WorleyParsons
resources & energy

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Proj. No.: 108010-00270
File Loc.: Folsom

Adam Green
Solar Reserve
2425 Olympic Blvd., Suite 500 East
Santa Monica, CA 90404

Dear Mr. Green:

RE: GROUNDWATER QUALITY ASSESSMENT – SAGUACHE SOLAR ENERGY PROJECT

Introduction

This letter presents the findings of the groundwater investigation conducted for the Saguache Solar Energy Project located near Center, Colorado (herein referred to as the Site). WorleyParsons identified 111 wells located within the property being optioned by Solar Reserve for the project (**Table 1**). The majority of these wells are used for irrigation and are completed within the upper aquifer. The upper aquifer is unconfined and extends to approximately 100 feet below ground surface. Groundwater levels in the upper aquifer beneath the Site range from 3 to 80 feet bgs (**Table 1**). Well yields in the upper aquifer are up to approximately 2,400 gallons per minute (gpm) but are generally around 1,000 gpm (**Table 1**).

The objective of this investigation was to characterize the groundwater quality in the upper aquifer in the vicinity of the northern and southern power blocks for preliminary design and permitting. WorleyParsons selected several wells owned and operated by Mountain Valley Produce, which are in the vicinity of the Power Blocks and are completed in the upper aquifer. **Figure 1** shows all of the wells located in the vicinity of the Power Blocks.

After coordinating with Ernest Myers, the general manager for Mountain Valley Produce, WorleyParsons selected well W-36 as the sample location for the southern power block and well W-43 for the sample location for the northern power block. Well W-36 is located approximately 0.36 miles from the southern power block and well W-43 is located approximately 0.44 miles from the northern power block (**Figure 1**).

Field Activities

On October 11, 2010 groundwater samples were collected from well W-36 and W-43. Dedicated turbine pumps were used to purge groundwater from these wells and geochemical parameters (temperature, pH, conductivity, and ORP) were measured during purging to ensure that a representative groundwater sample from the aquifer was collected from each well. At well W-36 a purge rate of approximately 540 gpm was maintained for approximately 1 hour 35 minutes and 51,300 gallons of water was discharged to the central pivot sprinkler system. Prior to sample collection the

geochemical parameters were stable indicating a representative groundwater sample was collected from the aquifer. At well W-43 a purge rate of approximately 1,100 gpm was maintained for approximately 1 hour 15 minutes and 82,500 gallons of water was discharged to the central pivot sprinkler system. Prior to sample collection the geochemical parameters were stable indicating a representative groundwater sample was collected from the aquifer. The groundwater sampling forms are included in **Attachment A**. These forms document the geochemical parameters.

Groundwater samples were placed in laboratory supplied sample containers and immediately following sample collection the samples were labeled and placed on ice in a cooler. The samples were transported to ACZ laboratories of Steamboat Springs, Colorado under chain of custody protocol.

Groundwater Quality

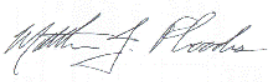
The groundwater samples collected form wells W-36 and W-43 were analyzed for a standard suite of compounds necessary for power plant design. **Table 2** summarizes the groundwater quality data. Total dissolved solids (TDS) concentrations range from 410 to 530 mg/L and the groundwater is sodium-sulfate type. The laboratory analytical report is included in **Attachment B**.

Closing

If you have any questions please do not hesitate to contact the undersigned.

Best Regards,

WORLEYPARSONS



Matthew Rhoades
Senior Hydrogeologist

Tables

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Table 1
Well Inventory
Saguache Solar Energy Project

Well ID	Alternate Well ID	Well Owner	Township, Range, and Section								UTM_x	UTM_y	Well Permit No.	Well Permit Status	Well Use	Aquifer	Well Installation Date	Date Well Abandoned	Ground Surface Elevation (feet amsl)	Well Depth (feet bgs)	Screened Interval (feet bgs)	Pump Rate (gpm)	Static Water Level (feet bgs)
Township 41 North Range 9 East Section 3							q160	q40															
1		C&W RANCHES	41	N	9	E	3	NE			414668.40	4187635.50	19782.00	Permit Expired	IRRIGATION	UNCONFINED SAN LUIS VALLEY							
2		SKYVIEW COOLING COMP	41	N	9	E	3	NE			414665.70	4187640.50	21256.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	3
3		SKYVIEW COOLING COMP	41	N	9	E	3	NW			413869.60	4187644.70	21255.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	3
4	21255-F	C&W RANCHES	41	N	9	E	3	NW			413868.10	4187638.50	19781.00	Permit Expired	IRRIGATION	UNCONFINED SAN LUIS VALLEY							
5		SKYVIEW COOLING COMP	41	N	9	E	3	SE			414657.90	4186817.50	19780.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	
6		SKYVIEW COOLING COMP	41	N	9	E	3	SE	NE		414659.80	4187018.50	49700.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	4/28/1998		7,700	115	35 - 115	1,000	14
7		SKYVIEW COOLING COMP	41	N	9	E	3	SW	NE		413864.30	4186816.50	20165.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		900	
8		SKYVIEW COOLING COMP	41	N	9	E	3	SW	SW		413660.50	4186618.00	13017.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				113		2,000	4
9		SKYVIEW COOLING COMP	41	N	9	E	3	SW	SW		413660.50	4186618.00	13016.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,800	4
10		INNESS MARK R	41	N	9	E	3	SW	SW		413520.70	4186474.70	208062.00	Well Constructed	DOMESTIC/STOCK	UNCONFINED SAN LUIS VALLEY	9/10/1999		7,700	98	68 - 98	15	6
Township 41 North Range 9 East Section 4																							
11		MCENTYRE FRANK	41	N	9	E	4				412659.90	4187238.50	202.00	Well Constructed		ALL UNNAMED AQUIFERS				130			
12		ENTIRE FRANK	41	N	9	E	4				412659.90	4187238.50	18.00	Well Constructed		ALL UNNAMED AQUIFERS				100			
13		SAM INVESTMENTS INC	41	N	9	E	4	NE			413065.00	4187651.50	20973.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		900	3
14		HUNT C. TRUST ESTATE	41	N	9	E	4	NE	SW		412861.10	4187441.70	5447.00	Permit Expired	IRRIGATION	ALL UNNAMED AQUIFERS							
15		SAM INVESTMENTS INC	41	N	9	E	4	NW			412256.20	4187660.70	20972.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		900	3
16		HUNT C. TRUST ESTATE	41	N	9	E	4	NW	SW		412054.60	4187450.00	5448.00	Permit Expired	IRRIGATION	ALL UNNAMED AQUIFERS							
17		SAM INVESTMENTS INC	41	N	9	E	4	SE			413059.60	4186819.00	20971.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	4
18		SAM INVESTMENTS INC	41	N	9	E	4	SW			412252.10	4186825.00	20970.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	4
19		SAM INVESTMENTS INC	41	N	9	E	4	SW	SW		411867.60	4186445.20	11337.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				125		2,000	6
20		SAM INVESTMENTS INC	41	N	9	E	4	SW	SW		411868.20	4186742.50	11336.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				98		1,800	6
21		SAM INVESTMENTS INC	41	N	9	E	4	SW	SW		412050.30	4186629.20	7555.00	Well Constructed	STOCK	ALL UNNAMED AQUIFERS				500			
Township 41 North Range 9 East Section 7																							
22	WELL #16A	MYERS ERNEST M & VIRGINIA K	41	N	9	E	7	SE			409809.6	4185250.7	23242	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY							
23		HUNT CAROLINE TRST ESTATE	41	N	9	E	7	SE			409816.4	4185249.2	21813	Permit Expired	IRRIGATION	UNCONFINED SAN LUIS VALLEY							
24	WELL #107	MYERS ERNEST M & VIRGINIA K	41	N	9	E	7	SE	SW		409432.7	4184913.7	6033	Well Constructed	STOCK	ALL UNNAMED AQUIFERS				500		50	
25	WELL #16	MYERS ERNEST M & VIRGINIA K	41	N	9	E	7	SE	SW		409457.9	4184868.2	11302	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				90		1,850	
26	#1A	WEDEL WAYNE L & JUDITH S	41	N	9	E	7	SW			409035.3	4185261	20868	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS	5/10/1976			100	30 - 100	900	5
Township 41 North Range 9 East Section 8																							
27	WELL #15A	MYERS ERNEST M & VIRGINIA K	41	N	9	E	8	NE			411440.70	4186028.00	25696.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				118		1,100	14
28		COOK T	41	N	9	E	8	NE	NE		411641.80	4186229.00	24304.00	Permit Expired	IRRIGATION	UNCONFINED SAN LUIS VALLEY	9/6/1979			100	30 - 100	600	5
29		SAM INVESTMENTS INC	41	N	9	E	8	NE	NE		411786.10	4186365.20	62789.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS						50	
30	WELL #108	MYERS ERNEST M & VIRGINIA K	41	N	9	E	8	NE	NW		411234.30	4186233.20	536.00	Well Constructed	DOMESTIC	ALL UNNAMED AQUIFERS				462		40	
31	WELL #15	MYERS ERNEST M & VIRGINIA K	41	N	9	E	8	NE	SW		411027.10	4185662.50	2853.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				122	20 - 122	2,000	5
32	WELL #5	MYERS ERNEST M & VIRGINIA K	41	N	9	E	8	NW	SW		410243.80	4185666.70	8936.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS	8/2/1972			97	17 - 97	2,000	6
33	WELL #5A	MYERS ERNEST M & VIRGINIA K	41	N	9	E	8	NW	SW		410616.90	4186037.70	22883.00	Well Abandoned	IRRIGATION	ALL UNNAMED AQUIFERS		3/27/2009		100		1,000	3
34	5-A	MYERS ERNEST M & VIRGINIA K	41	N	9	E	8	NW	SW		410610.90	4186044.00	22883.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	5/15/2008			100	40 - 100	900	20
35		SAM INVESTMENTS INC	41	N	9	E	8	SE			411431.60	4185240.00	23562.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	
36		SAM INVESTMENTS INC	41	N	9	E	8	SE	SW		411030.90	4184857.70	15066.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				120		1,500	3
37	WELL #4	MYERS ERNEST M & VIRGINIA K	41	N	9	E	8	SW	SW		410220.90	4184919.20	7720.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				135	12 - 130	2,000	70
38	WELL #4A	MYERS ERNEST M & VIRGINIA K	41	N	9	E	8	SW	SW		410614.30	4185243.70	22882.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	3
39	WELL #110	MYERS ERNEST M & VIRGINIA K	41	N	9	E	8	SW	SW		410211.00	4184879.70	6032.00	Well Constructed	STOCK	ALL UNNAMED AQUIFERS				500		50	
Township 41 North Range 9 East Section 9																							
40		MCENTYRE FRANK	41	N	9	E	9				412641.50	4185622.00	205.00	Well Constructed		ALL UNNAMED AQUIFERS				130			
41		MCENTYRE FRANK	41	N	9	E	9				412641.50	4185622.00	204.00	Well Constructed		ALL UNNAMED AQUIFERS				127			
42		ENTIRE FRANK	41	N	9	E	9				412641.50	4185622.00	17.00	Well Constructed		ALL UNNAMED AQUIFERS				107			
43		SAM INVESTMENT INC	41	N	9	E	9	NE			413050.40	4186014.20	19778.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	
44		SAM INVESTMENTS INC	41	N	9	E	9	NW			412245.40	4186020.20	20164.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	
45		SAM INVESTMENTS INC	41	N	9	E	9	NW	SW		412041.80	4185827.70	11716.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				107		1,600	7
46		SAM INVESTMENTS INC	41	N	9	E	9	SE			413037.50	4185226.60	19779.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	
47		SAM INVESTMENTS INC	41	N	9	E	9	SW			412236.30	4185234.20	20166.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	
48		SAM INVESTMENTS INC	41	N	9	E	9	SW	SW		412032.10	4185032.60	11718.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				130		2,000	5
49		SAM INVESTMENTS INC	41	N	9	E	9	SW	SW		412032.10	4185032.60	11717.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				127		2,000	5
Township 41 North Range 9 East Section 10																							
50		C & W RANCHES	41	N	9	E	10	NE			414648.60	4186012.70	19784.00	Well Abandoned	IRRIGATION	ALL UNNAMED AQUIFERS		3/7/1996		100		1,000	
51		SKYVIEW COOLING COMP	41	N	9	E	10	NE			413855.10	4186011.70	19784.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS	3/12/1996			130	40 - 130	1,000	8
52		SSS FARMS	41	N	9	E	10	NE			414652.50	4186020.20	27508.00	Permit Issued; Completion Status Unknown	MONITORING WELL	ALL UNNAMED AQUIFERS							

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Table 1
Well Inventory
Saguache Solar Energy Project

Well ID	Alternate Well ID	Well Owner	Township, Range, and Section	UTM_x	UTM_y	Well Permit No.	Well Permit Status	Well Use	Aquifer	Well Installation Date	Date Well Abandoned	Ground Surface Elevation (feet amsl)	Well Depth (feet bgs)	Screened Interval (feet bgs)	Pump Rate (gpm)	Static Water Level (feet bgs)
53		SKYVIEW COOLING COMP	41 N 9 E 10 NW	413855.10	4186011.70	19786.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	
54		PICKARD JACK	41 N 9 E 10 NW SW	413649.60	4185817.20	15798.00	Permit Expired	IRRIGATION	ALL UNNAMED AQUIFERS							
55		MOUNTAIN COAST ENTERPRISE	41 N 9 E 10 SE	414641.10	4185229.90	30438.00	Permit Issued; Completion Status Unknown	MONITORING WELL	ALL UNNAMED AQUIFERS							
56	#4	MOUNTAIN COAST ENTERPRISES LLC	41 N 9 E 10 SE	414638.00	4185236.90	19783.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	4/10/1997			133	29 - 129		
57		MOUNTAIN COAST ENTERPRISES LLC	41 N 9 E 10 SE	414638.00	4185236.90	19783.00	Well Abandoned	IRRIGATION	UNCONFINED SAN LUIS VALLEY	11/5/1975	3/2/1996		100	30 - 100	1,000	3
58		MOUNTAIN COAST ENTERPRISES LLC	41 N 9 E 10 SW	413842.10	4185227.40	19785.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	11/3/1976			100	30 - 100	1,000	3
Township 41 North Range 9 East Section 15																
59		C & W RANCHES	41 N 9 E 15 NW	413830.6	4184422.9	21257	Well Abandoned	IRRIGATION	ALL UNNAMED AQUIFERS		4/1/1996		100		1,000	3
60		WIJAYA COLORADO LLC	41 N 9 E 15 NW	413830.6	4184422.9	21257	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS	3/2/1996			130	40 130	1,000	9
61		SSS FARMS	41 N 9 E 15 NW	413828.6	4184420.6	27507	Permit Issued; Completion Status Unknown	MONITORING WELL	ALL UNNAMED AQUIFERS							
62		C&W RANCHES	41 N 9 E 15 NW	413828.6	4184420.6	19787	Permit Expired	IRRIGATION	UNCONFINED SAN LUIS VALLEY							
63		PICKARD JACK	41 N 9 E 15 NW NW	413630.9	4184620.4	15799	Permit Expired	IRRIGATION	ALL UNNAMED AQUIFERS							
Township 41 North Range 9 East Section 16																
64		WIJAYA COLORADO LLC	41 N 9 E 16 NE	413026.00	4184421.90	21260.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	10/23/1976			100	30 - 100	1,000	3
65		C&W RANCHES	41 N 9 E 16 NE	413026.70	4184420.10	19790.00	Permit Expired	IRRIGATION	UNCONFINED SAN LUIS VALLEY							
66		C&W RANCHES	41 N 9 E 16 NW	412224.10	4184428.40	19789.00	Permit Expired	IRRIGATION	UNCONFINED SAN LUIS VALLEY							
67		WIJAYA COLORADO LLC	41 N 9 E 16 NW	412225.30	4184429.60	21259.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	10/20/1976			100	30 - 100	1,000	3
68		WIJAYA COLORADO LLC	41 N 9 E 16 SW	412212.50	4183618.40	21258.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	10/18/1976			100	30 - 100	1,000	3
69		C&W RANCHES	41 N 9 E 16 SW	412212.00	4183620.40	19788.00	Permit Expired	IRRIGATION	UNCONFINED SAN LUIS VALLEY							
Township 41 North Range 9 East Section 17																
70	#12	SKYVIEW COOLING COMPANY	41 N 9 E 17 NE	411420.60	4184435.40	25697.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	5/1/1982			110	30 - 100	1,000	5
71		HALL RISING	41 N 9 E 17 NE NE	411737.10	4184790.40	77339.00	Permit Expired	HOUSEHOLD USE ONLY	ALL UNNAMED AQUIFERS							
72	#12	SKYVIEW COOLING COMPANY	41 N 9 E 17 NE SW	411025.80	4184088.40	2597.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS	6/8/1960			120	20 - 120	2,000	6
73	H9C2	SKYVIEW COOLING COMPANY	41 N 9 E 17 NE SW	411018.50	4184091.60	6034.00	Well Constructed	STOCK	ALL UNNAMED AQUIFERS	6/17/1960			500		50	
74	#3	SKYVIEW COOLING COMPANY	41 N 9 E 17 NW SW	410219.10	4184074.20	7719.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS	9/18/1957			132	12 - 132	2,045	70
75	#3A	SKYVIEW COOLING COMPANY	41 N 9 E 17 NW SW	410614.60	4184439.00	22881.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	6/1/1978			110	30 - 110	1,000	21
76	#14	SKYVIEW COOLING COMPANY	41 N 9 E 17 SE	411407.90	4183626.10	25698.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	12/6/1980			118	38 - 118	1,100	12
77	#14	SKYVIEW COOLING COMPANY	41 N 9 E 17 SE SW	411029.20	4183264.90	2854.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS	3/18/1961			127	20 - 127	2,000	5
78	H11C2	SKYVIEW COOLING COMPANY	41 N 9 E 17 SE SW	411021.80	4183291.60	7552.00	Well Constructed	STOCK	ALL UNNAMED AQUIFERS	1/10/1961			500			
79	#13A	SKYVIEW COOLING COMPANY	41 N 9 E 17 SW	410617.80	4183632.10	25694.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	5/10/1982			110	30 - 110	1,000	5
80	#13	SKYVIEW COOLING COMPANY	41 N 9 E 17 SW SW	410226.80	4183242.40	7795.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS	11/23/1957			135	15 - 135	1,800	3
Township 41 North Range 9 East Section 18																
81		SAM INVESTMENTS INC	41 N 9 E 18 NE	409809.80	4184446.20	21026.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	4
82		SAM INVESTMENTS INC.	41 N 9 E 18 NE NW	409525.20	4184767.00	257031.00	Well Constructed	DOMESTIC/STOCK	CONFINED SAN LUIS VALLEY				2,000		15	
83		BISHOP GEORGE F	41 N 9 E 18 NE SW	409615.00	4184246.20	18759.00	Permit Expired	IRRIGATION	UNCONFINED SAN LUIS VALLEY							
84		SAM INVESTMENTS INC	41 N 9 E 18 NE SW	409429.00	4184061.00	10416.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				110		2,400	3
85		SAM INVESTMENTS INC	41 N 9 E 18 NW	409023.20	4184456.50	21025.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	4
86		BISHOP GEORGE	41 N 9 E 18 NW NW	408822.40	4184659.50	27774.00	Well Constructed	DOMESTIC	ALL UNNAMED AQUIFERS				72		15	9
87		S A M INVESTMENTS	41 N 9 E 18 NW NW	408670.50	4184726.20	27774.00	Well Constructed	DOMESTIC/STOCK	ALL UNNAMED AQUIFERS	4/15/1999		7,700	100	80 - 100	15	15
88		BISHOP GEORGE F	41 N 9 E 18 NW SW	408817.50	4184254.70	18760.00	Permit Expired	IRRIGATION	UNCONFINED SAN LUIS VALLEY							
89		SAM INVESTMENTS INC	41 N 9 E 18 NW SW	408627.50	4184071.50	10415.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				113		2,400	3
90		SAM INVESTMENTS INC	41 N 9 E 18 SE	409813.10	4183638.00	21024.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	4
91		SAM INVESTMENTS INC	41 N 9 E 18 SE SW	409612.70	4183439.20	13181.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				119		2,000	3
92		SAM INVESTMENTS INC	41 N 9 E 18 SW	409011.50	4183643.50	20974.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,000	4
93		SAM INVESTMENTS INC	41 N 9 E 18 SW SE	409396.30	4183251.00	10623.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				90	30 - 90	1,800	42
94		SAM INVESTMENTS INC	41 N 9 E 18 SW SW	408621.00	4183260.70	6492.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				82	15 - 82	1,750	22
95		SAM INVESTMENTS INC	41 N 9 E 18 SW SW	408807.70	4183445.50	13164.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				123		2,000	3
Township 41 North Range 9 East Section 20																
96	#11A	SKYVIEW COOLING COMPANY	41 N 9 E 20 NE	411394.20	4182821.60	25695.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	1/30/1981			120	36 - 120	1,100	8
97	H14C2	SKYVIEW COOLING COMPANY	41 N 9 E 20 NE NW	410991.70	4182223.40	7554.00	Well Constructed	STOCK	ALL UNNAMED AQUIFERS	12/16/1960			500			
98	H13C2	SKYVIEW COOLING COMPANY	41 N 9 E 20 NE SW	411002.80	4182549.40	7553.00	Well Constructed	STOCK	ALL UNNAMED AQUIFERS	12/23/1960			500			
99	#11	SKYVIEW COOLING COMPANY	41 N 9 E 20 NE SW	411008.00	4182474.90	8937.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS	6/30/1958			133	12 - 133	1,900	3
100	#10A	SKYVIEW COOLING COMPANY	41 N 9 E 20 NW	410608.00	4182827.60	25692.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	12/4/1980			110	39 - 110	1,100	15
101	#10	SKYVIEW COOLING COMPANY	41 N 9 E 20 NW SW	410215.00	4182491.40	8935.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS	6/25/1958			136	12 - 136	2,100	80
102		SKYVIEW COOLING CORP	41 N 9 E 20 SE	411379.60	4182019.60	25693.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		1,100	17
103		ELLITHORPE ERIC L & V W	41 N 9 E 20 SE SE	411632.80	4181864.40	205893.00	Well Constructed	STOCK	CONFINED SAN LUIS VALLEY	12/31/1920			400		30	
104	#17	SKYVIEW COOLING COMPANY	41 N 9 E 20 SE SW	410986.10	4181729.10	8933.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS	9/26/1958			104	-- - 104	1,800	4
105	#8	SKYVIEW COOLING COMPANY	41 N 9 E 20 SW SW	410182.50	4181709.90	8934.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS	9/15/1958			112	12 - 112	2,000	3
106	#8A	SKYVIEW COOLING COMPANY	41 N 9 E 20 SW SW	410585.00	4182018.90	22884.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	6/5/1978			110	30 - 110	1,000	3
107		SKYVIEW COOLING COMPANY	41 N 9 E 20 SW SW	410182.50	4181709.90	47224.00	Well Constructed	COMMERCIAL/IRRIGATION	UNCONFINED SAN LUIS VALLEY						15	
Township 41 North Range 9 East Section 22																

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Table 1
Well Inventory
Saguache Solar Energy Project

Well ID	Alternate Well ID	Well Owner	Township, Range, and Section	UTM_x	UTM_y	Well Permit No.	Well Permit Status	Well Use	Aquifer	Well Installation Date	Date Well Abandoned	Ground Surface Elevation (feet amsl)	Well Depth (feet bgs)	Screened Interval (feet bgs)	Pump Rate (gpm)	Static Water Level (feet bgs)
108		TRIPLE L YOUTH RANCH	41 N 9 E 22 SE	414628.80	4181996.90	25280.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				100		900	5
109		KUNTZ JACK & JANET	41 N 9 E 22 SE SW	414627.40	4181813.90	35499.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	11/7/1989			90	30 - 90	450	8
110		KUNTZ JACK & JANET	41 N 9 E 22 SW	413810.50	4181994.90	25281.00	Well Constructed	IRRIGATION	UNCONFINED SAN LUIS VALLEY	3/17/1982			92		916	12
111		KUNTZ JACK & JANET	41 N 9 E 22 SW SW	413604.70	4181793.60	13941.00	Well Constructed	IRRIGATION	ALL UNNAMED AQUIFERS				102		1,950	4

Notes:
1. Yellow highlight indicates wells closest to the power blocks.

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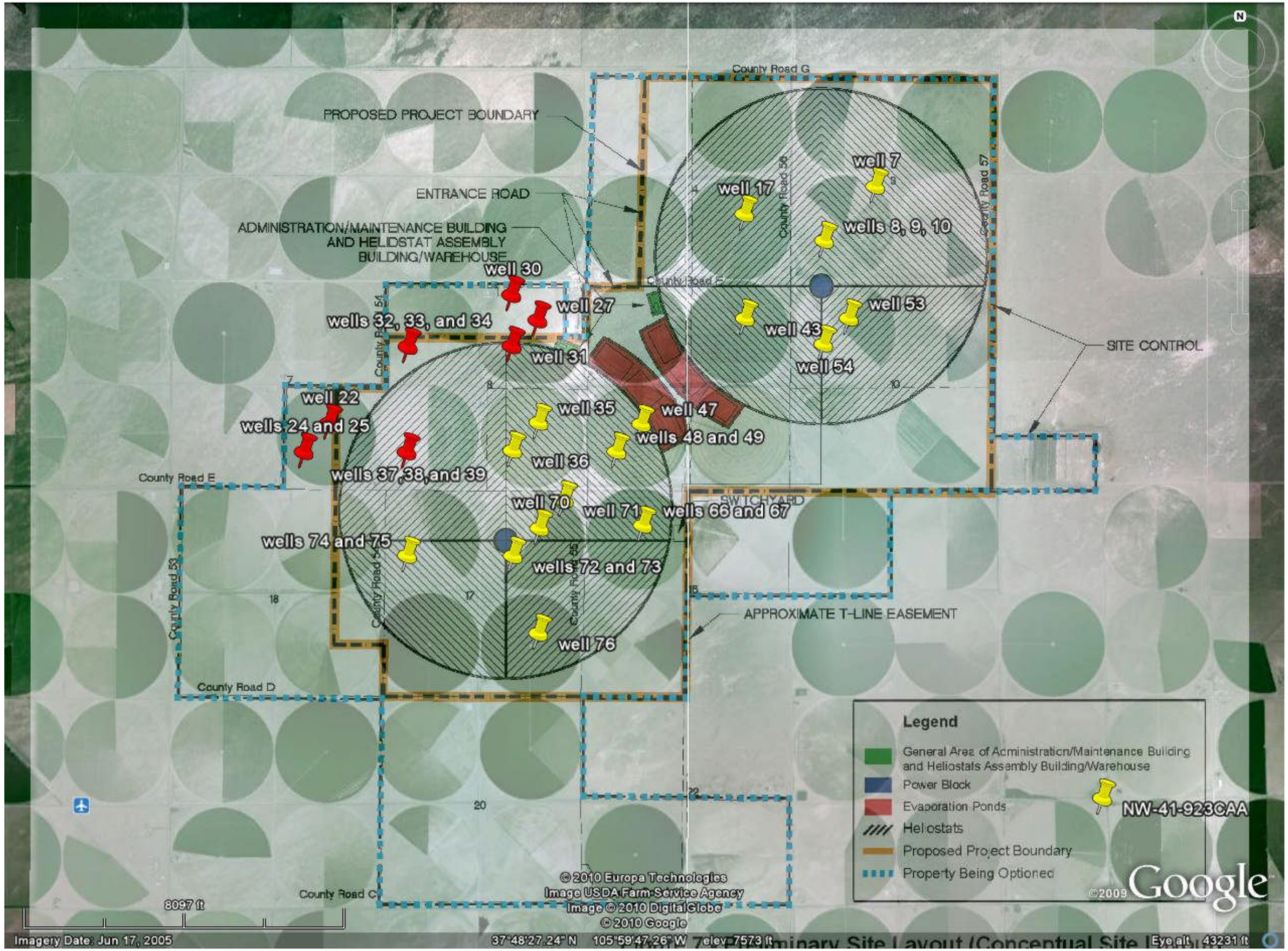
Table 2
Groundwater Quality in the Upper Aquifer

Analyte	Well ID	W-36	W-43
	Sample Collection Date	10/11/2010	10/11/2010
	Aquifer	Upper	Upper
	Location	North Power Block	South Power Block
Metals			
Antimony	mg/L	<0.0004	<0.0005
Arsenic	mg/L	**0.0026**	**0.0021**
Barium	mg/L	**0.083**	**0.083**
Beryllium	mg/L	<0.002	<0.002
Cadmium	mg/L	<0.0001	<0.0001
Calcium	mg/L	**80.1**	**114**
Chromium	mg/L	<0.01	<0.01
Cobalt	mg/L	<0.01	<0.01
Copper	mg/L	<0.01	<0.01
Iron	mg/L	<0.02	<0.02
Lead	mg/L	<0.0001	**0.0003**
Magnesium	mg/L	**12**	**18.1**
Manganese	mg/L	<0.005	<0.005
Mercury	mg/L	<0.0002	<0.0002
Molybdenum	mg/L	<0.01	<0.01
Nickel	mg/L	<0.01	<0.01
Potassium	mg/L	**8**	**9.7**
Selenium	mg/L	**0.0004**	**0.0017**
Silica (dissolved)	mg/L	**39.1**	**41.7**
Silica (total)	mg/L	**28.1**	**30.5**
Silver	mg/L	<0.01	<0.01
Sodium	mg/L	**24.7**	**30.8**
Thallium	mg/L	<0.0001	<0.0001
Zinc	mg/L	<0.001	<0.001
Other			
Alkalinity (total)	mg/L	**170**	**226**
Alkalinity, Bicarbonate(As CaCO3)	mg/L	**165**	**224**
Alkalinity, Carbonate (As CaCO3)	mg/L	**5**	<2
Alkalinity, Hydroxide (As CaCO3)	mg/L	<2	<2
Chloride	mg/L	**8.6**	**33.1**
Fluoride	mg/L	<0.1	<0.1
Nitrate (NO3) - N	mg/L	**9.2**	**7.66**
Nitrite (NO2) - N	mg/L	<0.01	<0.01
pH, at 22 ºC	pH Units	**8.3**	**8.3**
Phosphorus (total)	mg/L	**0.12**	**0.05**
Phosphate (ortho)	mg/L	**0.24**	**0.18**
Specific Conductance (at 25°C)	umhos/cm	**616**	**828**
Sulfate as SO4	mg/L	**84.8**	**116**
Sulfide as S	mg/L	<0.02	<0.02
Total Hardness (calc as CaCO3)	mg/L	**250**	**359**
Total Dissolved Solids	mg/L	**410/402** [4]	**530/532** [4]

Notes:
1. ND = not detected above the laboratory reporting limit
2. <0.1 = not detected above the noted laboratory reporting limit
3. umhos/cm = micro ohms per centimeter
4.Total dissolved solids = measured/calculated
5. mg/L = milligrams per liter
6. °C = celsius
7. - - = not analyzed
8. **Bold** = concentration detected above the laboratory reporting limit.

Figures



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Wells Located Near the Power Blocks

Date: August 2010

Project: Saguache Solar Energy Project

Figure 1

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Infrastructure and Environment
2330 East Bidwell, Suite 150
Folsom, CA 95630, USA
Telephone: +1 916 817 3920
Facsimile: +1 916 983 1935
www.worleyparsons.com

Attachment A – Groundwater Monitoring Forms

WorleyParsons
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3901 VIA ORO AVENUE, SUITE 100
LONG BEACH, CA 90810
TEL: 310.547.6400 FAX: 310.547.6410

MONITORING WELL SAMPLING FORM

Project Name: Shunpike Solar	Date: 10/11/10
Project No.:	Time: 1:15
Employee Name: NB	Page 1 of 1

WELL CONSTRUCTION DETAILS		WELL NO: IW-43
DATES	Casing Type: PVC	Screen Type:
Constructed:	Diameter: 28"	Diamter:
Developed:	Length:	Length:
Last Sampled:	T.D.:	Slot Size:

LOCATION SKETCH:

WELL CONDITION:		Water Depth: NA
G.S. Elev.:	Water Depth:	F.P. Thickness:
T.C. Elev.:	Water Column:	Water Odor:
W.L. Elev:	Casing Volume:	Turbidity:
Note: 2" = 0.16 g/ft; 4" = 0.65 g/ft; and 6" = 1.5 g/ft		

Well Purging Method: Bladder Pump Purge Vol.: NA

WELL PURGING AND RECOVERY ANALYSIS: °C mS/cm %

Time	W.L.	Purge Rate	Vol. gal	Temp.	pH	Conduct.	Turbid.	D.O.	ORP	Sample No.	REMARKS
1:15	—	1100	0	—	—	—	—	—	—	—	Start Well
2:15	—	↓	66,000	11.8	7.46	0.784	—	—	75.7	—	
2:20	—	↓	↓	11.9	7.49	0.785	—	—	73.8	—	
2:30		↓	82,500	10,11	7.49	0.795	—	—	74.2	—	End Purging
		↓	↓								

SAMPLING INFORMATION:

Sample No.	Time	Sampling Method	Container	Analysis Required
IW-43-101110	2:30	Pump	7x Poly	See COC

ADDITIONAL INFORMATION:

WorleyParsons
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3901 VIA ORO AVENUE, SUITE 100
LONG BEACH, CA 90810
TEL: 310.547.6400 FAX: 310.547.6410

MONITORING WELL SAMPLING FORM

Project Name: SPTO UPRATE SOLAR	Date: 10/11/10
Project No.:	Time:
Employee Name: NB	Page 1 of 1

WELL CONSTRUCTION DETAILS		WELL NO: W-36
DATES	Casing Type: PVC	Screen Type:
Constructed:	Diameter: 2"	Diamter:
Developed:	Length:	Length:
Last Sampled:	T.D.:	Slot Size:

LOCATION SKETCH:

WELL CONDITION:		Water Depth:
G.S. Elev.:	Water Depth:	F.P. Thickness:
T.C. Elev.:	Water Column:	Water Odor:
W.L. Elev:	Casing Volume:	Turbidity:
Note: 2" = 0.16 g/ft; 4" = 0.65 g/ft; and 6" = 1.5 g/ft		

Well Purging Method:	Purge Vol.:

WELL PURGING AND RECOVERY ANALYSIS: °C , mS/cm

Time	W.L.	Purge Rate	Vol. Gal	Temp.	pH	Conduct.	Turbid.	D.O.	ORP	Sample No.	REMARKS
1:30	-	5406pm	0	-	-	-	-	-	-	-	START PUMP.
355				18.05	7.83	0.592	-	-	49.2	-	
3:00				9.99	7.76	0.581	-	-	44.9	-	
3:05		51,300		9.76	7.73	0.583	-	-	44.0	-	

SAMPLING INFORMATION:

Sample No.	Time	Sampling Method	Container	Analysis Required
W-36-101110	3:05	Pump	7x poly	See COC

ADDITIONAL INFORMATION:

WorleyParsons
resources & energy

Attachment B – Laboratory Analytical Report

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

November 02, 2010

Report to:
Nat Beal
WorleyParsons
1687 Cole Blvd. Suite 300
Golden, CO 80401

Bill to:
Connie Parks
WorleyParsons
1687 Cole Blvd. Suite 300
Golden, CO 80401

Project ID:
ACZ Project ID: L84836

Nat Beal:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 13, 2010. This project has been assigned to ACZ's project number, L84836. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L84836. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after December 02, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.

Tony Antalek has reviewed and approved this report.

WorleyParsons

November 02, 2010

Project ID:
ACZ Project ID: L84836

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 2 ground water samples from WorleyParsons on October 13, 2010. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L84836. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses except those qualified with an ACZ 'H' flag were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic and radiochemistry parameters. The individual methods are referenced on both the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures. In addition the following has been noted with this specific project:

1. Total versus dissolved disparities involving Silica (samples -01 & -02) were reanalyzed for confirmation. Also, see Inorganic Extended Qualifier Report 'ZS' flag regarding Silica Totals.

WorleyParsons
Project ID:
Sample ID: W-36-101110

ACZ Sample ID: ***L84836-01***
Date Sampled: *10/11/10 15:05*
Date Received: *10/13/10*
Sample Matrix: *Ground Water*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Phosphorus, total	M365.1 - Auto Ascorbic Acid Digestion							10/20/10 15:56	mpb
Total Hot Plate Digestion	M200.2 ICP							10/26/10 17:29	ear

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	10/27/10 23:49	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0026			mg/L	0.0005	0.002	10/27/10 23:49	pmc
Barium, dissolved	M200.7 ICP	0.083			mg/L	0.003	0.02	10/22/10 22:40	ear
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.002	0.01	10/25/10 13:08	ear
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	10/27/10 23:49	pmc
Calcium, dissolved	M200.7 ICP	80.1			mg/L	0.2	1	10/22/10 22:40	ear
Chromium, dissolved	M200.7 ICP		U	*	mg/L	0.01	0.05	10/25/10 13:08	ear
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/22/10 22:40	ear
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/22/10 22:40	ear
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	10/25/10 13:08	ear
Lead, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	10/27/10 23:49	pmc
Magnesium, dissolved	M200.7 ICP	12.0			mg/L	0.2	1	10/22/10 22:40	ear
Manganese, dissolved	M200.7 ICP		U		mg/L	0.005	0.03	10/22/10 22:40	ear
Mercury, dissolved	M245.1 CVAA		U		mg/L	0.0002	0.001	10/28/10 15:39	erf
Molybdenum, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/25/10 13:08	ear
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/22/10 22:40	ear
Potassium, dissolved	M200.7 ICP	8.0			mg/L	0.3	2	10/22/10 22:40	ear
Selenium, dissolved	M200.8 ICP-MS	0.0004			mg/L	0.0001	0.0003	10/27/10 23:49	pmc
Silica, dissolved	M200.7 ICP	39.1			mg/L	0.4	2	10/29/10 18:43	aeh
Silica, total	M200.7 ICP	28.1		*	mg/L	0.4	2	10/27/10 16:32	ear
Silver, dissolved	M200.7 ICP		U	*	mg/L	0.01	0.03	10/25/10 13:08	ear
Sodium, dissolved	M200.7 ICP	24.7			mg/L	0.3	2	10/22/10 22:40	ear
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	10/27/10 23:49	pmc
Zinc, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/22/10 22:40	ear

WorleyParsons
Project ID:
Sample ID: W-36-101110

ACZ Sample ID: ***L84836-01***
Date Sampled: *10/11/10 15:05*
Date Received: *10/13/10*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		165			mg/L	2	20	10/15/10 0:00	jjc
Carbonate as CaCO3		5	B		mg/L	2	20	10/15/10 0:00	jjc
Hydroxide as CaCO3			U		mg/L	2	20	10/15/10 0:00	jjc
Total Alkalinity		170			mg/L	2	20	10/15/10 0:00	jjc
Cation-Anion Balance	Calculation								
Cation-Anion Balance		1.6			%			11/02/10 0:00	calc
Sum of Anions		6.0			meq/L	0.1	0.5	11/02/10 0:00	calc
Sum of Cations		6.2			meq/L	0.1	0.5	11/02/10 0:00	calc
Chloride	M300.0 - Ion Chromatography	8.6		*	mg/L	0.5	3	10/15/10 21:28	ccp
Conductivity @25C	SM2510B	616			umhos/cm	1	10	10/15/10 22:13	jjc
Fluoride	M300.0 - Ion Chromatography		U	*	mg/L	0.1	0.5	10/15/10 21:28	ccp
Hardness as CaCO3	SM2340B - Calculation	250			mg/L	1	7	11/02/10 0:00	calc
Lab Filtration	SM 3030 B			*				10/14/10 10:13	jjc
Lab Filtration & Acidification	SM 3030 B			*				10/20/10 15:35	abm
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	9.2			mg/L	0.1	0.5	11/02/10 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	9.2	H	*	mg/L	0.1	0.5	10/13/10 20:20	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		HU	*	mg/L	0.01	0.05	10/13/10 19:47	pjb
pH (lab)	SM4500H+ B								
pH		8.3	H		units	0.1	0.1	10/15/10 0:00	jjc
pH measured at		22.0			C	0.1	0.1	10/15/10 0:00	jjc
Phosphate	Calculation based on Ortho Phosphorus	0.24			mg/L	0.03	0.15	11/02/10 0:00	calc
Phosphorus, ortho dissolved	M365.1 - Automated Ascorbic Acid	0.08	H	*	mg/L	0.01	0.05	10/13/10 20:24	pjb
Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	0.12		*	mg/L	0.01	0.05	10/22/10 14:58	itk
Residue, Filterable (TDS) @180C	SM2540C	410			mg/L	10	20	10/15/10 12:21	abm
Sulfate	M300.0 - Ion Chromatography	84.8			mg/L	0.5	3	10/15/10 21:28	ccp
Sulfide as S	376.2 - Methylene Blue		U	*	mg/L	0.02	0.1	10/18/10 14:08	abm
TDS (calculated)	Calculation	402			mg/L	10	50	11/02/10 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.02						11/02/10 0:00	calc

WorleyParsons
Project ID:
Sample ID: W-43-101110

ACZ Sample ID: ***L84836-02***
Date Sampled: *10/11/10 14:30*
Date Received: *10/13/10*
Sample Matrix: *Ground Water*

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Phosphorus, total	M365.1 - Auto Ascorbic Acid Digestion							10/20/10 16:08	mpb
Total Hot Plate Digestion	M200.2 ICP							10/26/10 17:42	ear

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	10/27/10 23:53	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0021			mg/L	0.0005	0.002	10/27/10 23:53	pmc
Barium, dissolved	M200.7 ICP	0.083			mg/L	0.003	0.02	10/22/10 22:43	ear
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.002	0.01	10/25/10 13:11	ear
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	10/27/10 23:53	pmc
Calcium, dissolved	M200.7 ICP	114			mg/L	0.2	1	10/22/10 22:43	ear
Chromium, dissolved	M200.7 ICP		U	*	mg/L	0.01	0.05	10/25/10 13:11	ear
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/22/10 22:43	ear
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/22/10 22:43	ear
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	10/25/10 13:11	ear
Lead, dissolved	M200.8 ICP-MS	0.0003	B		mg/L	0.0001	0.0005	10/27/10 23:53	pmc
Magnesium, dissolved	M200.7 ICP	18.1			mg/L	0.2	1	10/22/10 22:43	ear
Manganese, dissolved	M200.7 ICP		U		mg/L	0.005	0.03	10/22/10 22:43	ear
Mercury, dissolved	M245.1 CVAA		U		mg/L	0.0002	0.001	10/28/10 15:41	erf
Molybdenum, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/25/10 13:11	ear
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/22/10 22:43	ear
Potassium, dissolved	M200.7 ICP	9.7			mg/L	0.3	2	10/22/10 22:43	ear
Selenium, dissolved	M200.8 ICP-MS	0.0017			mg/L	0.0001	0.0003	10/27/10 23:53	pmc
Silica, dissolved	M200.7 ICP	41.7			mg/L	0.4	2	10/29/10 18:47	aeh
Silica, total	M200.7 ICP	30.5		*	mg/L	0.4	2	10/27/10 16:36	ear
Silver, dissolved	M200.7 ICP		U	*	mg/L	0.01	0.03	10/25/10 13:11	ear
Sodium, dissolved	M200.7 ICP	30.8			mg/L	0.3	2	10/22/10 22:43	ear
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	10/27/10 23:53	pmc
Zinc, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/22/10 22:43	ear

WorleyParsons
Project ID:
Sample ID: W-43-101110

ACZ Sample ID: ***L84836-02***
Date Sampled: *10/11/10 14:30*
Date Received: *10/13/10*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		224			mg/L	2	20	10/15/10 0:00	jjc
Carbonate as CaCO3			U		mg/L	2	20	10/15/10 0:00	jjc
Hydroxide as CaCO3			U		mg/L	2	20	10/15/10 0:00	jjc
Total Alkalinity		226			mg/L	2	20	10/15/10 0:00	jjc
Cation-Anion Balance	Calculation								
Cation-Anion Balance		2.4			%			11/02/10 0:00	calc
Sum of Anions		8.3			meq/L	0.1	0.5	11/02/10 0:00	calc
Sum of Cations		8.7			meq/L	0.1	0.5	11/02/10 0:00	calc
Chloride	M300.0 - Ion Chromatography	33.1		*	mg/L	0.5	3	10/15/10 21:49	ccp
Conductivity @25C	SM2510B	828			umhos/cm	1	10	10/15/10 22:22	jjc
Fluoride	M300.0 - Ion Chromatography		U	*	mg/L	0.1	0.5	10/15/10 21:49	ccp
Hardness as CaCO3	SM2340B - Calculation	359			mg/L	1	7	11/02/10 0:00	calc
Lab Filtration	SM 3030 B			*				10/14/10 10:15	jjc
Lab Filtration & Acidification	SM 3030 B			*				10/20/10 15:38	abm
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2	7.66			mg/L	0.08	0.4	11/02/10 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	7.66	H	*	mg/L	0.08	0.4	10/13/10 20:21	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		HU	*	mg/L	0.01	0.05	10/13/10 19:48	pjb
pH (lab)	SM4500H+ B								
pH		8.3	H		units	0.1	0.1	10/15/10 0:00	jjc
pH measured at		21.0			C	0.1	0.1	10/15/10 0:00	jjc
Phosphate	Calculation based on Ortho Phosphorus	0.18			mg/L	0.03	0.15	11/02/10 0:00	calc
Phosphorus, ortho dissolved	M365.1 - Automated Ascorbic Acid	0.06	H	*	mg/L	0.01	0.05	10/13/10 20:25	pjb
Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	0.05	B	*	mg/L	0.01	0.05	10/22/10 15:00	itk
Residue, Filterable (TDS) @180C	SM2540C	530			mg/L	10	20	10/15/10 12:22	abm
Sulfate	M300.0 - Ion Chromatography	116			mg/L	1	5	10/20/10 10:20	ccp
Sulfide as S	376.2 - Methylene Blue		U	*	mg/L	0.02	0.1	10/18/10 14:12	abm
TDS (calculated)	Calculation	532			mg/L	10	50	11/02/10 0:00	calc
TDS (ratio - measured/calculated)	Calculation	1.00						11/02/10 0:00	calc

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	PBW	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	PQV	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	SDL	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

WorleyParsons
Project ID:

ACZ Project ID: ***L84836***

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291523													
WG291523PBW1	PBW	10/15/10 12:22				U	mg/L		-20	20			
WG291523LCSW2	LCSW	10/15/10 12:35	WC100929-1	820.0001		808.5	mg/L	98.6	98	110			
WG291523PBW2	PBW	10/15/10 16:19				U	mg/L		-20	20			
WG291523LCSW5	LCSW	10/15/10 16:32	WC100929-1	820.0001		799.3	mg/L	97.5	98	110			
WG291523PBW3	PBW	10/15/10 19:47				U	mg/L		-20	20			
WG291523LCSW8	LCSW	10/15/10 20:01	WC100929-1	820.0001		806.2	mg/L	98.3	98	110			
L84837-05DUP	DUP	10/15/10 23:13			207	206.3	mg/L				0.3	20	
WG291523PBW4	PBW	10/15/10 23:19				U	mg/L		-20	20			
WG291523LCSW11	LCSW	10/15/10 23:33	WC100929-1	820.0001		816.6	mg/L	99.6	98	110			
WG291523LCSW14	LCSW	10/16/10 2:51	WC100929-1	820.0001		815.4	mg/L	99.4	98	110			

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292244													
WG292244ICV	ICV	10/27/10 23:25	MS101020-1	.02		.01967	mg/L	98.4	90	110			
WG292244ICB	ICB	10/27/10 23:28				.00068	mg/L		-0.00088	0.00088			
WG292244LFB	LFB	10/27/10 23:32	MS101019-3	.01		.00896	mg/L	89.6	85	115			
L84783-01AS	AS	10/27/10 23:39	MS101019-3	.01	.0006	.00917	mg/L	85.7	70	130			
L84783-01ASD	ASD	10/27/10 23:42	MS101019-3	.01	.0006	.00966	mg/L	90.6	70	130	5.2	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292244													
WG292244ICV	ICV	10/27/10 23:25	MS101020-1	.05		.04905	mg/L	98.1	90	110			
WG292244ICB	ICB	10/27/10 23:28				U	mg/L		-0.0011	0.0011			
WG292244LFB	LFB	10/27/10 23:32	MS101019-3	.05005		.04546	mg/L	90.8	85	115			
L84783-01AS	AS	10/27/10 23:39	MS101019-3	.05005	.0061	.0569	mg/L	101.5	70	130			
L84783-01ASD	ASD	10/27/10 23:42	MS101019-3	.05005	.0061	.05773	mg/L	103.2	70	130	1.45	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291972													
WG291972ICV	ICV	10/22/10 22:14	II101015-1	2		2.0044	mg/L	100.2	95	105			
WG291972ICB	ICB	10/22/10 22:18				.0035	mg/L		-0.009	0.009			
WG291972LFB	LFB	10/22/10 22:30	II101021-2	.5		.5252	mg/L	105	85	115			
L84836-02AS	AS	10/22/10 22:47	II101021-2	.5	.083	.5932	mg/L	102	85	115			
L84836-02ASD	ASD	10/22/10 22:50	II101021-2	.5	.083	.6138	mg/L	106.2	85	115	3.41	20	

Beryllium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292033													
WG292033ICV	ICV	10/25/10 12:43	II101015-1	2		1.9912	mg/L	99.6	95	105			
WG292033ICB	ICB	10/25/10 12:47				U	mg/L		-0.006	0.006			
WG292033LFB	LFB	10/25/10 12:59	II101021-2	.5		.5459	mg/L	109.2	85	115			
L84836-02AS	AS	10/25/10 13:15	II101021-2	.5	U	.5416	mg/L	108.3	85	115			
L84836-02ASD	ASD	10/25/10 13:18	II101021-2	.5	U	.5609	mg/L	112.2	85	115	3.5	20	

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Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292244													
WG292244ICV	ICV	10/27/10 23:25	MS101020-1	.05		.0483	mg/L	96.6	90	110			
WG292244ICB	ICB	10/27/10 23:28				U	mg/L		-0.00022	0.00022			
WG292244LFB	LFB	10/27/10 23:32	MS101019-3	.05005		.04499	mg/L	89.9	85	115			
L84783-01AS	AS	10/27/10 23:39	MS101019-3	.05005	U	.04907	mg/L	98	70	130			
L84783-01ASD	ASD	10/27/10 23:42	MS101019-3	.05005	U	.05013	mg/L	100.2	70	130	2.14	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291972													
WG291972ICV	ICV	10/22/10 22:14	II101015-1	100		100.38	mg/L	100.4	95	105			
WG291972ICB	ICB	10/22/10 22:18				U	mg/L		-0.6	0.6			
WG291972LFB	LFB	10/22/10 22:30	II101021-2	67.98099		69.42	mg/L	102.1	85	115			
L84836-02AS	AS	10/22/10 22:47	II101021-2	67.98099	114	181.31	mg/L	99	85	115			
L84836-02ASD	ASD	10/22/10 22:50	II101021-2	67.98099	114	179.8	mg/L	96.8	85	115	0.84	20	

Chloride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291421													
WG291421ICV	ICV	10/13/10 14:39	WI101001-1	20.06		20.16	mg/L	100.5	90	110			
WG291421ICB	ICB	10/13/10 15:00				U	mg/L		-1.5	1.5			
WG291520													
WG291520LFB	LFB	10/15/10 17:14	WI100817-1	30		29.9	mg/L	99.7	90	110			
L84724-01DUP	DUP	10/15/10 17:57			30	31	mg/L				3.3	20	RA
L84724-02AS	AS	10/15/10 18:39	WI100817-1	1500	130	1632	mg/L	100.1	90	110			

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292033													
WG292033ICV	ICV	10/25/10 12:43	II101015-1	2		2.018	mg/L	100.9	95	105			
WG292033ICB	ICB	10/25/10 12:47				U	mg/L		-0.03	0.03			
WG292033LFB	LFB	10/25/10 12:59	II101021-2	.5		.554	mg/L	110.8	85	115			
L84836-02AS	AS	10/25/10 13:15	II101021-2	.5	U	.569	mg/L	113.8	85	115			
L84836-02ASD	ASD	10/25/10 13:18	II101021-2	.5	U	.582	mg/L	116.4	85	115	2.26	20	MA

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291972													
WG291972ICV	ICV	10/22/10 22:14	II101015-1	2		2.01	mg/L	100.5	95	105			
WG291972ICB	ICB	10/22/10 22:18				U	mg/L		-0.03	0.03			
WG291972LFB	LFB	10/22/10 22:30	II101021-2	.5		.526	mg/L	105.2	85	115			
L84836-02AS	AS	10/22/10 22:47	II101021-2	.5	U	.539	mg/L	107.8	85	115			
L84836-02ASD	ASD	10/22/10 22:50	II101021-2	.5	U	.56	mg/L	112	85	115	3.82	20	

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Conductivity @25C SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291523													
WG291523LCSW1	LCSW	10/15/10 12:24	PCN35393	1408.8		1465	umhos/cm	104	90	110			
WG291523LCSW4	LCSW	10/15/10 16:21	PCN35393	1408.8		1447	umhos/cm	102.7	90	110			
WG291523LCSW7	LCSW	10/15/10 19:49	PCN35393	1408.8		1430	umhos/cm	101.5	90	110			
L84837-05DUP	DUP	10/15/10 23:13			397	398	umhos/cm				0.3	20	
WG291523LCSW10	LCSW	10/15/10 23:21	PCN35393	1408.8		1429	umhos/cm	101.4	90	110			
WG291523LCSW13	LCSW	10/16/10 2:38	PCN35393	1408.8		1416	umhos/cm	100.5	90	110			

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291972													
WG291972ICV	ICV	10/22/10 22:14	II101015-1	2		1.967	mg/L	98.4	95	105			
WG291972ICB	ICB	10/22/10 22:18				U	mg/L		-0.03	0.03			
WG291972LFB	LFB	10/22/10 22:30	II101021-2	.5		.528	mg/L	105.6	85	115			
L84836-02AS	AS	10/22/10 22:47	II101021-2	.5	U	.518	mg/L	103.6	85	115			
L84836-02ASD	ASD	10/22/10 22:50	II101021-2	.5	U	.541	mg/L	108.2	85	115	4.34	20	

Fluoride M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291421													
WG291421ICV	ICV	10/13/10 14:39	WI101001-1	4		4.1	mg/L	102.5	90	110			
WG291421ICB	ICB	10/13/10 15:00				U	mg/L		-0.3	0.3			
WG291520													
WG291520LFB	LFB	10/15/10 17:14	WI100817-1	1.5		1.51	mg/L	100.7	90	110			
L84724-01DUP	DUP	10/15/10 17:57			U	U	mg/L				0	20	RA
L84724-02AS	AS	10/15/10 18:39	WI100817-1	75	U	79.4	mg/L	105.9	90	110			

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292033													
WG292033ICV	ICV	10/25/10 12:43	II101015-1	2		1.905	mg/L	95.3	95	105			
WG292033ICB	ICB	10/25/10 12:47				U	mg/L		-0.06	0.06			
WG292033LFB	LFB	10/25/10 12:59	II101021-2	1		1.14	mg/L	114	85	115			
L84836-02AS	AS	10/25/10 13:15	II101021-2	1	U	1.045	mg/L	104.5	85	115			
L84836-02ASD	ASD	10/25/10 13:18	II101021-2	1	U	1.077	mg/L	107.7	85	115	3.02	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292244													
WG292244ICV	ICV	10/27/10 23:25	MS101020-1	.05		.04761	mg/L	95.2	90	110			
WG292244ICB	ICB	10/27/10 23:28				U	mg/L		-0.00022	0.00022			
WG292244LFB	LFB	10/27/10 23:32	MS101019-3	.05005		.04554	mg/L	91	85	115			
L84783-01AS	AS	10/27/10 23:39	MS101019-3	.05005	.0005	.04833	mg/L	95.6	70	130			
L84783-01ASD	ASD	10/27/10 23:42	MS101019-3	.05005	.0005	.04931	mg/L	97.5	70	130	2.01	20	

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Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291972													
WG291972ICV	ICV	10/22/10 22:14	II101015-1	100		101.58	mg/L	101.6	95	105			
WG291972ICB	ICB	10/22/10 22:18				U	mg/L		-0.6	0.6			
WG291972LFB	LFB	10/22/10 22:30	II101021-2	49.99941		50.92	mg/L	101.8	85	115			
L84836-02AS	AS	10/22/10 22:47	II101021-2	49.99941	18.1	71.69	mg/L	107.2	85	115			
L84836-02ASD	ASD	10/22/10 22:50	II101021-2	49.99941	18.1	71.06	mg/L	105.9	85	115	0.88	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291972													
WG291972ICV	ICV	10/22/10 22:14	II101015-1	2		1.9749	mg/L	98.7	95	105			
WG291972ICB	ICB	10/22/10 22:18				U	mg/L		-0.015	0.015			
WG291972LFB	LFB	10/22/10 22:30	II101021-2	.5		.5595	mg/L	111.9	85	115			
L84836-02AS	AS	10/22/10 22:47	II101021-2	.5	U	.542	mg/L	108.4	85	115			
L84836-02ASD	ASD	10/22/10 22:50	II101021-2	.5	U	.5624	mg/L	112.5	85	115	3.69	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292212													
WG292212ICV	ICV	10/28/10 9:26	II100929-3	.005015		.00477	mg/L	95.1	95	105			
WG292212ICB	ICB	10/28/10 9:28				U	mg/L		-0.0002	0.0002			
WG292216													
WG292216LRB	LRB	10/28/10 15:26				U	mg/L		-0.00044	0.00044			
WG292216LFB	LFB	10/28/10 15:28	II100929-5	.002002		.00185	mg/L	92.4	85	115			
L84909-04LFM	LFM	10/28/10 15:56	II100929-5	.002002	U	.00194	mg/L	96.9	85	115			
L84909-04LFMD	LFMD	10/28/10 16:00	II100929-5	.002002	U	.00193	mg/L	96.4	85	115	0.52	20	

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292033													
WG292033ICV	ICV	10/25/10 12:43	II101015-1	2		1.967	mg/L	98.4	95	105			
WG292033ICB	ICB	10/25/10 12:47				U	mg/L		-0.03	0.03			
WG292033LFB	LFB	10/25/10 12:59	II101021-2	.5		.533	mg/L	106.6	85	115			
L84836-02AS	AS	10/25/10 13:15	II101021-2	.5	U	.519	mg/L	103.8	85	115			
L84836-02ASD	ASD	10/25/10 13:18	II101021-2	.5	U	.533	mg/L	106.6	85	115	2.66	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291972													
WG291972ICV	ICV	10/22/10 22:14	II101015-1	2.002		2.024	mg/L	101.1	95	105			
WG291972ICB	ICB	10/22/10 22:18				U	mg/L		-0.03	0.03			
WG291972LFB	LFB	10/22/10 22:30	II101021-2	.5		.523	mg/L	104.6	85	115			
L84836-02AS	AS	10/22/10 22:47	II101021-2	.5	U	.541	mg/L	108.2	85	115			
L84836-02ASD	ASD	10/22/10 22:50	II101021-2	.5	U	.555	mg/L	111	85	115	2.55	20	

WorleyParsons
Project ID:

ACZ Project ID: ***L84836***

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291404													
WG291404ICV	ICV	10/13/10 19:24	WI100928-1	2.416		2.365	mg/L	97.9	90	110			
WG291404ICB	ICB	10/13/10 19:25				U	mg/L		-0.06	0.06			
WG291404LFB	LFB	10/13/10 19:29	WI100921-9	2		2.075	mg/L	103.8	90	110			
L84826-01AS	AS	10/13/10 19:32	WI100921-9	2		2.019	mg/L	101	90	110			
L84831-01DUP	DUP	10/13/10 20:07			35.1	35.06	mg/L				0.1	20	

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291404													
WG291404ICV	ICV	10/13/10 19:24	WI100928-1	.609		.645	mg/L	105.9	90	110			
WG291404ICB	ICB	10/13/10 19:25				U	mg/L		-0.03	0.03			
WG291404LFB	LFB	10/13/10 19:29	WI100921-9	1		1.028	mg/L	102.8	90	110			
L84826-01AS	AS	10/13/10 19:32	WI100921-9	1		.998	mg/L	99.8	90	110			
L84831-01DUP	DUP	10/13/10 19:35			U	U	mg/L				0	20	RA

pH (lab) M150.1 - Electrometric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291523													
WG291523LCSW3	LCSW	10/15/10 12:38	PCN34991	6		6.06	units	101	98	102			
WG291523LCSW6	LCSW	10/15/10 16:35	PCN34991	6		6.06	units	101	98	102			
WG291523LCSW9	LCSW	10/15/10 20:04	PCN34991	6		6.07	units	101.2	98	102			
L84837-05DUP	DUP	10/15/10 23:13			8.4	8.41	units				0.1	20	
WG291523LCSW12	LCSW	10/15/10 23:37	PCN34991	6		6.05	units	100.8	98	102			
WG291523LCSW15	LCSW	10/16/10 2:54	PCN34991	6		6.04	units	100.7	98	102			

Phosphorus, ortho dissolved M365.1 - Automated Ascorbic Acid

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291405													
WG291405ICV	ICV	10/13/10 20:07	WI100402-1	.65228		.663	mg/L	101.6	90	110			
WG291405ICB	ICB	10/13/10 20:08				U	mg/L		-0.03	0.03			
WG291405LFB	LFB	10/13/10 20:11	WI100929-2	.5		.509	mg/L	101.8	90	110			
L84831-01DUP	DUP	10/13/10 20:15			.02	.016	mg/L				22.2	20	RA
L84829-02AS	AS	10/13/10 20:32	WI100929-2	10	2.9	12.95	mg/L	100.5	90	110			

Phosphorus, total M365.1 - Auto Ascorbic Acid (digest)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291978													
WG291978ICV	ICV	10/22/10 14:09	WI101014-4	.65228		.66	mg/L	101.2	90	110			
WG291978ICB	ICB	10/22/10 14:12				U	mg/L		-0.03	0.03			
WG291990													
WG291795LRB	LRB	10/22/10 14:55				U	mg/L		-0.03	0.03			
WG291795LFB	LFB	10/22/10 14:57	WI101014-2	.5		.488	mg/L	97.6	90	110			
L84836-01LFM	LFM	10/22/10 14:59	WI101014-2	.5	.12	.606	mg/L	97.2	90	110			
L84836-02DUP	DUP	10/22/10 15:01			.05	.045	mg/L				10.5	20	RA
L84907-12LFM	LFM	10/22/10 15:15	WI101014-2	.5	U	.496	mg/L	99.2	90	110			
L84907-13DUP	DUP	10/22/10 15:17			U	U	mg/L				0	20	RA

WorleyParsons
Project ID:

ACZ Project ID: ***L84836***

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291972													
WG291972ICV	ICV	10/22/10 22:14	II101015-1	20		20.22	mg/L	101.1	95	105			
WG291972ICB	ICB	10/22/10 22:18				U	mg/L		-0.9	0.9			
WG291972LFB	LFB	10/22/10 22:30	II101021-2	99.95064		103.18	mg/L	103.2	85	115			
L84836-02AS	AS	10/22/10 22:47	II101021-2	99.95064	9.7	113.78	mg/L	104.1	85	115			
L84836-02ASD	ASD	10/22/10 22:50	II101021-2	99.95064	9.7	114.39	mg/L	104.7	85	115	0.53	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291535													
WG291535PBW	PBW	10/15/10 12:15				U	mg/L		-20	20			
WG291535LCSW	LCSW	10/15/10 12:15	PCN35381	260		254	mg/L	97.7	80	120			
L84836-02DUP	DUP	10/15/10 12:22			530	538	mg/L				1.5	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292244													
WG292244ICV	ICV	10/27/10 23:25	MS101020-1	.05		.05078	mg/L	101.6	90	110			
WG292244ICB	ICB	10/27/10 23:28				U	mg/L		-0.00022	0.00022			
WG292244LFB	LFB	10/27/10 23:32	MS101019-3	.05005		.04449	mg/L	88.9	85	115			
L84783-01AS	AS	10/27/10 23:39	MS101019-3	.05005	.0007	.05289	mg/L	104.3	70	130			
L84783-01ASD	ASD	10/27/10 23:42	MS101019-3	.05005	.0007	.05362	mg/L	105.7	70	130	1.37	20	

Silica, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292421													
WG292421ICV	ICV	10/29/10 18:23	II101015-1	42.8		41.31	mg/L	96.5	95	105			
WG292421ICB	ICB	10/29/10 18:27				U	mg/L		-1.2	1.2			
WG292421LFB	LFB	10/29/10 18:40	II101021-2	21.4		21.1	mg/L	98.6	85	115			
L84836-02AS	AS	10/29/10 18:50	II101021-2	21.4	41.7	61.2	mg/L	91.1	85	115			
L84836-02ASD	ASD	10/29/10 18:54	II101021-2	21.4	41.7	61.52	mg/L	92.6	85	115	0.52	20	

Silica, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292206													
WG292206ICV	ICV	10/27/10 16:09	II101015-3	42.8		41.72	mg/L	97.5	95	105			
WG292206ICB	ICB	10/27/10 16:13				U	mg/L		-1.2	1.2			
WG292119LRB	LRB	10/27/10 16:25				U	mg/L		-0.88	0.88			
WG292119LFB	LFB	10/27/10 16:29	II101021-2	21.4		21.08	mg/L	98.5	85	115			
L84940-01LFM	LFM	10/27/10 16:43	II101021-2	21.4	13.2	24.13	mg/L	51.1	70	130			M2
L84940-01LFMD	LFMD	10/27/10 16:46	II101021-2	21.4	13.2	25.08	mg/L	55.5	70	130	3.86	20	M2

WorleyParsons
Project ID:

ACZ Project ID: ***L84836***

Silver, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292033													
WG292033ICV	ICV	10/25/10 12:43	II101015-1	1.001		1.003	mg/L	100.2	95	105			
WG292033ICB	ICB	10/25/10 12:47				U	mg/L		-0.03	0.03			
WG292033LFB	LFB	10/25/10 12:59	II101021-2	.5		.511	mg/L	102.2	85	115			
L84836-02AS	AS	10/25/10 13:15	II101021-2	.5	U	.134	mg/L	26.8	85	115			M2 ZA
L84836-02ASD	ASD	10/25/10 13:18	II101021-2	.5	U	.114	mg/L	22.8	85	115	16.13	20	M2 ZA

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291972													
WG291972ICV	ICV	10/22/10 22:14	II101015-1	100		101.99	mg/L	102	95	105			
WG291972ICB	ICB	10/22/10 22:18				U	mg/L		-0.9	0.9			
WG291972LFB	LFB	10/22/10 22:30	II101021-2	100.0259		103.35	mg/L	103.3	85	115			
L84836-02AS	AS	10/22/10 22:47	II101021-2	100.0259	30.8	131.44	mg/L	100.6	85	115			
L84836-02ASD	ASD	10/22/10 22:50	II101021-2	100.0259	30.8	132.37	mg/L	101.5	85	115	0.71	20	

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291421													
WG291421ICV	ICV	10/13/10 14:39	WI101001-1	50		50.82	mg/L	101.6	90	110			
WG291421ICB	ICB	10/13/10 15:00				U	mg/L		-1.5	1.5			
WG291520													
WG291520LFB	LFB	10/15/10 17:14	WI100817-1	30		29.83	mg/L	99.4	90	110			
L84724-01DUP	DUP	10/15/10 17:57			1210	1200	mg/L				0.8	20	
L84724-02AS	AS	10/15/10 18:39	WI100817-1	1500	1890	3371	mg/L	98.7	90	110			

Sulfide as S 376.2 - Methylene Blue

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291652													
WG291652ICV	ICV	10/18/10 12:55	WC101018-5	.276		.289	mg/L	104.7	90	110			
WG291652ICB	ICB	10/18/10 12:59				U	mg/L		-0.06	0.06			
WG291652LFB1	LFB	10/18/10 13:03	WC101018-8	.2373333		.259	mg/L	109.1	80	120			
L84900-03AS	AS	10/18/10 14:59	WC101018-8	1.77999975	U	2.08	mg/L	116.9	75	125			
L84900-03DUP	DUP	10/18/10 15:04			U	U	mg/L				0	20	RA
WG291652LFB2	LFB	10/18/10 15:08	WC101018-8	.2373333		.26	mg/L	109.6	80	120			

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG292244													
WG292244ICV	ICV	10/27/10 23:25	MS101020-1	.05		.0533	mg/L	106.6	90	110			
WG292244ICB	ICB	10/27/10 23:28				U	mg/L		-0.00022	0.00022			
WG292244LFB	LFB	10/27/10 23:32	MS101019-3	.0501		.0479	mg/L	95.6	85	115			
L84783-01AS	AS	10/27/10 23:39	MS101019-3	.0501	U	.0514	mg/L	102.6	70	130			
L84783-01ASD	ASD	10/27/10 23:42	MS101019-3	.0501	U	.05149	mg/L	102.8	70	130	0.17	20	

WorleyParsons
Project ID:

ACZ Project ID: ***L84836***

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG291972													
WG291972ICV	ICV	10/22/10 22:14	II101015-1	2		1.993	mg/L	99.7	95	105			
WG291972ICB	ICB	10/22/10 22:18				U	mg/L		-0.03	0.03			
WG291972LFB	LFB	10/22/10 22:30	II101021-2	.5		.518	mg/L	103.6	85	115			
L84836-02AS	AS	10/22/10 22:47	II101021-2	.5	U	.557	mg/L	111.4	85	115			
L84836-02ASD	ASD	10/22/10 22:50	II101021-2	.5	U	.556	mg/L	111.2	85	115	0.18	20	

WorleyParsons ACZ Project ID: ***L84836***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L84836-01	WG292033	Chromium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG292206	Silica, total	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZS	Digestion procedures have the potential to trigger silica polymerization and precipitation, leading to low biased results. Silica chemistry is complex and polymerization kinetics are unpredictable. Dissolved and/or acid soluble silica analyses may provide more accurate measurements.
	WG292033	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
	WG291520	Chloride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG291404	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	HE	Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	HE	Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions).
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG291405	Phosphorus, ortho dissolved	M365.1 - Automated Ascorbic Acid	HE	Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions).
			M365.1 - Automated Ascorbic Acid	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M365.1 - Automated Ascorbic Acid	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG291990	Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG291652	Sulfide as S	376.2 - Methylene Blue	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

WorleyParsons ACZ Project ID: ***L84836***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L84836-02	WG292033	Chromium, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG292206	Silica, total	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZS	Digestion procedures have the potential to trigger silica polymerization and precipitation, leading to low biased results. Silica chemistry is complex and polymerization kinetics are unpredictable. Dissolved and/or acid soluble silica analyses may provide more accurate measurements.
	WG292033	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
	WG291520	Chloride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Fluoride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG291404	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	HE	Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	HE	Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions).
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG291405	Phosphorus, ortho dissolved	M365.1 - Automated Ascorbic Acid	HE	Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions).
			M365.1 - Automated Ascorbic Acid	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			M365.1 - Automated Ascorbic Acid	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG291990	Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG291652	Sulfide as S	376.2 - Methylene Blue	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

RadioChemistry Analytical Results

WorleyParsons
Project ID:
Sample ID: W-36-101110
Locator:

ACZ Sample ID: ***L84836-01***
Date Sampled: *10/11/10 15:05*
Date Received: *10/13/10*
Sample Matrix: *Ground Water*

Gross Alpha & Beta, total
M900.0

Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha	10/29/10 11:13		25	5.5	2.2	pCi/L	*	meg/mtb
Gross Beta	10/29/10 11:13		21	3.7	4	pCi/L		meg/mtb

** Please refer to Qualifier Reports for details.*

RadioChemistry Analytical Results

WorleyParsons
Project ID:
Sample ID: W-43-101110
Locator:

ACZ Sample ID: ***L84836-02***
Date Sampled: *10/11/10 14:30*
Date Received: *10/13/10*
Sample Matrix: *Ground Water*

Gross Alpha & Beta, total
M900.0

Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha	10/29/10 11:15		61	8.6	2.3	pCi/L	*	meg/mtb
Gross Beta	10/29/10 11:15		29	4.1	4	pCi/L		meg/mtb

** Please refer to Qualifier Reports for details.*

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Error(+/-)	Calculated sample specific uncertainty
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
LCL	Lower Control Limit, in % (except for LCSS, mg/Kg)
LLD	Calculated sample specific Lower Limit of Detection
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RER	Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.
UCL	Upper Control Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

DUP	Sample Duplicate	MS/MSD	Matrix Spike/Matrix Spike Duplicate
LCSS	Laboratory Control Sample - Soil	PBS	Prep Blank - Soil
LCSW	Laboratory Control Sample - Water	PBW	Prep Blank - Water

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Matrix Spikes	Determines sample matrix interferences, if any.

ACZ Qualifiers (Qual)

H	Analysis exceeded method hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Replicate Error Ratio (RER) accepted because sample concentrations are less than 10x the MDL.
U	No nuclides detected above the Lower Limit of Detection (LLD)
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
X	QC is out of control. See Case Narrative.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method Prefix Reference

M	EPA methodology, including those under SDWA, CWA, and RCRA
SM	Standard Methods for the Examination of Water and Wastewater, 19th edition (1995) & 20th edition (1998).
D	ASTM
RP	DOE
ESM	DOE/ESM

Comments

(1) Solid matrices are reported on a dry weight basis.

(2) Preparation method: "Method" indicates preparation defined in analytical method.

(3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

WorleyParsons
Project ID:

ACZ Project ID: ***L84836***

Alpha M900.0 pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG292529																
WG292231PBW	PBW	10/29/10						.28	0.96	1.4			2.8			
WG292231LCSW	LCSW	10/29/10	RC091218-1	81.06				92	8.2	1.4	113.5	63	146			
L84836-01DUP	DUP-RER	10/29/10			25	5.5	2.2	37	6.8	2.2				1.37	2	
L84825-10MS	MS	10/29/10	RC091218-1	81.06	1.6	2.3	2.3	41	7	2.3	48.6	63	146			M2

Beta M900.0 pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG292529																
WG292231PBW	PBW	10/29/10						-2.8	2.6	4			8			
WG292231LCSW	LCSW	10/29/10	PCN30831	100				86	6.2	4	86	61	123			
L84836-01DUP	DUP-RER	10/29/10			21	3.7	4	20	3.8	4				0.19	2	
L84837-01MS	MS	10/29/10	PCN30831	100	3.7	3.2	4.1	79	6	4.1	75.3	61	123			

WorleyParsons

ACZ Project ID: ***L84836***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L84836-01	WG292529	Gross Alpha	M900.0	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L84836-02	WG292529	Gross Alpha	M900.0	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

Wet Chemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Lab Filtration	SM 3030 B
Lab Filtration & Acidification	SM 3030 B
Sulfide as S	376.2 - Methylene Blue

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

WorleyParsons

ACZ Project ID: L84836
Date Received: 10/13/2010 10:57
Received By: gac
Date Printed: 10/14/2010

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
1235		3.4	13

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

Cross out in Report to: and PO#.

ACZ Laboratories, Inc.
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Sample Receipt

WorleyParsons

ACZ Project ID: L84836
Date Received: 10/13/2010 10:57
Received By: gac
Date Printed: 10/14/2010

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L84836-01	W-36-101110	Y			Y				Y			
L84836-02	W-43-101110	Y			Y				Y			

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

ACZ Laboratories, Inc. L84836

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: NAT BEAL
Company: WORLEY PARSONS
E-mail: nat.beal@worleyparsons.com
Address: 1687 COLE BLVD SUITE 300 GOLDEN, CO 80401
Telephone: 720.323.2775

Copy of Report to:

Name:
Company:
E-mail:
Telephone:

Invoice to:

Name: SAME AS ABOVE
Company:
E-mail:
Address: CONNIE PARKS 1687 COLE BLVD SUITE 300 GOLDEN, CO
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES [ ] NO [ ]

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

Are samples for SDWA Compliance Monitoring? Yes [ ] No [✓]

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: NAT BEAL Sampler's site Information State: CO Zip code: 80401 Time Zone: MT

PROJECT INFORMATION

Quote #: SOLAR-SUITE
Project/PO #:
Reporting state for compliance testing: CO
Are any samples NRC licensable material? Yes (No)

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE: TIME	Matrix	# of Containers	
W-36-101110	10/11/10: 3:05	AQ	7	SEE QUOTE AND BOTTLE # 1502436B FOR ANALYSES.
W-43-101110	10/11/10: 2:30	AQ	7	

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE: TIME	RECEIVED BY:	DATE: TIME
NAT BEAL	10/11/10: 1600		10-13-10 1057

FRMAD050.02.17.10 White - Return with sample. Yellow - Retain for your records.

L84836 Chain of Custody

ACZ Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Bottle Order Packing List

Account: WORLEY/WorleyParsons
Bottle Order: BO24368

Bill to Account: Bill to ACZ
Ship Date Requested: 10/01/2010
Request Placed at: 10/01/2010 10:48
Service Requested: UPS Ground

Sampling supplies

PACK	Qty	ACZ ID	Type	Description
	1	COC	Chain of Custody	Chain of Custody, 1 for 10 samples.
	2	SEAL	Custody Seal	Custody seals for cooler, two for each cooler.
	1	RETURN	Return Address	Return Address label, one for each cooler.
	14	LABELS	Sample Labels	ACZ supplied labels for sample containers

ACZ Coolers

PACK	Qty	ACZ ID	Size	Weight	UPS Tracking Number
	1	1235	Medium	8	1Z8101300306208427

Quote number: SOLAR-SUITE
Sample Quantity: 2

2 samples/ one time analysis- General Mineral, Title 22 and othe
ACZ is responsible for necessary sample filtering

PACK	Qty	Type	Size	Filter/Raw/Preserve	Instructions
	1	RAW	500 ML	Raw	Wet Chemistry (analyses that do not require preservative or filtration) - Completely fill container.
	1	RED	250 ML	Raw/Nitric	Metals (total except ICPMS) - Do not overfill as there is Nitric Acid in the bottle.
	1	TAN	125 ML	Raw/NaOH & Zinc Acetate	Sulfide - Do not overfill as there is Sodium Hydroxide and Zinc Acetate in the bottle.
	1	WHITE	250 ML	Filtered	Wet chemistry (dissolved) - This is a filitered sample. Completely fill container.
	1	YELLOW	250 ML	Raw/Sulfuric	For total wet chemistry analyses. Do not overfill as there is Sulfuric Acid in the bottle.
	1	RED RAD	1000 ML	Raw/Nitric	Radiochemistry (total) - Do not overfill as there is Nitric Acid in the bottle.
	1	GREEN PC	250 ML	Green pre-cleaned Filtered/Nitiric	Metals (dissolved including ICPMS) - This is a filitered sample. Completely fill container.

Prepared By/Date: _____

mpg