will not leach metals as mineralized ore might. (Lombardi, at p. 11.) Mining, on the other hand, by definition involves extracting mineralized ore that is processed in the mill, contributes to tailings, and may release metals. (Lombardi, at pp. 7-19.)

Any pollution-causing activities (i.e., extracting ore, milling, handling of tailings and other wastes) were carried out by the Walker Company, the mine operator, under the supervision of Walker Company managers and by Walker Company personnel. (McNulty, at pp. 13-16.)

F. It Is Impermissible to Assume the Anaconda Companies Directed Pollution-Causing Activities.

The Prosecution Team asks the Board to *assume* the facts it must prove to establish direct operator liability. The Prosecution Team admits this strategy:

¹⁴ Rather, the Draft CAOs seek to abate metals releases to groundwater and surface water from mining and mineral processing sources, and ineffective response measures taken by the Regional Board. (Lombardi, at p. 14.)

Moreover, substantial evidence in the record demonstrates that Anaconda and International's control was so pervasive that it is reasonable to assume that they *did* direct placement of waste at the Mine and Tailings.

(Pros. Op. Br. at p. 13, original emphasis).

As an initial matter, it is completely impermissible to assume an essential element of a case. Here the *only* "evidence" of wide-spread control of the Anaconda Companies of the Walker Mine is Dr. Quivik's unsupported and bald conclusion that the Anaconda Companies "managed" the mine. (Quivik at 8.)¹⁵ But California law does not allow a party to establish a fact based on the speculation of an expert witness; Dr. Quivik cannot correct the Prosecution Team's error.¹⁶ Setting aside Dr. Quivik's speculation rather than evidence about pervasive control, as discussed in section I(A), above, pervasive control does not create direct liability without specific evidence of control over pollution-causing activity.

Moreover, the record does not support the Prosecution Team's wild speculation that the Anaconda Companies' must have directed waste disposal, but actually undermines that conclusion.

First, the Anaconda Companies' area of involvement — providing geological services — is but one of many areas of the Walker Company's business enterprise. An operating mine requires numerous other functions. (McNulty, at pp. 13-14.) In particular, the concentration department is tasked with milling and waste disposal, which all takes place outside of the mine workings. (*Id.* at 7.) The concentration department has its own staff, its own managers, and is thus operationally and organizationally distinct from both mining and the provision of geological services. It is simply not credible that the geologists involved from the Anaconda Companies would operate or direct activity in

¹⁵ Dr. Quivik also appears to have based his conclusion, at least in part, of the actions of "two-hat" people. See, e.g., Quivik at 14-17 and 28-29 (extensive discussion of officers and managers Anaconda "placed" in the Walker Company). As discussed above on page 21, however, two-hat people are presumed to be wearing their "subsidiary hat" when participating in actions involving the subsidiary and, accordingly, their actions cannot be attributed to the parent for the purposes of a direct liability analysis.

¹⁶ See Atlantic Richfield's Prehearing Brief No. 9.

the functionally remote world of waste disposal. (McNulty, at p. 10.) Indeed, the only letter from Reno Sales (an Anaconda exploration geologist of great renown) regarding tailings does nothing more than make an introduction to someone else that might provide some advice on tailings. (Ex. 139.) Making an introduction, and nothing more, proves Anaconda was *not* involved in waste related activities, and deferred to mine management on matters related to operations.

Further, mining is highly labor intensive, requiring hundreds of employees at the Walker Mine who brought with them the myriad issues that a modern businessperson would recognize as the purview of a Human Resources department. Additionally, each aspect of the mine's operations would have required various pieces of equipment and the mine had mechanics and machinists to maintain all the equipment. (McNulty, at p. 13.) There was also a substantial wood mill at the Walker Mine. (*Id.* at p. 13.) And all of this is to say nothing of the other components to the town site – the office buildings, the employee housing, the school, the hospital, the post office – established and operated by the Walker Company to support its mining operations. Unsurprisingly, then, the available evidence reports significant business dealings of the Walker Company that do not reference, or involve in any way, the Anaconda Companies. (Haegle, at pp. 14-15 and examples cited therein.)

It is simply unreasonable to assume that because the Anaconda Companies were involved and showed interest in *one* aspect of this multifaceted and robust business, that they were involved in *all* aspects. (*See also*, Haegle, at p. 12, calculating the value of the services provided to the Walker Company by the Anaconda Companies to be modest in comparison to the overall operations). Also, the mine was very isolated during the winter season, which could last up to six months. It would be impractical for Anaconda employees, none of whom lived or worked in the area, to be involved in anything other than long-range planning and occasional site visits.

The Prosecution Team's request that the Board *assume* pervasive control that must have included waste disposal is particularly unfair given the Board's delay in bringing this action. The only

records that appear to remain are Anaconda's own records, which obviously disproportionately represent the Anaconda Companies' communications with Walker Company. The Walker Mining Company's own records do not appear to be available and all known witnesses appear to be deceased.

Importantly, when records and witnesses were available, a federal judge rejected an allegation of wide-spread control by IS&R over the Walker Company. After the Walker Company filed for bankruptcy, a group of shareholders challenged IS&R's bankruptcy claim on the grounds that IS&R (or Anaconda) had unfairly dominated the Walker Company's affairs and that the Walker Company was IS&R's alter ego. After trial before a Special Master, which included an eight-day hearing, federal judge Tillman D. Johnson determined that there was insufficient proof that any act or omission of the Anaconda Companies "constitutes or proves any domination or control by them or any of them" over the Walker Company or its "business or affairs." (Exs. 131-32.)

This contemporaneous finding by the Bankruptcy Court forecloses any argument – or assumption – that IS&R pervasively controlled the Walker Mine and thereby controlled pollution-causing activity. The proceeding was brought by other shareholders and creditors of Walker, whose claims competed with IS&R's for the limited assets in the Walker Company's estate. They had a strong motivation to fully litigate the issues. The case was tried shortly after the underlying transactions, when the litigants presumably had access to all of the relevant evidence and the witnesses who had participated in the transactions.

G. The Pervasive Control Theory is Particularly Weak with Respect to the Tailings Site.

The Prosecution Team's theory of IS&R liability for the tailings repository relies solely upon the Anaconda Company's guidance *at the Mine Site*. (Pros. Open. Br. at 12; 13; 15.) Indeed the Prosecution Team's Opening Brief fails to assert IS&R conducted *any* operations at the Tailings Site, concurrently with Walker or otherwise.

In fact, Walker Mining Company representatives interacted directly with the USFS on matters related to the tailings site. By 1919, the Walker Company had applied for permission to build a tailings reservoir and impoundment on federal land approximately $\frac{3}{4}$ of a mile away from the mine. The application was "for the main purpose of the storage of tailings produced by the milling and reduction of copper ores." (Ex. 15.) After its initial application was rejected, Walker Company filed an appeal with the Department of Interior. Before granting the Walker Company's application, the federal government took several steps to ensure that affected federal agencies consented to the proposed reservoir and impoundment. As part of this process, the USFS issued a statement finding that the proposed tailings impoundment would not interfere with the proper occupation and use of U.S. Forest Service lands. (Exs. 10 and 26.) As a condition of approval, the USFS also required the Walker Mining Company to execute a series of stipulations concerning impoundment operations, indicating that the USFS was aware that such impoundments presented some degree of environmental risk, and further indicating that the USFS had the discretion to require site-specific terms to mitigate the risks. The stipulations included the construction of a tailings dam to standards set by U.S. Debris Commission, and Walker Company's promise, which the USFS accepted, to indemnify the government for any damages to the National Forest that might arise if the dam failed, overflowed, leaked or allowed water to seep out. (Exs. 24 and 26.)

Upon receiving approval to build the tailings reservoir and impoundment in 1920, Walker Company proceeded to deposit tailings in the impoundment from the time of its construction until 1941, when the mine shut down. Throughout this period, all of the USFS' communications about the tailings impoundment were directed to Walker Mining Company employees or Walker Company's attorney. See *infra* pp. 18-19. Notably, the USFS did not communicate with IS&R or Anaconda regarding the impoundment. The Forest Service did not attempt to have IS&R, Anaconda, or anyone else guarantee the work that Walker Mining Company performed at the impoundment.

During the time the Walker Company operated the mine, Dolly Creek was diverted around the tailings area. (Ex. 150.) It was only after the Walker Mining Company closed the mine and ceased operations in the 1940s that the U.S. Forest Service allowed Dolly Creek to revert to its original course through the edge of the tailings pond. (Lombardi, at p. 18.)

It is undisputed that the U.S. Government owns the tailings impoundment on lands managed by the USFS, operates the impoundment today, and was the owner at all times in the past when hazardous substances were disposed of there.

II. APPORTIONMENT

To the extent the Regional Board finds that the Prosecution Team has met its burden and holds Atlantic Richfield liable as an operator for pollution-related activities under the *Bestfoods* test, the Draft CAOs must be modified to apportion liability and allocate responsibility for response among all known owners and operators. See Atlantic Richfield's Pre-hearing Brief No. 7.¹⁷ Under the facts describing the Anaconda Companies' involvement, allocation of only a minor share of future response activities may be apportioned to Atlantic Richfield. There are several operators and owners of the sites, and the harm the Draft CAOs seek to address is reasonably capable of apportionment.

First, because the original mine, mill and tailings pond were in place when IS&R purchased its shares in October 1918, none of the waste on the mine site can be attributed to pollution-related decisions in which IS&R could have participated, as those decisions were made before IS&R invested in the Walker Company. By virtue of its bankruptcy, the Walker Company's share is an 'orphan' for purposes of allocating future costs.

¹⁷ See Atlantic Richfield Company's Prehearing Motion No. 7 Requesting A Regional Board Ruling That Atlantic Richfield Cannot Be Jointly And Severally Liable For Clean Up And Abatement Of The Mine And/Or Mine Tailings Sites.

Second, exploration and development activities for which the Anaconda Companies provided guidance to Walker Company staff were carried out by Walker Company miners in "country rock" that was barren of mineralization. Dr. McNulty estimates that the amount of country rock removed from the underground was no more than 5% of the total rock (ore + country rock) removed from underground; of this 5%, only a negligible fraction would contain minerals that could be released to the environment. (McNulty, at p. 9; Lombardi, at p. 6.)

Third, as to the Tailings Site later developed on USFS lands, to the extent IS&R would be liable under a direct liability theory, Atlantic Richfield has settled its liability with the USFS for cleanup of the Tailings Site, obtained a release and covenant not to sue, and has contribution protection under the consent decree. The United States is the owner of the Tailings Site; the property is managed by the USFS and the USFS has assumed responsibility for cleanup under the consent decree. Any and all future costs related to cleanup of the Mine Tailings Site are the responsibility of the USFS and the Regional Board (for the assumed liabilities of others as explained below).

Fourth, the Regional Board, through its settlements and hold harmless agreements with other owners and operators, assumed the liabilities of those owners and operators. Further, the Regional Board is an operator arising from the actions the Regional Board itself has implemented since 1958 and those later taken under Cal. Water Code ¶ 13305(l) authority, and in furtherance of the Barry and Kennedy settlements and releases given to the then current and now past owners and operators of the Sites.¹⁸

Fifth, in apportionment of the harm, temporal factors are appropriately considered. The USFS has managed the federal lands on which the Tailings Site is located since the advent of mining, and approved the tailings repository in 1920, a period of approximately 94 years. At the Mining and Tailings

¹⁸ See Atlantic Richfield Company's Prehearing Motion No. 2 Requesting A Regional Board Ruling That The Regional Board Is A Discharger At The Sites.

Sites operated by the Walker Company, the Anaconda Companies held an investment interest in the Walker Company for a period of approximately 26 years (1919 – 1945), although the mine did not operate continuously during that period. The Regional Board's tenure as an owner and operator is traced to at least 1946 when Robert Barry took ownership and control of the Site. Through its settlements and hold harmless agreements with Barry and others, the Regional Board has assumed their liabilities, a period covering more than 60 years.

Sixth, the evidence shows there are others that have operated at the Sites during the Barry / Calicopia tenure as owner of the Mine Site property. The Regional Board, to the extent it has not compromised its ability to seek relief from such parties, may pursue those entities to participate in Mine Site cleanup.¹⁹

In sum, should the Regional Board issue the Draft CAOs notwithstanding the legal and fact-based arguments posited by Atlantic Richfield, there is a reasonable basis for apportionment of liability among the responsible parties at the Sites. Apportionment of liability, if any, to Atlantic Richfield must arise from the findings made by the Regional Board in review of the evidence presented at the hearing and in Atlantic Richfield's pre-filed case materials (i.e., specific findings related to pollution-causing activities for which Atlantic Richfield is liable under the *Bestfoods* direct liability standard).

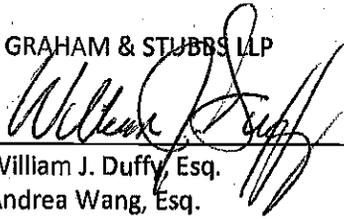
CONCLUSION

For the foregoing reasons, Atlantic Richfield respectfully requests that the Regional Board reject the Draft CAOs in their entirety.

¹⁹ Relief against these parties could be sought in a contribution action. The Regional Board may not lawfully issue a CAO to any party at the Mine Tailings Site for the reasons set forth in Atlantic Richfield Company's Prehearing Motion No. 1 Requesting A Regional Board Ruling That CERCLA Prohibits The Regional Board From Issuing The CAOs.

Dated this 20th day of February, 2014.

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Attorneys for Atlantic Richfield Company

Exhibit 93

COPY.

CONTRACT.

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THIS AGREEMENT, made and entered into this 12th day of August, 1916, at Salt Lake City, Utah, by and between WALKER MINING COMPANY, a corporation organized under the laws of the State of Arizona, party of the first part, hereinafter designated as the Mining Company, and INTERNATIONAL SMELTING COMPANY, a corporation organized under the laws of the State of Montana, party of the second part, hereinafter designated as the Smelting Company, WITNESSETH: that

WHEREAS, the Mining Company is the owner and in possession of a group of mining claims known as the Walker Mining Claims situated in Plumas County, State of California, upon which mining claims is situated a mill which is supposed to be completed and ready for operation; and

WHEREAS, the Mining Company is indebted to various corporations and individuals in a large sum of money and desires to borrow from the Smelting Company funds with which to pay a portion of said indebtedness, and also desires to enter into a contract with the Smelting Company under which the Smelting Company will advance to the Mining Company the necessary funds with which to carry on the Mining Company's mining and milling operations; and

WHEREAS, the Smelting Company is willing, upon the terms and for the considerations hereinafter set forth, to advance a portion of the moneys necessary to pay off said present indebtedness and also to advance the moneys necessary for the further development of the said mining claims and to begin the mining and concentration and shipment of ores and has also, contemporaneously with the execution of this agreement, entered into a contract with the Mining Company for the purchase and smelting of the ores produced by it:

MIN 000001499

NOW THEREFORE, in consideration of the premises and of the mutual covenants hereinafter contained, it is covenanted and agreed between the parties as follows:

1.

The Smelting Company agrees forthwith to loan to the Mining Company the sum of Seventy-five Thousand Dollars (\$75,000.00) to apply upon the outstanding indebtedness of the Mining Company. This loan is to bear interest at the rate of six per cent (6%) per annum and is to be repaid to the Smelting Company out of the net earnings of the Walker Mining Company, and if such net earnings shall prove insufficient for that purpose, the said sum with interest as aforesaid, shall at any and all events become due and be payable by the Mining Company to the Smelting Company on January 1, 1918. For the purpose of computing the interest on said loan, any and all amounts applicable to the reduction of said indebtedness shall be treated as being paid to or received by the Smelting Company on the first day of the month next succeeding the month in which, according to the accounts of the Smelting Company, said net earnings were made.

2.

The Smelting Company shall forthwith begin the following development work upon said group of mining claims: It shall, at its own expense and without the right to recover from the Mining Company any part of the cost thereof, continue the sinking of a two-compartment shaft on the Bullion Mining claim. Two hundred feet of sinking additional to what is already done shall be done by the Smelting Company in this shaft. In addition thereto, the Smelting Company shall also, at its own expense and without cost to the Mining Company, drive five hundred (500) feet of drifts or cross-outs or both from said

shaft at such point or points as in its judgment will tend best to develop the mining ground. Said sinking and driving are to be done in good and minerlike fashion and are to be completed prior to July 1, 1917.

3.

The Walker Mining Company hereby agrees that during the entire period until July 1, 1917, it will place and keep in charge of the operation of its mine and mill a Manager nominated by or satisfactory to the Smelting Company, and up to and including July 1, 1917, the entire management of the business of the Mining Company so far as pertains to the completion and operation of its mill and the conduct of its mining and milling operations, shall be under the exclusive supervision and control of such Manager.

4.

It being understood between the parties hereto that there is a possibility of more money being required for the purpose of completing the successful installation of the process for the treatment of ores in the mill now constructed, and it being understood between the parties hereto that it will be necessary to provide additional moneys for the carrying on of mining and milling operations and the transportation of ores and for meeting the other expenses incidental to the operation of said property, the Smelting Company agrees and undertakes to furnish from time to time as required and without interest, the moneys necessary for the operation of said mine and mill as a going concern, charging the amounts so advanced by it to the Mining Company in its accounts and crediting in said accounts the sums realized from ores produced by the Mining Company and for which the Smelting Company is obligated to pay under the smelting contract.

hereinbefore referred to. In the event that for any reason the operations of the mine and mill shall not prove profitable and should the Smelting Company upon ascertaining this fact decline to proceed further under this agreement and decline to furnish additional moneys for the operation of the mine and mill and for the carrying on of the general operations of the Mining Company, it shall have the right to charge against the Mining Company and recover from it the net amount so due as shown by its account of said operations, but in no event shall it have the right to recover an amount in excess of Twenty Thousand (\$20,000.00) Dollars, it being hereby expressly understood and agreed that all expenditures over and above the amount realized from ores and concentrates shipped and over and above the sum of Twenty Thousand (\$20,000.00) Dollars additional, shall be at the sole risk of the Smelting Company. Such net balance due from the Mining Company shall be repaid to the Smelting Company on or before January 1, 1918, but without interest.

5.

By way of further assurance to the Smelting Company, the Mining Company has at the time of the execution of this agreement procured to be placed in the possession of the Smelting Company the written resignations of four of the Board of Directors of the Mining Company, the same to be used at the discretion of the Smelting Company at any time prior to July 1, 1917, for the purpose of giving to the Smelting Company the control of the Board of Directors of the Mining Company.

6.

The Smelting Company is at liberty at any time to cease to advance or become responsible for moneys for the operation of the said mine and mill. It shall not, however, have the right to suspend or refuse to continue the sinking of the shaft

or the driving of the 500 feet of drifts or cross-outs hereinbefore stipulated for. The Smelting Company covenants that during the period while it shall continue to furnish the moneys required for the operation of the mine and mill it will furnish the same in such amounts and at such times as to enable the Manager nominated by it to prosecute such operations vigorously and continuously, except as such continuous operation may be interrupted by fires, floods, strikes, weather conditions or other contingencies which, being beyond the control of the said Smelting Company, shall make it impracticable to operate said mine and mill or either of them. And said Smelting Company agrees that it will furnish such moneys and exercise its influence or control over such Manager so that in the mining and milling of ores and in the shipment of ores and concentrates under the said smelting contract, only such ores or concentrates will be mined, milled and shipped as will in the sound judgment of the Smelting Company afford a profit to the Mining Company, and will in other respects so cause said mine and mill to be managed, controlled and operated as, if possible, to yield the largest and best profit to the Mining Company.

7.

The Mining Company agrees that the Smelting Company shall be repaid for the moneys advanced by it as hereinbefore set forth, prior to any payments being made by the Mining Company to the holders of its preferred stock.

8.

It is understood that the Smelting Company is under no obligation to advance any moneys to defray expenses of litigation not incident to the operation of the property, nor is it under obligation to defray any of the general corporate ex-

penses or salaries of general officers of the corporation, if any, provided that so long as it shall continue to furnish moneys for the operation of the mine it will also furnish such additional moneys as may be necessary for the defense of the Gladden suit, reimbursement of such advancements to be treated as though made for the operation of the mine and mill.

9.

The Smelting Company shall see to it that the Manager of the property placed in charge of its operations as hereinbefore provided shall keep such vouchers, accounts and other records as will tend to show the operations of the mine and of the mill and of other activities of the corporation, according to the methods ordinarily adopted by corporations engaged in the mining and milling of ores.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their respective officers thereunto duly authorized, in duplicate, the day and year first above written.

ATTEST:

John F. Cowan,
Secretary.

WALKER MINING COMPANY,

By J. R. Walker,
Its President.

INTERNATIONAL SMELTING COMPANY

By William Wraith,
Its General Manager.

MIN 000001504

Exhibit 94

State of California

M e m o r a n d u m

File
Department of Justice

1300 I STREET, SUITE 125

P.O. BOX 944255

SACRAMENTO, CA. 94244-2550

WSW/PWM

Date: September 2, 1999

Telephone: CALNET (8) (8) 454-5372
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To : Gary Carlton
Water Quality Control Board
Central Valley Region

Frances McChesney
Senior Staff Counsel
State Water Resources Control Board

From : *Tracy L. Winsor*
Tracy L. Winsor
Deputy Attorney General
Natural Resources Law Section
Office of the Attorney General - Sacramento

Subject : CVRWOCB v. Cedar Point Properties, Inc.

(one copy is for your file.)

Enclosed please find two copies of the Settlement Agreement along with the following documents:

1. Stipulated Injunction;
2. Notice of Boards' Interest in Timber Harvest, etc; and
3. Order Staying Litigation.

Please sign one Settlement Agreement and forward it back to my office. Please fax me a copy of the signature or call me to let me know you've signed so I can get it in the overnight mail to the defendants.

If you have any questions, please do not hesitate to contact me.

TW:dm
Enc.

SETTLEMENT AGREEMENT

I PARTIES

This Settlement Agreement ("Agreement") is made and entered into, effective upon the date of execution by the last signatory hereto, by Plaintiffs People ex rel. State Water Resources Control Board ("State Board"), Central Valley Regional Water Quality Control Board ("Regional Board") (collectively, "Boards"), and defendants Cedar Point Properties, Inc., a California Corporation (hereinafter "Corporation"), and Daniel R. Kennedy, individually (collectively, "Defendants"). Any reference to "Parties" in this Agreement is to the plaintiffs and defendants as set forth above.

II BACKGROUND AND PURPOSE

A. This matter involves a dispute over legal responsibility for clean up, remediation, and abatement activities at a certain property in Plumas County. The property in question is Plumas County Assessor's Parcel Numbers 009-080-01, 009-090-01, and 009-100-09 (hereinafter "Walker Mine Property," or "property.") The property is in central Plumas County about 24 miles north of Portola in Sections 19, 29, 30, 31, and 32, T25N, R12E, and in Sections 5,6,7, and 8, T24N, R12E, MDB& M. The main tunnel, or "portal," to a 782-acre inactive underground copper mine commonly known as the Walker Mine is on one of the three parcels. The Boards contend that the tunnels and workings of the Walker Mine extend underneath all three parcels. The Defendants dispute this claim.

B. Discharges of heavy metals from the Walker Mine Property have been and continue to be a source of significant pollution and threat of pollution to the waters of the State of California.

C. In the 1980's, after litigation with the prior property owners and pursuant to its authority provided in the California Water Code, the Regional Board undertook certain clean up, remediation, and abatement activity at the Walker Mine Property. As part of those efforts, the Regional Board installed a concrete seal in the main adit of the Walker Mine, approximately 1/2 mile underground from the portal. The mine seal has been effective in minimizing the discharge of pollutants from the portal. However, due to seepage of water into the tunnel in front of the mine seal, some discharge continues from the portal. Discharges also continue to be a problem both from piles of mine tailings near the portal, and from a settling pond also near the portal.

D. To address ongoing discharge problems, in June, 1997 the Regional Board adopted an Operations and Maintenance Plan ("OMP"), to be implemented at the Walker Mine Property, as funding permitted. The OMP describes maintenance of existing remedial structures on the Walker Mine Property and monitoring of the concrete mine seal and surface waters on the property. Since its adoption, the Regional Board has proceeded to implement various aspects of the OMP at the property.

E. In May, 1997, based on the Walker Mine Property prior owner's failure to pay property taxes, the Plumas County Treasurer/Tax Collector noticed a sale of the Walker Mine Property. Daniel R. Kennedy attended the May 1997 tax sale and successfully bid on the Walker Mine Property. The Board and Daniel R. Kennedy disagree as to the capacity in which Daniel R. Kennedy attended the May 1997 tax sale and bid on the Walker Mine Property.

F. After the May 1997 tax sale, Daniel R. Kennedy incorporated the Corporation. The Corporation took legal title to the Walker Mine Property. Daniel R. Kennedy became the President of the Corporation.

G. On or about September 1, 1997, Daniel R. Kennedy and the Corporation entered into a contract for sale of the timber rights on the Walker Mine Property to Daniel R. Kennedy. The Boards challenge the validity of this contract.

H. The California Water Code provides that upon order of the Regional Board, a discharger shall clean up and abate any discharge or threat of discharge of pollutants into the Waters of the State of California. On or about October 7, 1997, the Regional Board, through its Executive Officer, issued Clean Up and Abatement Order No. 97-715 (Order No. 97-715) to Cedar Point Properties as the property owner of record of the Walker Mine Property. Order No. 97-715 directed Cedar Point Properties to 1) prevent additional releases of waste from the Walker Mine Property to surface waters, 2) provide continuous operations and maintenance of existing remedial structures, 3) complete specified tasks according to a designated time schedule, including submitting a completed National Pollutant Discharge Elimination System ("NPDES") permit application, providing technical reports, and implementing best management practices, 4) reimburse the Regional Board for reasonable costs associated with oversight and remedial activities, 5) grant reasonable site access to the Regional Board and its agents, 6) design and implement surface water diversions to minimize surface water runoff into Walker Mine, and 7) continue sampling, monitoring, and remediation efforts.

I. The California Water Code provides that the Regional Board shall recover its reasonable costs of clean up, remediation, and abatement activity from any responsible party. (Cal. Water Code § 13304.) The California Water Code also provides that costs of clean up, remediation, and abatement activity constitute a lien on the affected property and the Regional Board may record a lien on the affected property for the amount of costs incurred. (*Ibid.*) On or

about March 13, 1998, the Regional Board recorded a lien in the amount of \$238,334 on the Walker Mine Property ("the Lien"). The Regional Board served notice of the Lien on Cedar Point Properties as property owner of record.

J. On or about July 6, 1998, the Boards filed a civil complaint against Defendants, namely, Plumas County Superior Court Case No. 19897. The Boards' complaint contains seven causes of action, as follows: 1) the First Cause of Action seeks injunctive relief, to gain Defendants' compliance with Cleanup and Abatement Order No. 97-715; 2) the Second Cause of Action seeks a determination that the Lien extends to the timber on the Walker Mine Property, foreclosure of the Lien, and a money judgment for additional cleanup and abatement costs incurred to the date of judgment; 3) the Third Cause of Action seeks in the alternative to void a fraudulent transfer of timber rights from the Corporation to Daniel R. Kennedy or a third party; 4) the Fourth Cause of Action seeks individual liability against Daniel R. Kennedy for clean up and abatement for his acts and omissions as controlling agent of the Corporation; 5) the Fifth Cause of Action seeks, in the alternative, an order piercing the corporate veil, finding the Corporation is merely the "alter ego" of Daniel R. Kennedy and holding Daniel R. Kennedy individually liable for clean up and abatement at the Walker Mine Property; and 6) the Sixth Cause of Action seeks injunctive relief ordering that proceeds of any timber harvest performed at the Walker Mine Property be escrowed and paid out according to a Court ordered formula; 7) the Seventh Cause of Action seeks civil penalties and injunctive relief for failure to submit a completed NPDES permit application and report of waste discharge.

K. The Defendants answered the Boards' complaint separately. Daniel R. Kennedy denied any responsibility for clean up activity at the property. The Corporation acknowledged

that a condition of pollution and nuisance exists on the Walker Mine Property, but maintained that said condition only emanated from one parcel of the Walker Mine Property. The Corporation maintained that it was not responsible to pay the Lien.

L. In February, 1999, the Corporation filed a Cross-Complaint against the Boards, alleging that the Lien, and the Boards' Complaint for cost recovery, constituted a taking of its property without just compensation. The Boards demurred to the Corporation's cross-complaint and the demurrer was sustained with leave to amend. The Corporation did not amend its cross-complaint.

M. At its July 28, 1999 meeting, as authorized by the Federal Water Pollution Control Act and the California Water Code, the Regional Board adopted NPDES permit number CA0084531 (Order No. 99-110), and Cease and Desist Order Number 99-111 which contain, respectively, effluent limits and receiving water limits for discharges from the Walker Mine Property, and a timetable for implementing certain activities to abate the discharges from the Walker Mine Property. Cedar Point Properties, Inc., as property owner of record, is the discharger named in the NPDES permit and Cease and Desist Order.

N. The Parties contemplate that this Agreement will be incorporated by reference into an order of the Plumas County Superior Court staying this litigation pending completion of the timber harvest. This Agreement contemplates that the Plumas County Superior Court will retain jurisdiction over this matter to enforce any disputes that may arise regarding terms or implementation of this Agreement or any other matter respecting this Agreement. In the event at least fifty percent (50%) of the Boards' lien is repaid within six (6) months of completion of the harvest, or January 1, 2001, whichever is sooner, as outlined more fully below, the Parties

contemplate that a Stipulated Judgment shall be entered accordingly in this action releasing Daniel R. Kennedy in his individual capacity. In any event, and regardless of timber harvest proceeds, or any other matter, the Corporation is now and will remain responsible for clean up, remediation and abatement activity at the Walker Mine Property. This Agreement shall not be construed to preclude the Boards or any State or Federal agency from taking any appropriate action, administrative, judicial, or otherwise against the Corporation to enforce compliance with applicable laws.

III CONSIDERATION

Plumas County Superior Court Case No. 19897 involves litigation of claims which are contested. In the interest of avoiding the cost, difficulty, and uncertainty associated with litigating Plumas County Superior Court Case No. 19897, the Parties have negotiated this Agreement. The Parties believe that sufficient proceeds will be generated from the timber harvest to pay off the Lien in full. If there are sufficient timber harvest proceeds to pay one hundred percent (100%), (\$238,334), of the Lien, then the entire Lien will be paid out of the timber harvest proceeds. This Agreement shall not be construed, however, to prevent the Boards from seeking repayment of any portion of the Lien which is not paid by timber harvest proceeds, from any appropriate source or entity. The Boards' release of Daniel R. Kennedy in his individual capacity, as outlined below, is conditioned upon payment of at least fifty percent (50%) (\$119,167) of the Lien within a reasonable period of time, not to exceed six (6) months after completion of harvest, or January 1, 2001, whichever is sooner. In the event that timber harvest proceeds are sufficient to pay off at least fifty percent (50%) (\$119,167) of the Boards' lien, as stated above, the Boards agree to release and settle their claims against Daniel R. Kennedy as

outlined more fully below. However, if timber harvest proceeds are not sufficient to satisfy fifty percent (50%) of the lien, and, should fifty percent (50%) of the Lien not be paid off in a timely manner, then Daniel R. Kennedy will not be released from liability. Under these circumstances, the Boards may seek recovery of the balance due to satisfy the full Lien, from Daniel R. Kennedy, or any other parties, and Daniel R. Kennedy will have the right to dispute any such claim to recovery of the full Lien from him.

Provided that at least fifty percent (50%) of the Lien is timely paid off with timber harvest proceeds or otherwise, the Boards contemplate that the Agreement will be a complete and final resolution of all liability for all claims, differences, and disputes between the Boards and Daniel R. Kennedy individually pertaining to the Walker Mine Property. The Corporation will gain money from the timber harvest to apply towards its legal obligation to clean up, remediate, and abate the discharges from the Walker Mine Property. The Agreement does not purport to release the Corporation from any liability for any claim, difference, or dispute pertaining to the Walker Mine Property or any other matter, or to shield the Corporation from any action the Boards may later take if the Corporation fails to comply with its obligation to clean up, remediate, and abate the condition of pollution and nuisance emanating from the Walker Mine Property. However, if the Lien is entirely reimbursed with the proceeds of the timber harvest as contemplated by this Agreement, the Boards will file an appropriate notice releasing the Lien, or any portion of the Lien which is reimbursed.

IV REGIONAL BOARD ACTIVITY AT SITE NOT AFFECTED

Nothing in this Agreement shall be construed to prevent the Regional Board from undertaking any activity authorized by law at the Walker Mine Property, or from seeking cost

recovery for such activity from the Corporation, or any other potentially responsible party, for any such activity. In the event a Stipulated Judgment is entered releasing Daniel R. Kennedy from liability as a result of this Agreement, the Boards will no longer consider Daniel R. Kennedy to be a potentially responsible party.

V RESCISSION OF TIMBERING AGREEMENT

The Corporation and Daniel R. Kennedy intend by executing this Agreement to supersede and render null and void the September 1, 1997 "Timber Purchase Agreement," executed by Daniel Kennedy as Buyer, and Andrew Cardin on behalf of Cedar Point Properties, Inc., as Seller. Daniel R. Kennedy and the Corporation agree that after execution this Agreement will represent the sole understanding regarding distribution of timber harvest proceeds between and among themselves and any other party, whether or not a party to this litigation.

VI INJUNCTION

A. Corporate Commitment to Clean Up: The Corporation acknowledges that it is required by law to abate the discharges from the Walker Mine Property, and to comply with Cleanup and Abatement Order No. 97-715, NPDES permit number CA0084531 (Order No. 99-110), and Cease and Desist Order Number 99-111. The Corporation agrees that an injunction may enter ordering it to comply with these documents, subject to the appeal rights available to the Corporation with respect to such documents.

B. Distribution of Timber Harvest Proceeds: Subject to the formula for distribution of timber harvest proceeds set forth below, the Parties agree that the Defendants may harvest the timber on the Walker Mine Property. Demands on the account, and distribution of timber proceeds shall be made in the order in which items payable from the account are set forth below

in subparagraphs 1 through 7. The Defendants agree that an injunction may enter ordering that the proceeds of sale of any timber harvested from the Walker Mine Property be distributed in the manner contemplated in this Agreement, and forbidding distribution of proceeds in any other manner except as agreed upon by the Parties and/or authorized by the Court.

1. Direct Payment to Logger(s): The mills shall pay the loggers directly out of the timber harvest proceeds, pursuant to the terms of the timber harvesting contract discussed below. The Corporation will contract to harvest timber from the property using a bid method to select one or more loggers, as necessary. A minimum of two bids for each logging contract to be awarded will be deemed acceptable. No bid shall be accepted from any person or entity with a financial or familial connection to Daniel Kennedy, Andrew Cardin, or the Corporation. There will be one or more contracts with the logger, as necessary, and one or more contracts with the mill or mills to which the timber is sold. All such contracts will be subject to review and approval by the Boards, and shall be sent to the attention of Phil Nemir, at P.O. Box 1717, Susanville, CA 96130 for review, with a copy to the attention of Patrick Morris at 3443 Routier Rd., Ste. A, Sacramento CA 95827. The Boards shall have ten business days to approve or disapprove such contract(s) from the date of receipt. The contract(s) with the mills shall provide for payment of proceeds directly to the logger(s), subject to the following hold back provision. A minimum of seven dollars (\$7.00) per thousand board feet logged shall be held back from payment until such time as all legal requirements under the Timber Harvest Plan (THP), including but not limited to the California Water Code, Forest Practice Act (Pub. Res. Code §§ 4511-4612), Forest Practice Rules (Title 14, Cal. Code Regs. §§ 895-1115.4), and the logging contract are satisfied. The hold back monies shall be deposited in the escrow account with the

remaining proceeds of the timber harvest, as specified below, and shall be released upon demand and documentation verifying completion of all legal requirements, above, by Board staff. The Boards will serve a copy of the injunction and order and a notice of the Boards' interest in the timber on the logger and the mills. The injunction and order will be circulated to the Defendants for approval as to form prior to submission to the Court. The Defendants may review and comment on the Boards' notice to the logger and the mills before the Boards serve the notice on the mills.

2. Escrow of Remaining Proceeds: The mills shall pay all remaining proceeds directly to an account created or accounts created at Mid Valley Title and Escrow Company. The remainder of proceeds shall be deposited in this account to be distributed only upon the written consent of the Boards, or an order of the Plumas County Superior Court. When the escrow account is opened the Mid Valley Title and Escrow Company will be instructed not to disburse any funds until it receives instructions from the Boards or a Court order authorizing payment. Any fees relating to the escrow account shall be paid by the Corporation and not the Boards.

3. Timber Sale Preparation/Administration: Fifteen percent (15%) of net harvest proceeds ("net" shall be defined as contracted delivered log price less contracted logging cost, times volume removed), shall be distributed from the escrow account to pay for fees and costs associated with sales preparation and harvest administration. As net revenues are received, Daniel R. Kennedy may make a demand upon the escrow account for this fifteen percent (15%) sum.

4. Yield Taxes: The Corporation shall make a demand upon the escrow account for yield taxes when the amount of said taxes is known, and shall provide appropriate documentation

for said demand. The check for the yield taxes shall be made out in the appropriate sum to the State Board of Equalization, unless the Corporation provides appropriate documentation that it has already paid said taxes. Income taxes shall not be considered as an item payable from the escrow account.

5. United States Forest Service Road Use Fees/California Department of Fish & Game Fees: The Corporation shall make a demand upon the escrow account for any United States Forest Service road use fees and California Department of Fish & Game Fees, and shall provide appropriate documentation for said demand(s). A check for such fees shall be made out to the United States Forest Service and to the California Department of Fish & Game, respectively, unless the Corporation provides appropriate documentation that it has already paid said fees.

6. Repayment of the Lien: The Lien shall be repaid in the recorded amount of two hundred thirty-eight thousand, three hundred thirty four dollars (\$238,334). The State Board shall make a demand upon the escrow account for said payment. The sum shall be deposited in the State Water Pollution Cleanup and Abatement Account CA69. Upon receipt of the monies contemplated in this Paragraph, the State Board shall file a notice releasing the Lien. In the event that less than one hundred percent (100%) of the lien is repaid, the State Board shall file a notice releasing any portion of the Lien which is repaid.

7. Balance of Harvest Proceeds: After items 1 through 6 above, have been paid, there will be a balance of proceeds remaining. Part of this balance will be the hold back money (\$7.00 per thousand board feet) which the logger will be entitled to make a demand for upon satisfaction and appropriate documentation showing completion of all rules and regulations and requirements

pertaining to the timber harvest and the logging contract. Out of the remaining balance of harvest proceeds, fifty percent (50%) shall be released to Daniel R. Kennedy upon demand and approval by the Boards. The remaining fifty percent (50%) of the balance of harvest proceeds shall remain in the escrow account, to be used by the Corporation for remedial activities at the property upon demand and approval by the Boards. "Remedial activities" shall be defined as but not necessarily limited to remedial items set forth in NPDES permit number CA0084531 (Order No. 99-110), Cease and Desist Order Number 99-111, any approved work plan or plans submitted pursuant thereto, and the like. Demands for consultant and attorney fees, prospective from the date of the agreement and relating to approved remedial activities as defined above may be submitted, will also be subject to approval by the Boards. The NPDES permit fee is not a remedial activity and will not be considered an item payable from the account. Any dispute regarding the Corporation's use or non-use of the remaining funds in the balance of the proceeds shall be resolved by way of motion to the Plumas County Superior Court. In such a motion, the Boards and the Corporation shall have the right to request the Court to compel or prevent distributions of the remaining balance.

C. Period for Review and Approval or Disapproval of Demands on Account: The Boards shall have a period of eight business days to review, and to approve or disapprove a demand made by the Defendants for payment from the account. In the event a demand is approved, the Boards shall have an additional two business days to send written authorization to the Defendants and Mid Valley Title Company. Such authorization may be sent by facsimile. In the event Defendants make a demand for payment and the Boards fail to notify of approval or disapproval within ten business days, the demand shall be considered disapproved.

D. The Lien: The Regional Board represents and warrants it will not make a demand on the escrow account until the demands in sub-paragraphs 1 through 5 above have been paid. At such time as the demands for matters in sub-paragraphs 1 through 5, above, have been paid from the escrow account, the Regional Board shall be entitled to make a demand on the account for payment of the Lien. At that time, the Regional Board will submit escrow instructions to the escrow agent authorizing release of that payment.

E. Person Authorized to Approve Disbursements: The person authorized to approve disbursements in writing on behalf of the Boards is Gary Carlton, the Regional Board's Executive Officer. Unless Executive Officer Carlton otherwise so approves in a writing served on Defendants and the escrow agent, no other person, with the exception of the Court, shall have the authority to authorize disbursements from the escrow account.

VII DOCUMENTS PERTAINING TO HARVEST; ACCOUNTING

Defendants shall notify Patrick Morris at (916) 255-3121 and Phil Nemir by telephone at (530) 257-2294 at least one week before the harvest that they are prepared to begin. Defendants shall provide the Boards copies of all documents pertaining to the timber harvest. Copies of the accounting from the mill, and any weight tags, scale tickets, trip tickets, demands for payment, invoices, checks, correspondence regarding payment of the logger or demands for payment from the logger, shall be provided to the Boards bimonthly, and with any demand(s) for payment by Defendants from the escrow account that fall in between such accountings. One copy shall be sent to the attention of Patrick Morris, CVRWQCB, 3443 Routier Rd., Ste. A, Sacramento, CA 95827-3098. A second copy shall be sent to the attention of Phil Nemir, P.O. Box 1717, Susanville, CA 96130. The Boards shall have the right to request and receive documentation for

any matter relating to the harvest.

VIII CORPORATION EXPRESSLY RESPONSIBLE FOR COMPLIANCE

By the terms of this agreement, Cedar Point Properties, Inc., expressly acknowledges that it is responsible for clean up, remediation, and abatement activities at the Walker Mine Property. Nothing in this Agreement shall be interpreted to release the Corporation from compliance with any State or Federal law. In addition, nothing in this Agreement shall be interpreted to bar the Boards, or any other State or Federal Agency, from taking any appropriate action against the Corporation which is authorized by law, whether administrative, judicial, or otherwise, including, but not limited to, seeking penalties, damages, injunctive relief, obtaining and enforcing judgments, or any other relief authorized by law.

IX CONDITIONAL RELEASE ONLY AS TO DANIEL R. KENNEDY, INDIVIDUALLY

This Agreement shall not be construed to release Daniel R. Kennedy from liability for any matter other than liability relating to Plumas County Superior Court Case No. 19897. The Parties expect there will be sufficient funds from the timber harvest to pay off one hundred percent (100%) of the Lien. The Boards' release of Daniel R. Kennedy as outlined below, is expressly conditioned upon payment of at least fifty percent (50%) of the Lien, with the expectation that such payment shall come from the timber harvest proceeds, but if harvest proceeds are insufficient, Daniel R. Kennedy shall have six (6) months from completion of harvest, or until January 1, 2001, to pay any amount which remains owing to make up the difference between timber harvest proceeds and fifty percent (50%) of the Lien.

A. Effect of Failure to Timely Satisfy At Least Fifty Percent of the Lien: In the event that fifty percent (50%) of the Lien is not satisfied within six (6) months of completion of the

harvest, or January 1, 2001, whichever is sooner, Daniel R. Kennedy shall not be released from liability respecting Plumas County Superior Court No. 19897, except that a release will be filed for any portion of the Lien which is actually paid off. In the event that fifty percent (50%) of the Lien is not timely paid off, the releases contemplated by this Agreement as to Daniel R. Kennedy shall be of no force and effect; and the Boards will be free to pursue Daniel R. Kennedy for liability respecting the Walker Mine Property in this or any other forum in any action, for any matter authorized by law. In the releases contemplated herein do not take effect, Daniel R. Kennedy shall not be prejudiced in his right to dispute any and all claims against him personally.

B. Release Contemplated Upon Timely Payment of At Least Fifty Percent of Boards' Lien: As to Daniel R. Kennedy only, this Agreement, and the releases contained hereafter, involve the settlement of claims which are contested, and nothing contained in this Agreement shall be construed as an admission by Daniel R. Kennedy of any fault, wrongdoing, and/or liability of any kind to the Boards, or any other person or entity with respect to the Walker Mine Property or Plumas County Superior Court Case No. 19897.

C. Civil Code Section 1542: Except as otherwise set forth in this Agreement, the Boards and Daniel R. Kennedy warrant, represent, and acknowledge that, in the event that fifty percent (50%) of the Boards' lien is timely paid off as contemplated by this Agreement, the Agreement shall act as a complete bar to every claim, demand and cause of action arising from the Plumas County Superior Court No. 19897. The Boards acknowledge that they have been advised by their counsel in the execution of this Agreement and that they are familiar with the provisions of California Civil Code section 1542 which provides:

A general release does not extend to claims which the creditor does not know or suspect

to exist in his favor at the time of executing the release, which if known by him must have materially affected his settlement with the debtor.

WAIVER: Provided that at least fifty percent (50%) of the Boards' lien is timely paid off as set forth in this Agreement, both the Boards and Daniel R. Kennedy agree that entry of a Stipulated Judgment according to this Agreement, will waive and relinquish any right or benefit they may have against one another under section 1542 of the California Civil Code concerning Plumas County Superior Court Case No. 19897.

D. Mutual Covenant Not to Sue: Provided that at least fifty percent (50%) of the Boards' lien is timely paid off as contemplated by this Agreement, and a Stipulated Judgment is entered as contemplated by this Agreement; except to enforce this Agreement, the Boards and Daniel R. Kennedy agree not to sue, make any claim or commence, maintain or prosecute any action under state or federal law against one another, to the extent such action arises from acts or omissions regarding Plumas County Superior Court Case No. 19897.

XI AGREEMENT INTERPRETATION, VENUE, GOVERNING LAW

The Parties worked together with their respective counsel to produce the terms of this agreement and in the event of a dispute hereunder, this Agreement shall not be interpreted for or against either party hereto on the ground that any such party drafted or caused to be drafted this Agreement or any part hereof. With respect to any suit, action or proceeding arising out of or relating to this Agreement, or other documentation related hereto, the parties submit to the jurisdiction and venue of the Plumas County Superior Court. The Agreement shall be construed and governed by the laws of the State of California.

XII BREACH OF AGREEMENT BY PADDING LOGGING COSTS

In the event that the Boards later discover, and the Court rules, that the Defendants intentionally inflated the logging costs with or without the participation of any third party, the release of Daniel R. Kennedy contemplated by this Agreement shall be null and void. In this situation, the Boards shall be entitled to pursue Daniel R. Kennedy for liability any amount remaining due on the Lien and any matter arising from the Walker Mine Property or alleged in Plumas County Superior Court Case No. 19897. Any claim brought under this section shall be subject to the limitations period set forth in the California Code of Civil Procedure, section 338(d).

XIII ATTORNEYS' FEES

The parties agree to bear their own attorneys' fees and costs incurred with respect to Plumas County Superior Court Case No. 19897. However, if after execution of this Agreement, any party to this Agreement brings an action at law, or in equity, to enforce this Agreement, or to interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, costs, and any other appropriate relief.

XIV AUTHORITY TO EXECUTE AGREEMENT

The person executing this Agreement on behalf of each party represents and warrants that: (a) each is authorized by their respective entity to execute this Agreement; and (b) each is acting within the scope of his or her authority as officers or duly authorized representatives of his or her respective entity. These representations and warranties are in addition to, and not in derogation of, all representations and warranties implied by law.

XV COUNTERPARTS

This Agreement may be executed in several counterparts, and all counterparts so executed

shall constitute one agreement, binding on all of the parties hereto, notwithstanding that all of the parties are not signatory to the original counterpart.

XVI INTEGRATION

The foregoing constitutes the entire agreement between the Parties and may not be modified, amended, or waived, except in writing duly executed by both Parties

XVII AGREEMENT DOES NOT BIND ANY OTHER AGENCY

This Agreement is made and entered into by and on behalf of the Boards only. Except as expressly provided in this Agreement, nothing in this Agreement is intended nor shall it be construed to preclude the Attorney General from exercising his or her authority as an independent Constitutional officer under any law, statute, or regulation. Furthermore, except as expressly provided in this Agreement, nothing in this Agreement is intended nor shall it be construed to preclude any state or federal agency, department, board or entity from exercising its authority under any law, statute, or regulation.

XVIII UNFORSEEN EVENTS

The release of Daniel R. Kennedy contemplated by this Agreement is conditional. The conditionality of the release shall not be subject to any defenses such as impossibility of performance, and the like. Thus, regardless of any natural disaster, act of God, warfare, or any other occurrence, unless the Boards receive payment of at least fifty percent (50%) of the Boards' lien within six (6) months of completion of harvest, or January 1, 2001, whichever is sooner, the release contemplated by this Agreement shall have no force and effect.

Dated: _____

State of California Regional Water Quality
Control Board, Central Valley Region

By: _____
GARY M. CARLTON, Executive Officer

State of California Water Resources Control
Board

By: _____
FRANCES McCHESNEY, Senior Staff
Counsel

CEDAR POINT PROPERTIES, INC.

By: _____
ANDREW CARDIN, Chief Financial
Officer

DANIEL R. KENNEDY, Individually

Dated: _____

Dated: _____

Dated: _____

Exhibit 95

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER NO. R5-2013-XXXX

FOR

**ATLANTIC RICHFIELD COMPANY
UNITED STATES DEPARTMENT OF AGRICULTURE,
UNITED STATES FOREST SERVICE**

**WALKER MINE TAILINGS
PLUMAS COUNTY**

This Order is issued to Atlantic Richfield Company (ARCO) and the United States Department of Agriculture, United States Forest Service (Forest Service) (collectively Dischargers) pursuant to Water Code section 13304, which authorizes the Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board) to issue Cleanup and Abatement Orders and Water Code section 13267, which authorizes the Executive Officer to issue Orders requiring the submittal of technical reports.

The Executive Officer of the Central Valley Water Board finds:

1. The Walker Mine Tailings (tailings) are located about 15 miles northeast of Quincy in Plumas County, on lands within the Plumas National Forest under the jurisdiction and control of the Forest Service. The site includes APNs 009-010-USA, 009-100-USA and 009-110-USA within Section 12 T24N, R11E and Sections 7 and 18, T24N, R12E Mount Diablo Base and Meridian as shown in Attachments A, B, and C, incorporated by reference.
2. The Walker Mine (mine), an abandoned underground copper mine located on adjacent private lands, generated the tailings. The tailings contain about 4.5 million cubic yards of mining waste over approximately 100 acres with an average depth of about 28 feet.
3. Copper and other wastes from the tailings discharge or threaten to discharge to Dolly Creek and other waters of the state within the Little Grizzly Creek watershed, impairing beneficial uses and creating a condition of pollution or nuisance.
4. The Walker Mining Company (Walker) acquired the mine in 1915 and began mining around 1916. International Smelting and Refining Company (International) acquired the controlling interest in Walker in 1918. International was a wholly-owned subsidiary of, and in 1928 merged into, the Anaconda Copper Mining Company (Anaconda).
5. Anaconda, International and Walker concurrently operated the mine beginning in 1918. In 1919, they sought and eventually obtained a federal right of way for the tailings site and constructed an impoundment basin including levees and a flashboard dam. They deposited

tailings on the site from 1920 until ceasing production in 1941. They ceased all operations in 1943. Walker filed for bankruptcy in 1944, and its assets were sold in 1945. The tailings have been a continuous source of pollutants to the watershed from at least the time production ceased.

6. ARCO is the successor by merger to Anaconda. The Forest Service owns and manages the tailings. Both are therefore properly named as Dischargers and are legally responsible for complying with this Order.
7. The mine is subject to a separate Cleanup and Abatement Order issued to ARCO.

WATER QUALITY ISSUES AND SITE HISTORY

8. The tailings are located at the confluence of Dolly Creek and Little Grizzly Creek. The mine's main access portal, mill and concentrator facilities were located about 0.75 miles upstream on Dolly Creek. A levee separates the tailings from Little Grizzly Creek. Dolly Creek crosses the tailings in a northeast to southwest direction and discharges into Little Grizzly Creek at two locations, the "Diversion Channel Outfall" and the "USFS Dam" (see Attachment C). Dolly Creek is tributary to Little Grizzly Creek, which is tributary to Indian Creek, which is tributary to the North Fork of the Feather River. All are waters of the state and of the United States.
9. The tailings form a perched aquifer with the groundwater elevation dependent on the elevation of the USFS Dam. Groundwater elevations beneath the tailings average 8.3 feet below the surface of the tailings, ranging from 0.13 feet to 25.9 feet. Groundwater flow direction is towards Little Grizzly Creek. A groundwater monitoring network consists of seven monitoring wells (see Attachment C).
10. "Mining Waste" is defined under Water Code section 13050, subdivision (q)(1), as *"all solid, semisolid, and liquid waste materials from the extraction, beneficiation, and processing of ores and minerals. Mining waste includes, but is not limited to, soil, waste rock, and overburden, as defined in Public Resources Code section 2732, and tailings, slag, and other processed waste materials...."*
11. The tailings contain metals, including copper, which oxidizes and become soluble when exposed to water. As such, the tailings are classified as Group B mining waste in accordance with Title 27 of the California Code of Regulations, section 22480(b)(2)(B), *"mining wastes that consist of or contain nonhazardous soluble pollutants of concentrations which exceed water quality objectives for, or could cause, degradation of waters of the state,"*
12. The site is a waste management unit for the treatment, storage, or disposal of mining waste (*Mining Unit*) as defined in Title 27, section 22470.

13. The mine and tailings together have discharged metals and acid mine drainage (AMD) into Dolly Creek from at least the time production ceased in 1941, if not earlier. The mine and tailings discharged enough metals and AMD to eliminate aquatic life in Little Grizzly Creek to the confluence with Indian Creek 10 miles downstream.
14. The Central Valley Water Board identified water quality problems associated with the tailings in at least 1958, when staff noted that the flash board dam and levees were in a state of disrepair and that Dolly Creek carried silt from the tailings into Little Grizzly Creek. The Forest Service repaired the levee and flash board dam in approximately 1980, although occasional discharges continued from the site.
15. In November 1987, pursuant to Resolution No. 86-057, the Central Valley Water Board installed an engineered concrete plug, or seal, inside the mine in order to stop AMD discharges from the underground ore zone to surface waters of Dolly Creek. The mine seal significantly reduced AMD, copper concentrations and flow in Dolly Creek upstream of the tailings.
16. In 1991, the U.S. Environmental Protection Agency placed the tailings on the Federal Agency Hazardous Waste Compliance Docket pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Forest Service adopted a Federal Record of Decision (ROD) for remediation of the tailings in 1994. The ROD selected remedial actions including channel erosion control, development of wetlands for passive treatment, revegetation and wind erosion control.
17. Pursuant to the ROD, the Forest Service constructed wetlands, erected wind barriers and planted trees and grasses on the tailings. The revegetation efforts were only marginally successful, however, due to poor growing conditions. Windborne transportation of tailings continues to be a source of discharge to Dolly Creek and Little Grizzly Creek.
18. In December 1999, the Regional Board proposed to name ARCO as a discharger for the tailings (tentative order revising WDRs No. 91-017), but the new WDRs were never finalized against ARCO based on ARCO's resistance and the Board's then-understanding of Anaconda's involvement at the mine. The WDRs were finalized against the Forest Service in Order No. 5-00-028, which remains in effect.
19. The Forest Service amended the ROD in 2001 to allow the diversion of Dolly Creek around the tailings to ensure the effectiveness of the wetland treatment system and to reduce the releases of metals and other constituents during heavy flows. This work was completed in 2008.
20. During a 2005 CERCLA lawsuit, the Forest Service and ARCO obtained a consent decree whereby ARCO provided \$2.5 million for future response costs involved with federal remedial activities at the tailings. The Central Valley Water Board was not a party to that action.

21. The Central Valley Water board and others have regularly collected and analyzed surface water samples from the tailings. Water quality data indicate that the tailings continue to contribute significant concentrations of copper to Little Grizzly Creek, as shown in Figures 1 through 7, attached and incorporated here. Copper concentrations discharged from the "Diversion Channel Outfall" (Figure 1) and the "USFS Dam" (Figure 2) regularly exceed water quality objectives and pose a threat to waters of the State. Copper concentrations at the downstream point of compliance generally exceed water quality objectives (Figure 3) and increase in comparison to the upstream unaffected monitoring points (Figure 4). Copper concentrations at the "Diversion Channel Outfall" exceed water quality objectives (Figure 5). Furthermore, copper concentrations increase approximately one order of magnitude as they cross the tailings and discharge from the "USFS Dam" to Little Grizzly Creek (Figures 6 and 7).
22. Groundwater monitoring data show that the tailings have impacted groundwater with copper (ranging from less than 0.5 $\mu\text{g/l}$ to 51 $\mu\text{g/l}$) averaging 4.5 $\mu\text{g/l}$ in monitoring wells W-3, W-5, and W-7.
23. The apparent source of the elevated levels of copper is leachate generated by surface water flows in Dolly Creek and run-off that comes in contact with mining waste within the tailings.
24. Since 1984, the Central Valley Water Board has spent more than \$2.6 million on the Walker Mine acid mine drainage abatement project, including monitoring activities at the tailings.

OPERATOR LIABILITY

25. In 1987, ARCO conveyed the Anaconda Geological Documents Collection to the University of Wyoming. The Anaconda Geological Documents Collection is a publicly accessible database containing hundreds of documents related to the Walker Mine. The database became available online sometime after 1999. Central Valley Regional Board staff recently obtained and reviewed relevant documents from the database and other sources.
26. The record shows that Anaconda, International and Walker concurrently operated the mine and tailings from 1918 through at least 1943. Anaconda operated the site as it would have any of its directly-owned assets; Anaconda staff acting on Anaconda's behalf regularly directed specific operation and exploration activities at the mine, particularly during critical periods. Anaconda's involvement at the mine went well beyond what is normally expected of a responsible corporate parent. Documents showing Anaconda's direct operation of the mine are contained in Attachment D, which is incorporated herein.
27. Anaconda was a direct operator of the mine and ARCO is liable as Anaconda's successor.
28. In the alternative, ARCO is liable as Anaconda's successor because Anaconda operated Walker as a corporate alter ego. The record reveals that Anaconda, through International,

financed the indebtedness of Walker from at least 1922 through 1944. Moreover, Anaconda, through International, carried the costs of exploration and development during periods when Walker was not profitable, in part because Anaconda believed that Walker would eventually become profitable, and because Walker supplied copper concentrate to International's Tooele smelter.

LEGAL PROVISIONS

29. Section 303(d) of the Federal Clean Water Act (CWA) requires states to identify waters not attaining water quality standards (referred to as the 303(d) list). Dolly Creek and Little Grizzly Creek below the mine and tailings have been identified by the Central Valley Water Board as an impaired water bodies because of high aqueous concentrations of copper and zinc.
30. Once a water body is identified as impaired and added to the 303d list, the CWA requires the states to develop a Total Daily Maximum Load (TMDL) for the water body. The Central Valley Regional Board will develop a TMDL for Dolly Creek and Little Grizzly Creek by 2020, unless the cleanup action proposed herein results in the attainment of the water quality objectives.
31. The Central Valley Water Board's *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, 4th Edition* (Basin Plan) designates beneficial uses of the waters of the State, establishes water quality objectives (WQOs) to protect these uses, and establishes implementation policies to implement WQOs. The designated beneficial uses of the North Fork of the Feather River and its tributaries are municipal and domestic supply; hydropower generation; water contact recreation; non-contact water recreation; cold freshwater habitat; spawning, reproduction and/or early development; and wildlife habitat.
32. The beneficial uses of underlying groundwater, as stated in the Basin Plan, are municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.
33. Because the site contains mining waste as described in Water Code sections 13050, closure of the Mining Unit(s) must comply with the requirements of Title 27 California Code of Regulations sections 22470 through 22510 and with such provisions of the other portions of Title 27 that are specifically referenced in that article.
34. Affecting the beneficial uses of waters of the state by exceeding applicable WQOs constitutes a condition of pollution as defined in Water Code section 13050, subdivision (l)(1).
35. Water Code section 13304, subdivision (a) states in part that:

"Any person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirement or other order or prohibition issued by a Regional Water Board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the Regional Water Board, clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including, but not limited to, overseeing cleanup and abatement efforts. Upon failure of any person to comply with the cleanup or abatement order, the Attorney General, at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In the suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant."

36. Water Code section 13304, subdivision (b), authorizes the Central Valley Water Board to perform cleanup, abatement, or remedial work where necessary to prevent substantial pollution, nuisance, or injury to waters of the state. Water Code section 13304, subdivision (c), authorizes the Central Valley Water Board to seek reimbursement from the Discharger for the costs associated with such cleanup, abatement or remedial work.
37. The State Water Resources Control Board (State Board) has adopted Resolution No. 92-49, *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under CWC Section 13304*. Resolution No. 92-49 sets forth the policies and procedures to be used during an investigation or cleanup of a polluted site and requires that cleanup levels be consistent with State Board Resolution No. 68-16, the *Statement of Policy With Respect to Maintaining High Quality of Waters in California*. Resolution No. 92-49 and the Basin Plan establish cleanup levels to be achieved. Resolution No. 92-49 requires waste to be cleaned up to background, or if that is not reasonable, to an alternative level that is the most stringent level that is economically and technologically feasible in accordance with Title 23, section 2550.4. Any alternative cleanup level to background must: (1) be consistent with the maximum benefit to the people of the state; (2) not unreasonably affect present and anticipated beneficial use of such water; and (3) not result in water quality less than that prescribed in the Basin Plan and applicable Water Quality Control Plans and Policies of the State Board.
38. Chapter IV of the Basin Plan contains the *Policy for Investigation and Cleanup of Contaminated Sites*, which describes the Central Valley Water Board's policy for managing contaminated sites. This policy is based on Water Code sections 13000 and 13304, California Code of Regulations, title 23, division 3, chapter 15; California Code of Regulations, title 23, division 2, subdivision 1; and State Board Resolution Nos. 68-16 and 92-49. The policy addresses site investigation, source removal or containment, information required to be submitted for consideration in establishing cleanup levels, and the basis for establishment of soil and groundwater cleanup levels.

39. The State Board's Water Quality Enforcement Policy states in part: "At a minimum, cleanup levels must be sufficiently stringent to fully support beneficial uses, unless the Central Valley Water Board allows a containment zone. In the interim, and if restoration of background water quality cannot be achieved, the Order should require the discharger(s) to abate the effects of the discharge." (Water Quality Enforcement Policy, p. 35).
40. Water Code section 13267 states, in part:
- "(b)(1) In conducting an investigation, the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or, discharging, or who proposes to discharge waste within its region . . . shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."*
41. The Dischargers are named in this Order because through their actions and/or by virtue of their ownership of the tailings, they have caused or permitted waste to be discharged or deposited where it has discharged and threatens to discharge to waters of the state and has created a condition of pollution or nuisance.
42. In accordance with Water Code section 13304, the Dischargers must take all actions necessary to clean up and abate the discharge and threatened discharge of all mining waste (including the ongoing monitoring and maintenance of the seal) and restore the affected waters to background conditions (i.e., the water quality that existed before mining activities began).
43. In accordance with Water Code section 13267, the reports required herein are necessary to formulate a plan to remediate the wastes at the mine, to assure protection of waters of the state, and to protect public health and the environment.
44. Failure to comply with the remedial provisions of this Order may result in enforcement action(s), which may include the imposition of administrative civil liability pursuant to Water Code section 13350 (up to \$5,000 per day of violation) or 13385 (up to \$10,000 per day of violation). Failure to comply with the reporting provisions of this Order may result in enforcement action(s), which may include the imposition of administrative civil liability pursuant to Water Code section 13268 (up to \$5,000 per day of violation).
45. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act (CEQA) (Pub. Resources Code, §§ 21000 et seq.), pursuant to California Code of Regulations, title 14, section 15321, subdivision (a)(2). The implementation of the Order is also an action to assure the restoration of natural resources and/or the environment and is exempt from the

provisions of CEQA in accordance with California Code of Regulations, title 14 sections 15307 and 15308. This Order may also be classified as a minor action to prevent, minimize, stabilize, mitigate or eliminate the release or threat of release of hazardous waste or substances, and is exempt from the provisions of CEQA in accordance with California Code of Regulations, title 14, section 15330.

DRAFT

IT IS HEREBY ORDERED pursuant to Water Code Sections 13304 and 13267, that the Dischargers, their agents, successors, and assigns, shall investigate the discharges of waste, clean up the waste, and abate the effects of the waste, forthwith, from the Walker Mine Tailings. The work shall be completed in conformance with Title 27 California Code of Regulations, sections 22470 through 22510, State Board Resolution No. 92-49 and with the Central Valley Water Board's Basin Plan (in particular the Policies and Plans listed within the Control Action Considerations portion of Chapter IV), other applicable state and local laws, and consistent with California Health and Safety Code, Division 20, chapter 6.8. "Forthwith" means as soon as is reasonably possible. Compliance with this requirement shall include, but not be limited to, completing the tasks listed below.

Any person signing a document submitted under this Order shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my knowledge and on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

1. The Dischargers shall submit a report on **XX July 2013** describing measures taken to jointly manage the site for remedial purposes.
2. The Dischargers shall reimburse the Central Valley Water Board for reasonable costs associated with oversight of the investigation and remediation of the tailings, pursuant to Water Code section 13305, subdivision (c)(1). Within **30 days** of the effective date of this Order, the Dischargers shall provide the name and address where the invoices shall be sent. Failure to provide a name and address for invoices and/or failure to reimburse the Central Valley Water Board's oversight costs in a timely manner shall be considered a violation of this Order. If the Central Valley Water Board adopts Waste Discharge Requirements (WDRs), review of reports related to writing of the WDRs and all compliance measures thereafter would be subject to the fees required by issuance of the Order and the reimbursement for associated costs under this requirement would no longer apply.
3. The Dischargers shall investigate, identify, and classify all sources of mining waste in compliance with Title 27 section 22480. This would include at a minimum all mining waste associated with surface impoundments, waste piles, tailings and leachate associated with mining at the site. The Discharger shall submit the following reports related to characterization of the mining waste:
 - a. **By XX September 2013**, submit a work plan to identify all mining waste as defined in Water Code section 13050, subdivision (q)(1) at the site. This work plan shall include a strategy/plan to characterize and classify the mining waste in compliance with Title 27 section 22480 and the extent to which the site is degrading water

quality above background concentrations. This work plan shall also include a method to establish a Water Quality Protection Standard (Water Standard) per Title 27 section 20390.

- b. **By XX December 2013**, submit a characterization report that identifies all mine waste locations and basis for classification of mine waste at each location per the work plan submitted above. All the laboratory data shall be submitted with the characterization report. This report shall also include the establishment of the Water Standard.
4. **By XX April 2014**, submit a work plan and Time Schedule to close and maintain the tailings in compliance with Title 27 sections 22470 through 22510 and to remediate the site in such a way to prevent future releases of mining waste (copper and other pollutants) to surface and ground waters.
5. **By XX June 2014**, submit a Report of Waste Discharge with a complete characterization of the waste discharged in accordance with Water Code section 13260, subdivision (k). The Report of Waste Discharge shall also be in compliance with Title 27 section 21710 et seq., and include a short and long term monitoring plan per Title 27 section 22500. The mine waste units shall meet the construction standards in Title 27 section 22490, and the closure and post closure maintenance requirements in Title 27 section 22510.
6. **Beginning 90 Days after Regional Board approval of the Work Plan and Time Schedule defined in item 5. above**, submit regular quarterly reports documenting progress in completing remedial actions.
7. **By 31 December 2016**, complete all remedial actions and submit a final construction report.
8. Responsibilities for the water quality problems associated with the tailings shall end when the tailings no longer poses a threat to water quality.

REPORTING

9. When reporting data, the Dischargers shall arrange the information in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner as to illustrate clearly the compliance with this Order.
10. Fourteen days prior to conducting any fieldwork, the Dischargers shall submit a Health and Safety Plan that is adequate to ensure worker and public safety during the field activities in accordance with Title 8, section 5192.
11. As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, all reports shall be prepared by a registered professional or their subordinate and signed by the registered professional.

12. All reports must be submitted to the Central Valley Water Board as both paper and electronic copies. Electronic copies of all reports and analytical results are to be submitted over the Internet to the State Water Board Geographic Environmental Information Management System database (GeoTracker) at <http://geotracker.swrcb.ca.gov>. Electronic copies are due to GeoTracker concurrent with the corresponding hard copy. Electronic submittals shall comply with GeoTracker standards and procedures as specified on the State Water Board's web site.
13. The Dischargers shall notify Central Valley Water Board staff at least five working days prior to any onsite work, testing, or sampling that pertains to environmental remediation and investigation and is not routine monitoring, maintenance, or inspection.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday (including mandatory furlough days), the petition must be received by the State Water Board by 5:00 p.m. on the next business day.

Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

This Order is effective upon the date of signature.

Ordered by:

PAMELA C. CREEDON Executive Officer

(Date)

Exhibit 96

**STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 2010-0023**

TO ALLOCATE \$600,000 FROM THE CLEANUP AND ABATEMENT ACCOUNT (CAA) TO
FUND THE INSPECTION, MAINTENANCE, AND REPAIRS TO THE 700-LEVEL ADIT AT
WALKER MINE (PROJECT)

WHEREAS:

1. The Central Valley Regional Water Quality Control Board (Central Valley Water Board) is requesting an additional \$600,000 from the CAA to fund the Project for the next five years;
2. The Central Valley Water Board will not be able to meet its requirements to protect water quality as described in the Walker Mine (Mine) *Acid Mine Drainage Abatement Project, Operations and Maintenance Procedures* (May 1997), adopted by the Central Valley Water Board in Resolution No. 97-161;
3. The Mine discharged acid mine drainage (AMD) directly into Dolly Creek, and the discharge eliminated aquatic life downstream in Dolly Creek and Little Grizzly Creek for a distance of approximately 10 miles;
4. In November 1987, the Central Valley Water Board installed an engineered concrete mine seal to prevent the direct discharge of AMD;
5. In 1991, the Central Valley Water Board received a \$1.5 million settlement from the owners of the property. The money was paid to the CAA and the State Water Resources Control Board (State Water Board) adopted Resolution Nos. 1991-0016 and 1997-0082, which authorized \$1.2 million and \$1.5 million, respectively, from the CAA to the Central Valley Water Board for the Mine;
6. Inspection, maintenance, and repair of the 700-Level Adit are required before staff can inspect and further maintain the Mine seal; and
7. The requested allocation is consistent with the purposes of Water Code Section 13442. Section 13442 provides that the State Water Board may order moneys to be paid from the CAA to a public agency with authority to cleanup or abate the effects of a waste "to assist it in cleaning up the waste or abating its effects on the waters of the state."

THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Approves funding an additional \$600,000 from the CAA to the Central Valley Water Board for the Project;
2. Directs that less than ten percent of the \$600,000 funding amount is authorized for Project oversight by the Central Valley Water Board; and

3. Reverts any unexpended funds to the CAA as of June 20, 2015, unless the Deputy Director or Assistant Deputy Director of the Division of Financial Assistance authorizes an extension. The funds will be available until June 30, 2015.

CERTIFICATION

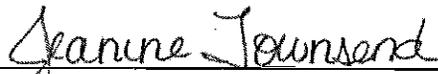
The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Board held on May 18, 2010.

AYE: Chairman Charles R. Hoppin
Board Member Arthur G. Baggett, Jr.
Board Member Tam M. Doduc
Board Member Walter G. Pettit

NAY: None

ABSENT: Vice Chair Frances Spivy-Weber

ABSTAIN: None



Jeanine Townsend
Clerk to the Board

Exhibit 97

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION NO. R5-2010-0036

AUTHORIZATION TO APPLY FOR FUNDS
FROM THE STATE WATER POLLUTION CLEANUP AND ABATEMENT ACCOUNT
AND
AUTHORIZATION FOR THE EXECUTIVE OFFICER
TO ENTER INTO CONTRACTS FOR MAINTENANCE AND CLEANUP ACTIONS
FOR
WALKER MINE, PLUMAS COUNTY

WHEREAS, there is in the State Water Quality Control Fund the State Water Pollution Cleanup and Abatement Account (Account) which is administered by the State Water Resources Control Board; and

WHEREAS, upon application by a Regional Board that is attempting to remedy a significant unforeseen water pollution problem, posing an actual or potential public health threat, and for which the Regional Board does not have adequate resources budgeted, the State Board may order moneys to be paid from the Account to the Regional Board to assist it in responding to the problem; and

WHEREAS, using Account funds, the Central Valley Water Board installed an engineered mine seal in the main adit of Walker Mine in November 1987, which has successfully prevented a direct discharge of acid mine drainage from the underground workings of the mine into Dolly Creek and Little Grizzly Creek; and

WHEREAS, the seal has made a significant improvement in the water quality of Dolly Creek and Little Grizzly Creek; and

WHEREAS, other point source and non-point source acid mine discharges from the Walker Mine property are continuing to occur and impair beneficial uses of Dolly Creek and Little Grizzly Creek; and

WHEREAS, the Central Valley Water Board does not have sufficient resources budgeted for remedying the water quality problems associated with the Walker Mine; and

WHEREAS, in Central Valley Water Board Resolution 97-160 the Executive Officer was authorized to apply to the State Water Resources Control Board for \$1,200,000 from the State Water Pollution Cleanup and Abatement Account to respond to the problems associated with the Walker Mine; and

WHEREAS, since 1997 the Central Valley Water Board has expended over \$1,000,000 from the Account for maintenance and cleanup activities at the Walker Mine; and

WHEREAS, the period to expend all of the \$1,200,000 over 10 years has expired and additional resources are needed to continue monitoring, contract for mine maintenance, and search for Responsible Parties; and

WHEREAS, the Central Valley Water Board adopted Resolution 97-161, which describes the Operations and Maintenance Procedures and information on the long term annualized costs of operations and maintenance for the Walker Mine.

WHEREAS, Annualized costs for operations and maintenance of the mine structures for the next five years are estimated to be \$120,000: Therefore, be it

RESOLVED, that the Executive Officer is hereby authorized to apply to the State Water Resources Control Board State Water Pollution Cleanup and Abatement Account to respond to the problems associated with the Walker Mine; and be it further

RESOLVED, that the Executive Officer is hereby authorized to enter in to engineering services and construction contracts for maintenance activities and cleanup actions associated with the Walker Mine; and be it further

RESOLVED, that if State funds are expended, the Executive Officer is directed to seek reimbursement from any responsible party.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the Central Valley Water Board, on 18 March 2010.

original signed by
PAMELA C. CREEDON, Executive Officer

Exhibit 98

From: Tauriainen, Andrew@Waterboards [mailto:Andrew.Tauriainen@waterboards.ca.gov]
Sent: Tuesday, January 21, 2014 11:28 AM
To: Coupe, David@Waterboards; Michael Hope (michael.hope@usda.gov); Duffy, William; Huggins, Jeff@Waterboards; Busby, Robert@Waterboards; Altevogt, Andrew@Waterboards; jbruen@fbm.com
Cc: Landau, Ken@Waterboards; MacDonald, Alex@Waterboards
Subject: RE: Walker Mine: Update Concerning Objections and Reply to Proposed Hearing Procedure

Thank you. Given that the proposed hearing procedures and schedule remain in place, the Prosecution Team will continue preparing its Case-in-Chief for submittal on January 23. We request that the Advisory Team's ruling on the hearing procedure objections provide direction and time to amend the Case-in-Chief if necessary. The proposed cleanup and abatement orders involve significant issues and evidence such that the Case-in-Chief has taken several days to prepare, and may take several more to modify.

Andrew Tauriainen, Senior Staff Counsel
State Water Resources Control Board
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1001 I Street, 16th Floor
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-----Original Message-----

From: Coupe, David@Waterboards
Sent: Tuesday, January 21, 2014 9:46 AM
To: Tauriainen, Andrew@Waterboards; Michael Hope (michael.hope@usda.gov); Bill Duffy (william.duffy@dgs.gov); Huggins, Jeff@Waterboards; Busby, Robert@Waterboards; Altevogt, Andrew@Waterboards; jbruen@fbm.com
Cc: Landau, Ken@Waterboards; MacDonald, Alex@Waterboards
Subject: RE: Walker Mine: Update Concerning Objections and Reply to Proposed Hearing Procedure

Mr. Tauriainen et al.:

In response to Mr. Tauriainen's email below, my apologies but I have been tied up on other matters that have required my immediate attention. The Advisory Team does plan to consult with the Board Chair on these issues. I am hopeful that pre-hearing rulings will be made in the next five business days.

David

David P. Coupe
Attorney III and Member of the Advisory Team c/o San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Phone: (510) 622-2306
Fax: (510) 622-2460

E-mail: dcoupe@waterboards.ca.gov

-----Original Message-----

From: Tauriainen, Andrew@Waterboards
Sent: Friday, January 17, 2014 7:56 PM
To: Coupe, David@Waterboards; Michael Hope (michael.hope@usda.gov); Bill Duffy (william.duffy@dgsllaw.com); Huggins, Jeff@Waterboards; Busby, Robert@Waterboards; Altevogt, Andrew@Waterboards; jbruen@fbm.com
Cc: Landau, Ken@Waterboards; MacDonald, Alex@Waterboards
Subject: RE: Walker Mine: Update Concerning Objections and Reply to Proposed Hearing Procedure

Advisory Team:

Please advise as to whether any ruling on the hearing procedure objections will affect the scope of the hearing or the January 23 submittal deadline. Until instructed otherwise, the Prosecution Team is preparing its case-in-chief as though the January 23 deadline and the proposed hearing schedule remains in place.

Andrew Tauriainen, Senior Staff Counsel
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From: Coupe, David@Waterboards
Sent: Friday, December 20, 2013 10:39 AM
To: Tauriainen, Andrew@Waterboards; Michael Hope (michael.hope@usda.gov); Bill Duffy (william.duffy@dgsllaw.com); Huggins, Jeff@Waterboards; Busby, Robert@Waterboards; Altevogt, Andrew@Waterboards; jbruen@fbm.com
Cc: Landau, Ken@Waterboards; MacDonald, Alex@Waterboards
Subject: Walker Mine: Update Concerning Objections and Reply to Proposed Hearing Procedure

All:

I am most recently in receipt of the Prosecution Team's reply to objections on the proposed hearing procedure in an email from Mr. Tauriainen on December 17, 2013. I am also in receipt of Mr. Duffy's objections in an email dated December 6th as well as objections from Mr. Hope in an email dated December 5th.

The proposed hearing procedure includes a deadline of 10 January 2014 for the Advisory Team to issue a decision on objections to the proposed hearing procedure and any request for Designated Party status.

This email serves to inform the Parties that these decisions will not be issued by the Advisory Team on or before 10 January 2014. At this time, it is anticipated that issuing a decision on objections to the proposed hearing procedure and any request for Designated Party status will occur on or before 17 January 2014. As a

result, some of the deadlines in the proposed hearing procedure may be changed accordingly to allow for some additional time in order to account for this additional week.

Please note that I will be unavailable beginning December 23rd at approximately noon PST until Monday, January 6th and I will be tied up on settlement matters for a good portion of the week of January 6th.

As always, questions of strictly a procedural nature may be sent to me and Mr. Landau with a copy to all Parties.

David P. Coupe

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