Table 9-1. Water Quality in Alluvium - Major Constituents

Roca Honda/San Mateo Area Ground Water Major Constituent Quality Data for Alluvium (mg/L unless otherwise specified)																					
WELL LOCATION																					
Well ID #	Township (N)	Range (W)	Section	Data Source	Sample Date	Specific conductance (µmhos)	pH (s.u.)	Temp. °F	Hardness (mg/L as $CaCO_3$)	Alkalinity (as $CaCO_3$)	Ca (dissolved)	Mg	Na (dissolved)	K (dissolved)	Bicarbonate as HCO_3	Sulfate as SO_4	Cl	F	Silica as SiO_2	Nitrogen Nitrate as NO_3	TDS
120	13	9	24	RH	8/06/2008	1218	7.13	67	ND	330	69	25	227	3	400	356	26	1.3	18.4	ND	
120				RH	11/16/2008	1206	7.71	53.5	ND	324	67	25	232	3	395	334	24	1.6	18.7	ND	603
120				RH	2/18/2009	1496	9.29	43	ND	442	10	4	313	4	472	273	34	2.8	8.7	ND	748
121	13	9	24	RH	8/18/2008	1573	9.16	56.6	ND	207	45	4	368	3	161	452	42	.5	1.1	ND	
21	13	8	22	RH	8/21/2008	601	6.99	60.15	ND	313	54	16	78	1	382	22	7	1.0	67.2	ND	
21				RH	11/08/2008	669	7.78	54.45	ND	328	56	16	86	1	401	26	7	1.1	70.9	ND	334
21				RH	2/11/2009	649	7.66	51.48	ND	340	41	15	81	ND	415	16	5	1.1	59.0	ND	325
115	13	9	22	RH	9/16/2008	765	7.10	56.41	ND	281	49	9	154	3	343	137	15	1.1	19.8	5.71	
115				RH	11/13/2008	875	7.78	57.5	ND	286	47	9	157	3	349	129	15	1.1	20.6	5.6	437
33	13	8	23	RH	9/22/2008				ND	443	71	17	263	2	540	300	39	.9	30.6	2.0	
33				RH	11/17/2008	1309	7.52	54.98	ND	421	71	17	264	2	349	264	34	.7	27.7	ND	655
131	14	8	25	D,E	10/23/1979	1,010	8	11.9 (°C)			75	69	70	1.7	454	202	18	0.8		0.09	672

Data Source:

A NMEI 1974 (see particularly Table 7.5, Table 7.7)
B Cooper and John 1968 (see particularly Table 1)
C GMRC 1979a (see particularly Pt. 1: Table 2.6-2, Table 2.6-4, Table 2.2-19; also Pt. 1 Appendix B, Table B-1, Table B-3, Table B-4, Table B-6, Table B-7, Table B-9, Table B-10)
D GMRC 1979c (App. D to source E below) (see particularly Table 4)
E GMRC 1979d (see particularly Table II-4, Table III-1)
F Metric Corp. 2005b
F[a] Metric Corp. 2005a (see particularly Figure 7, Table 1)
G RGRC 1994
H NMED DP-61 file
I Brod and Stone 1981
O OSE 2008
RH Roca Honda 2008, 2009

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Table 9-2. Water Quality in Alluvium – Minor Constituents

Roca Honda/San Mateo Area Ground Water Minor Constituent Quality Data for Alluvium (µg/L unless otherwise specified)																										
Well ID #	**Township (N)**	**Range (W)**	**Section**	**Data Source**	**Sample Date**	**Ba** mg/L	**B** mg/L	**Se** mg/L	**Zn**	**Cu**	**Pb**	**As**	**Cr**	**Co**	**Mn**	**Fe**	**Cd**	**Ni**	**Mo**	**Hg**	**Ag**	**Al**	**Gross Alpha (pCi/L)**	**Ra-226 (pCi/L)**	**Ra-228 (pCi/L)**	**U (mg/L)**
120	13	9	24	RH	8/06/2008	ND	.2	ND	ND	ND	ND	ND	ND	ND	.07	ND	ND	ND	ND	ND	ND	ND	6.7	.41	.42	.0033
120				RH	11/16/2008	ND	.2	.0002	ND	ND	ND	.0001	ND	ND	.08	ND	ND	ND	ND	ND	ND	ND	8.2	.41	.25	.0031
120				RH	2/18/2009	ND	.5	ND	ND	ND	ND	ND	ND	ND	ND	.08	ND	ND	.01	ND	ND	ND	2.1	-.06	.71	ND
121	13	9	24	RH	8/18/2008	ND	.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	-.02	.27	ND
21	13	8	22	RH	8/21/2008	.1	ND	ND	ND	ND	ND	.003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.8	.03	.31	.0049
21				RH	11/08/2008	ND	ND	.003	.1	ND	.1	.ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.4	.09	2.4	.0053
21				RH	2/11/2009	ND	ND	.003	.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.0	.71	.13	.0055
115	13	9	22	RH	9/16/2008	ND	.2	.026	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	205.	-.1	.32	.18
115				RH	11/13/2008	ND	.2	.026	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	228	-.1	.01	.166
33	13	8	23	RH	9/22/2008	ND	.3	.003	ND	ND	ND	ND	ND	ND	.26	.05	ND	ND	ND	ND	ND	ND	26.8	-.03	0	.0085
33				RH	11/17/2008	ND	.3	.002	ND	ND	ND	ND	ND	ND	.14	ND	ND	ND	ND	ND	ND	ND	13.7	-.3	.01	.008
131	14	8	25	D,E	10/23/1979	0.9	0.15	<0.002	250	10	20	<10	<20	<10	550	100	<5	<20	<50	<2	<5	200	<5	0.06±0.03	<1	<0.013

Data Source:

A NMEI 1974 (see particularly Table 7.5, Table 7.7)
B Cooper and John 1968 (see particularly Table 1)
C GMRC 1979a (see particularly Pt. 1: Table 2.6-2, Table 2.6-4, Table 2.2-19; also Pt. 1 Appendix B, Table B-1, Table B-3, Table B-4, Table B-6, Table B-7, Table B-9, Table B-10)
D GMRC 1979c (App. D to source E below) (see particularly Table 4)
E GMRC 1979d (see particularly Table II-4, Table III-1)
F Metric Corp. 2005b
Fa Metric Corp. 2005a (see particularly Figure 7, Table 1)
G RGRC 1994
H NMED DP-61 file
I Brod and Stone 1981
O OSE 2008
RH Roca Honda, 2008, 2009

Table 9-3. Water Quality in Menefee Formation Wells – Major Constituents

Roca Honda/San Mateo Area Ground Water Major Constituent Quality Data For Menefee Formation (mg/L unless otherwise specified)

Well ID #	Township (N)	Range (W)	Section	Data Source	Sample Date	Specific conductance (µmhos)	pH (s.u.)	Temp °F	Hardness (mg/L as $CaCO_3$)	Alkalinity (as $CaCO_3$)	Ca (dissolved)	Mg	Na (dissolved)	K (dissolved)	Bicarbonate as HCO_3	Sulfate as SO_4	Cl	F	Silica as SiO_2	Nitrogen Nitrate as NO_3	TDS
27	13	8	23	RH	8/06/2008	505	6.82	68.73	224	250	72	11	38	4	310	21	6	.4	51.6	.07	338
27				RH	11/13/2008	498	7.38	56.39	196	249	63	10	34	4	304	20	6	.4	55.9	ND	330
27				RH	2/16/2009	499	7.73	46.60	179	248	57	9	35	4	302	18	6	.4	38.7	ND	250
87	13	8	25	RH	8/12/2008	587	7.78	68.89	83	309	21	7	135	2	377	23	4	1.8	18.9	.11	367
87				RH	11/12/2008	643	8.54	53.70	118	329	36	11	129	2	402	26	5	1.5	29.3	0.5	258
87				RH	2/16/2009	663	8.46	46.42	105	326	27	9	113	2	398	22	4	1.6	21.3	0.8	331
62	13	8	24	RH	8/20/2008	956	7.4	57.90	176	340	48	14	188	2	415	74	106	.6	14	.13	616
62				RH	11/11/2008	893	8.03	58.55	110	328	30	9	183	1	400	67	45	.6	13.8	0.1	520
62				RH	2/18/2009	834	8.39	55.17	76	320	20	6	156	1	371	62	35	0.6	10.1	0.1	417
100	13	8	28	RH	8/21/2008	378	6.97	56.59	64	130	18	5	39	9	158	13	13	.2	5.2	ND	181
100				RH	11/08/2008	404	7.81	50.93	108	187	29	9	39	11	228	6	8	.3	3.2	ND	229
100				RH	2/11/2009	418	7.56	53.93	124	208	33	10	35	8	254	6	4	0.5	26.6	ND	209
7	13	8	11	RH	9/17/2008	3742	8.3	62.45	50	976	14	4	1190	3	870	1260	92	2.8	14.9	.05	566
7				RH	11/16/2008	4759	9.53	55.35	37	1220	8	4	1260	5	918	1250	82	2.8	14.0	ND	3320
7				RH	2/16/2009	3976	8.69	55.02	65	803	18	5	986	4	947	1300	77	2.8	7.2	ND	1988
4	13	8	1	D,E	10/16/1979	1,050	8.3	14.4 (°C)			30	10	200	3.3	460	50	65	3.8		0.62	625
4				I	3/10/1978	960					4	17.8	89	4.6	386	90.5	19			0	494
9	13	8	14	A,I	10/11/1972	2,123	7.61				78.6	36	350	4.6	514.9	430	18.1	0.5	11.1	1.45	1,445
8	13	8	14	C	3/10/1976		8.6		20		5.4	1.6	370	1.7	456	277	12	4.5			476
10	13	8	17	I	8/23/1977	1,100					29	22	170	5.5	254	289	7.3			2.9	669
20	13	8	22	A,C	10/18/1972	332	7.86				6.1	2.1	60	1.3	217.2	8	4	0.56	24.8	0.02	324
20				C	3/9/1976		8.2		20		5.6	1.4	81	1.2	172	6.9	<2	0.62			222
20				C	Dec-76		7.8		31		5.5	1.9	75	<2	202	9		1.2			189
20				I	Aug-77	360					7	1.7	76	1.5	207	22	4.9		22	0.8	240
26	13	8	23	I	2/9/1978	460					45	3.2	21	3.3	188		5			0	172
31	13	8	23	A	10/17/1972	315	7.38				42.3	6.4	20	3.4	197.7	9.5	8	0.32	70.8	0.03	358
31				C	3/9/1976		7.4		113		41	4.9	20	2.8	136	12	8	0.22			214
31				C	Dec-76		7.2		153		49	8.1	25	3.6	226	20		0.64			253
31				I	Feb-78	310					40	6.1	20.1	3.3	188		0.14			0	169
42	13	8	24	I	2/21/1978	1,150					3	0.8	268	1.1	431	185	6			0	680
41	13	8	24	C	3/9/1976		8.8		11		3.4	0.97	270	1.3	300	199	8	1.3			702
41				I	3/9/1978	880					1.2	0.4	206	1.1	385	99	4			0.1	510
45	13	8	24	C	3/9/1976		8.4		16		5.1	1.4	165	1.2	363	82	3	1.7			534
45				C	Dec-76		8.5		9		2.3	0.61	220	0.82	380	99		2.2			513
48	13	8	24	A,B	9/10/1962	836	9	13.8 (°C)			1.6	0	206	0.9	379	70	4.2		12	0.4	674
48				A	10/17/1972	800	8.75				3	0.5	190	0.9	417.3	48.5	12	1.7	13	0.11	685
48				C	3/9/1976		8.9		4		1.1	0.17	205	0.71	250	69	6	1.7			478
48				C	Dec-76		7.8		63		9.7	2.8	300	1.4	552	165		4			731
56	13	8	24	I	2/9/1978	790					26.4	9.2	154	1.5	365	96	18			0	448
57	13	8	24	I	2/9/1978	1,000					74	25	131	1.5	381	169	42			13	647

Table 9-3. (Continued)

Roca Honda/San Mateo Area Ground Water Major Constituent Quality Data For Menefee Formation (mg/L unless otherwise specified)																						
Well ID #	**Township (N)**	**Range (W)**	**Section**	**1/4 1/4 1/4**	**Data Source**	**Sample Date**	**Specific conductance (µmhos)**	**pH (s.u.)**	**Temp °F**	**Hardness (mg/L as $CaCO_3$)**	**Alkalinity (as $CaCO_3$)**	**Ca (dissolved)**	**Mg**	**Na (dissolved)**	**K (dissolved)**	**Bicarbonate as HCO_3**	**Sulfate as SO_4**	**Cl**	**F**	**Silica as SiO_2**	**Nitrogen Nitrate as NO_3**	**TDS**
58	13	8	24	342	C	3/9/1976		7.9		65		19	4.4	165	1.4	285	104	5	0.73			462
58	13	8	24	342	C	3/10/1976		7.9		65		18	4.4	165	1.4	267	104	10	0.71			978
91	13	8	26	221	A,I	10/24/1972	964	8.25				3.1	0.9	258	1.3	654	9.9	8	3	17.5	0.27	953
89	13	8	26	221	I	Jul-76	729					54	27	74	3.1	375	71	10			1.4	460
92	13	8	26	222	I	2/21/1978	450					55	9.5	27	5.4	244	37	8			0.65	265
98	13	8	27	133	I	8/22/1977	850					4	1.4	205	2	502	1.1	15				531
133	14	8	25	212	D,E	10/13/1979	2,970	7.5	13.8 (°C)			205	73	460	15	785	1,120	20	0.3		0.13	2,299

Data Source:

A NMEI 1974 (see particularly Table 7.5, Table 7.7)
B Cooper and John 1968 (see particularly Table 1)
C GMRC 1979a (see particularly Pt. 1: Table 2.6-2, Table 2.6-4, Table 2.2-19; also Pt. 1 Appendix B, Table B-1, Table B-3, Table B-4, Table B-6, Table B-7, Table B-9, Table B-10)
D GMRC 1979c (App. D to source E below) (see particularly Table 4)
E GMRC 1979d (see particularly Table II-4, Table III-1)
F Metric Corp. 2005b
F[a] Metric Corp. 2005a (see particularly Figure 7, Table 1)
G RGRC 1994
H NMED DP-61 file
I Brod and Stone 1981
O OSE 2008
RH Roca Honda Resources, 2008, 2009

Table 9-4. Water Quality in Menefee Formation Wells - Minor Constituents

Roca Honda/San Mateo Area Ground Water Minor Constituent Quality Data For Menefee Formation (µg/L unless otherwise specified)

Well ID #	Town-ship (N)	Range (W)	Section	Data Source	Sample Date	Sr mg/L	Ba mg/L	B mg/L	Li mg/L	Si mg/L	Se mg/L	Zn	Cu	Pb	Bi	As	Cr	Co	Mn	Fe	Sb	Cd	Ni	Mo	Hg	Ag	Al	V	PO_4	Gross Beta pCi/L	Gross Alpha pCi/L	Ra-226 pCi/L	Th-230 pCi/L	Ra-228 pCi/L	U mg/L	Sr-90 pCi/L
27	13	8	23	RH	8/06/2008		.2	ND			ND	0.15	0.06	ND		ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	-.02	5.5	-0.03	-0.2	0.03	0.0049	
27				RH	11/13/2008		.2	ND			ND	0.26	0.08	ND		ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	4.4	5.8	-0.07	-0.1	-0.2	0.0041	
27				RH	2/16/2009		0.2	ND			0.001	0.11	0.05	ND		ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	4.1	5.3	-0.006	-0.1	0.08	0.0054	
87	13	8	25	RH	8/12/2008		.2	0.4			ND	0.01	0.02	ND		.008	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	0.3	8.0	0.12	-0.2	0.39	0.0024	
87				RH	11/12/2008		0.1	ND			ND	0.02	0.04	ND		0.002	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	5.6	8.4	-0.2	0.1	-0.4	0.0015	
87				RH	2/16/2009		ND	0.3			ND	ND	0.01	ND		0.002	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	0.7	2.0	-0.08	-0.02	2.1	0.0016	
62	13	8	24	RH	8/20/2008		ND	ND			ND	0.03	ND	ND		ND	ND	ND	0.01	ND		ND	ND	ND	ND	ND	ND	ND	ND	0.6	4.2	-0.10	1.7	0.77	0.0109	
62				RH	11/11/2008		ND	0.1			ND	0.03	ND	ND		ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	-3.0	5.5	-0.03	0.0	-0.3	0.0027	
62				RH	2/18/2009		ND	0.1			ND	0.02	ND	ND		ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	-2	3.5	0.0	-0.02	0.55	0.0016	
100	13	8	28	RH	8/21/2008		ND	ND			ND	ND	ND	ND		ND	ND	ND	0.01	ND		ND	ND	ND	ND	ND	ND	ND	ND	3.5	1.9	0.13	1.5	0.79	0.0005	
100				RH	11/08/2008		ND	ND			ND	ND	ND	ND		ND	ND	ND	0.30	ND		ND	ND	ND	ND	ND	ND	ND	ND	14.1	6.6	0.009	0.0	1.5	ND	
100				RH	2/11/2009		ND	ND			ND	ND	ND	ND		ND	ND	ND	0.10	ND		ND	ND	ND	ND	ND	ND	ND	ND	5.3	6.3	0.12	0.05	0.3	0.0036	
7	13	8	11	RH	9/17/2008		ND	0.2			ND	0.08	ND	ND		0.004	ND	ND	0.01	0.12		ND	ND	ND	ND	ND	ND	ND	ND	-7.0	6.9	-0.06	2.8	0.1	0.1999	
7				RH	11/16/2008		ND	0.05			ND	0.08	ND	ND		0.009	ND	ND	0.01	0.51		ND	ND	ND	ND	ND	ND	ND	ND	21.0	48.9	0.89	-0.5	0.14	0.0009	
7				RH	2/16/2009		ND	0.5			ND	0.05	ND	ND		ND	ND	ND	0.06	0.57		ND	ND	ND	ND	ND	ND	ND	ND	14.2	15.8	1.3	-0.2	0.3	0.001	
4	13	8	1	D,E	10/16/1979		0.2	0.3			<0.002	300	60	20		10	<20	<10	20	<10		<5	<20	<50	<2	<5	700		2.01		<6	0.13±0.03		<1	<0.006	
9	13	8	14	A	10/11/1972	1.5	<1	1.2	0.04	12		30	3.1	2.6	<0.5	<0.5		<1	115	9,000	<0.6	1.6	<1	<3	<1					<0.02						
8	13	8	14	C	3/10/1976		<0.5	0.73			<0.005	20	30	40		<10	<5		80	6,900		2				<2									<0.002	
20	13	8	22	A,C	10/18/1972	<0.2	<1	<0.1	0.03	17		60	5.9	<0.25	<0.5	13		<1	3	132	<0.6	1.9	<1	<3	<1					<0.02						
20				C	3/9/1976		<0.3	0.1				30	<5	10		<10	40		8	640		<2				<5									<0.002	
20				C	Dec-76		0.5	0.1				30	<5	<10		<10	<5		<2	30		<2				<2									0.005	
26	13	8	23	A	10/17/1972	0.5	<1	<0.1	0.03	33		138	30	1.4	<0.5	<0.5		<1	0.8	90	<0.6	3	<1	<3	<1					<0.02						
26				C	3/9/1976		<0.5	<0.1			<0.005	170	<5	<10		<1	<5		<2	40		<2				<2									<0.002	
26				C	Dec-76		<0.5	0.1			<0.005	240	10	20		<10	<5		<2	100		<2				<2									0.004	
41	13	8	24	C	3/9/1976		<0.5	0.31			<0.005	220	<5	10		<10	<5		20	490		<2		<10		<2		<1							0.002	
41	13	8	24	C	3/9/1976		<0.1	0.3			<0.01	370	<3	<1		<10	9		24	800		<1		2		<1		<10							0.0053	
45	13	8	24	C	3/9/1976		<0.5	0.42			<0.005	80	<5	90		<190	<5		10	200		<2		50		<2		<1		2±9	2.3±2.0	0.1±0.2	0.0±0.4		<0.002	
45				C	Dec-76		<0.5	0.3			<0.005	60	<10	10		<10	<5		8	150		<2		<10		<2		<2		6±10	0.9±1.5	0.0±0.2	0.0±0.1	2±3	0.004	
48	13	8	24	A,B	9/10/1962																															
48				A	10/17/1972	<0.2	<1	0.7	0.03	11		30	7.6	<0.25	<0.5	<0.5		<1	2.4	170	<0.6	0.5	<1	<3	<1					<0.02						
48				C	3/9/1976		<0.5	0.5			<0.005	40	<5	<10		<10	<5		5	60		<2				<2									<0.002	
48				C	Dec-76		<0.5	0.4			<0.005	1,000	30	30		30	<5		7	330		<2				<2									<0.002	

Table 9-4. (Continued)

Roca Honda/San Mateo Area Ground Water Minor Constituent Quality Data For Menefee Formation (µg/L unless otherwise specified)

Well ID #	Town-ship (N)	Range (W)	Section	Data Source	Sample Date	Sr mg/L	Ba mg/L	B mg/L	Li mg/L	Si mg/L	Se mg/L	Zn	Cu	Pb	Bi	As	Cr	Co	Mn	Fe	Sb	Cd	Ni	Mo	Hg	Ag	Al	V	PO_4	Gross Beta pCi/L	Gross Alpha pCi/L	Ra-226 pCi/L	Th-230 pCi/L	Ra-228 pCi/L	U mg/L	Sr-90 pCi/L
62	13	8	24	A,B	9/10/1962																															
62				C	3/9/1976		<0.5	0.2			<0.005	80	<5	10		<10	<5		5	30		<2				<2									0.002	
62				C	Dec-76		<0.5	0.2			<0.005	350	50	90		<10	<5		<2	50		<2				<2									0.008	
58	13	8	24	C	3/9/1976		<0.5	0.11			<0.005	150	20			<10	<5		20	170		<2				<2									<0.002	
58	13	8	24	C	3/10/1976		<0.5	0.13			<0.005	170	20	10		<10	<5		30	270		<2				<2									<0.002	
68	13	8	24	C	8/26/1976		0.4	0.2				4	?	<1		<10	<1		13	129		<1		<1						0±1		3.62±1.29		3.7±1.8		0±0.3
80	13	8	25	A	10/11/1972	<0.2	<1	<0.1	0.03	16		295	24	8.4	<0.5	<5		<1	1	1,550	<0.6	6.4	<1	<3	<1					<0.02						
91	13	8	26	A,B	9/11/1962																															
91				A	10/24/1972	<0.2	<1	1.3	0.03	20		740	120	2.5	<0.5	26		<1	35	4,300	<0.6	3.8	<1	<3	<1					<0.02						
133	14	8	25	D,E	10/13/1979		1	0.85			<0.002	620	20	30		<10	<20	<10	530	170		<5	<20	<50	<2	<5	100				<7	2.9±0.03		<1	<0.006	

Data Source:

A NMEI 1974 (see particularly Table 7.5, Table 7.7)
B Cooper & John 1968 (see particularly Table 1)
C GMRC 1979a (see particularly Pt. 1: Table 2.6-2, Table 2.6-4, Table 2.2-19; also Pt. 1 Appendix B, Table B-1, Table B-3, Table B-4, Table B-6, Table B-7, Table B-9, Table B-10)
D GMRC 1979c (App. D to source E below) (see particularly Table 4)
E GMRC 1979d (see particularly Table II-4, Table III-1)
F Metric Corp. 2005b
F[a] Metric Corp. 2005a (see particularly Figure 7, Table 1)
G RGRC 1994
H NMED DP-61 file
I Brod and Stone 1981
O OSE 2008
RH Roca Honda Resources 2008, 2009

Table 9-5. Water Quality in Point Lookout Sandstone Wells - Major Constituents

Roca Honda/San Mateo Area Ground Water Major Constituent Quality Data for Point Lookout Sandstone (mg/L unless otherwise specified)

Well ID #	Township (N)	Range (W)	Section	Data Source	Sample Date	Specific Conductance (micromhos)	pH (s.u.)	Temp. °F	Hardness (mg/L as $CaCO_3$)	Ca (dissolved)	Mg	Na (dissolved)	K (dissolved)	Bicarbonate as HCO_3	Sulfate as SO_4	Cl	F	Silica as SiO_2	Nitrogen Nitrate as NO_3	TDS
90	13	8	26	RH	8/11/2008	404	8.03	68.98	18	5	1	101	1	253	2	1	1.0	18.4	ND	249
90				RH	11/10/2008	430	8.92	56.07	16	4	1	104	1	259	3	1	1.0	14.2	ND	258
90				RH	2/16/2009	992	9.03	65.75	11	3	ND	229	1	531	44	8	3.3	8.6	ND	626
22	13	8	22	RH	8/21/2008				21	6	2	68	1	192	6	ND	0.6	14.2	ND	204
22				RH	11/13/2008	316	8.53	57.97	22	6	2	78	1	200	6	ND	0.6	14.4	0.2	212
22				RH	1/11/2009	323	8.76	55.32	18	4	0.6	77	1	210	4	ND	0.6	11.7	ND	221
102	13	8	33	RH	9/24/2008				15	4	ND	311	2	670	ND	4	7.6	12.3	ND	655
102				RH	11/08/2008	706	8.82	52.53	12	3	1	195	2	443	ND	3	3.3	15.5	ND	446
102				RH	2/11/2009	837	8.83		10	2	ND	192	2	537	ND	4	5.0	11.4	ND	554
66	13	8	24	C	3/8/1976		8.2		24	6.4	1.8	78	1.3	174	6	2	0.63			276
66				C	Dec-76		7.8		26	5.5	2	75	1.3	197	7		1.2			
66				C	Dec-76		8.45		64.4	5.11	1.84	89	<0.1	176	<1		0.46			
78	13	8	25	A	10/11/1972	509	7.4			22.6	5.7	70.1	21.9	263.6	11.5	17	0.72	20.6	0.84 (total Nitrogen)	434
78				C	3/10/1976		7.4		149	44	10	44	2.7	184	40	16	0.4			320
90	13	8	26	A,B,C,I	9/11/1962	808	8.1	13.8 (°C)		74	24	76	3	365	103	22		14	14 (total Nitrogen)	695
102	13	8	33	C	6/1/1972	730	8		29	6.4	3.2	170	1.2	348	83	10				490
103	13	8	33	I	8/2/1977	940				2	0.4	218	4		10	20			0	538
122	14	7	34	E	Mar-July, 1979		7.1		260	130	41	64	3		400	6.7	0.79	7.3	<0.1 (N)	850
132	14	8	25	D,E	10/18/1979	909	7.9	14.7 (°C)		75	27	109	3	419	156	10	0.2		0.04	595

Data Source:

A NMEI 1974 (see particularly Table 7.5, Table 7.7)
B Cooper and John 1968 (see particularly Table 1)
C GMRC 1979a (see particularly Pt. 1: Table 2.6-2, Table 2.6-4, Table 2.2-19; also Pt. 1 Appendix B, Table B-1, Table B-3, Table B-4, Table B-6, Table B-7, Table B-9, Table B-10)
D GMRC 1979c (App. D to source E below) (see particularly Table 4)
E GMRC 1979d (see particularly Table II-4, Table III-1)
F Metric Corp. 2005b
F[a] Metric Corp. 2005a (see particularly Figure 7, Table 1)
G RGRC 1994
H NMED DP-61 file
I Brod and Stone 1981
O OSE 2008
RH Roca Honda Resources 2008, 2009

Table 9-6. Water Quality in Point Lookout Sandstone Wells - Minor Constituent

Roca Honda/San Mateo Area Ground Water Minor Constituent Quality Data for Point Lookout Sandstone (µg/L unless otherwise specified)

Well ID #	Town-ship (N)	Range (W)	Section	Data Source	Sample Date	Ba mg/L	B mg/L	Si mg/L	Se mg/L	Zn	Cu	Pb	As	Cr	Co	Mn	Fe	Cd	Ni	Mo	Hg	Ag	Al	V	Gross Beta pCi/L	Gross Alpha pCi/L	Ra-226 pCi/L	Th-230 pCi/L	Ra-228 pCi/L	U mg/L
90	13	8	26	RH	8/11/2008	ND	0.2			0.09	0.02	ND	ND	ND	ND	ND	0.03	0.03	ND	ND	ND	ND	ND		-2.0	0.3	0.24	0.1	2.1	ND
90				RH	11/10/2008	0.4	0.1			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		6.7	6.0	0.01	0.0	0.32	ND
90				RH	2/16/2009	ND	0.4			ND	0.01	ND	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		0.7	2.0	-0.08	-0.02	2.1	0.0016
22	13	8	22	RH	8/21/2008	ND	0.4			0.02	ND	ND	ND	ND	ND	0.01	0.06	ND	ND	ND	ND	ND	ND		-0.6	0.9	0.31	1.2	1.1	ND
22				RH	11/13/2008	0.3	ND			0.03	ND	ND	ND	ND	ND	ND	.03	ND	ND	ND	ND	ND	ND		-0.06	0.8	0.24	0.0	0.57	ND
22				RH	1/11/2009	0.3	ND			0.02	ND	ND	ND	ND	ND	ND	0.04								-0.9	1.5	0.28	-0.05	0.22	ND
102	13	8	33	RH	9/24/2008	0.2	0.5			0.09	ND	ND	0.001	ND	ND	0.02	0.04	ND	ND	ND	ND	ND	ND		-3.0	1.5	0.08	0.6	-0.2	ND
102				RH	11/08/2008	ND	0.5			0.05	ND	ND	0.001	ND	ND	ND	0.25	ND	ND	ND	ND	ND	ND		-2	0.4	-0.01	-0.5	1.6	ND
102				RH	2/11/2009	0.1	0.4			0.06	ND	ND	0.002	ND	ND	ND	0.09	ND	ND	ND	ND	ND	ND		-0.5	0.5	0.06	0.1	1.3	ND
66	13	8	24	C	3/8/1976	<0.5	0.11		<0.005	20	80	20	<10	<5		10	1,200	<2				<2			2±6	1.1±1.0	0.4±0.3	0.0±0.4		<0.002
66				C	Dec-76	0.5	0.1		<0.005	6	<5	10	<10	<5		6	110	<2				<2			0±6	2.3±1.3	0.0±0.3	0.0±0.2	0±3	0.004
102	13	8	33	C	6/1/1972	<0.1		13.3								<50	<100			<20										
122		14	7	E	Mar–Jul 1979	0.06	<0.2	7.3	<0.01	1100	<10	<50	<10	<10	<20	<10	2,400		<10	<50	<1	<20	<100	<10	10±2	<3	0.06±0.02		2±1	
123	14	7	19	C	3/9/1976	<0.5	0.13			5	<5		<10	<5		6	180	<2							1±6	0.3±0.6	0.3±0.7	0.0±0.4		<0.002
132	14	8	25	D,E	10/18/1979	0.45	0.25		<0.002	260	5	10	<10	<20	<10	20	<10	<5	<20	<50	<2	<5	<100			<7	0.41±0.03		2±1	<0.006

Note: There were no results for Sr, Sb, Li, Bi, PO^4, cyanide, Pb-210 (by analysis of Po-210), or Sr-90.

Data Source:

A NMEI 1974 (see particularly Table 7.5, Table 7.7)
B Cooper & John 1968 (see particularly Table 1)
C GMRC 1979a (see particularly Pt. 1: Table 2.6-2, Table 2.6-4, Table 2.2-19; also Pt. 1 Appendix B, Table B-1, Table B-3, Table B-4, Table B-6, Table B-7, Table B-9, Table B-10)
D GMRC 1979c (App. D to source E below) (see particularly Table 4)
E GMRC 1979d (see particularly Table II-4, Table III-1)
F Metric Corp. 2005b
F[a] Metric Corp. 2005a (see particularly Figure 7, Table 1)
G RGRC 1994
H NMED DP-61 file
I Brod and Stone 1981
O OSE 2008
RH Roca Honda Resources 2008, 2009

Table 9-7. Water Quality in Gallup Sandstone Wells - Major Constituents

Roca Honda/San Mateo Area Ground Water Major Constituent Quality Data For Gallup Sandstone (mg/L unless otherwise specified)																					
WELL LOCATION				Source Data	Sample Date	Specific conductance (µmhos)	pH (s.u.)	Temp °F	Hardness (mg/L as $CaCO_3$)	Alkalinity (as $CaCO_3$)	Ca (dissolved)	Mg	Na (dissolved)	K (dissolved)	Bicarbonate as HCO_3	Sulfate as SO_4	Cl	F	Silica as SiO_2	Nitrogen Nitrate as NO_3	TDS
Well ID #	Township (N)	Range (W)	Section																		
32	13	8	23	RH	8/21/2008	797	8.41	61.57	6	470	2	ND	237	1	496	8	4	2.9	19.6	ND	546
16	13	8	17	RH	8/25/2008	947	7.92	60.80	213	240	32	32	169	5	293	285	7	0.5	8.3	0.6	647
16				RH	11/13/2008	961	8.61	56.10	173	215	24	28	172	5	250	265	6	0.4	6.8	ND	610
16				RH	2/12/2009	932	8.92	55.77	165	201	17	22	152	6	245	258	5	0.4		0.5	613

Data Source:

A NMEI 1974 (see particularly Table 7.5, Table 7.7)
B Cooper and John 1968 (see particularly Table 1)
C GMRC 1979a (see particularly Pt. 1: Table 2.6-2, Table 2.6-4, Table 2.2-19; also Pt. 1 Appendix B, Table B-1, Table B-3, Table B-4, Table B-6, Table B-7, Table B-9, Table B-10)
D GMRC 1979c (App. D to source E below) (see particularly Table 4)
E GMRC 1979d (see particularly Table II-4, Table III-1)
F Metric Corp. 2005b
F[a] Metric Corp. 2005a (see particularly Figure 7, Table 1)
G RGRC 1994
H NMED DP-61 file
I Brod and Stone 1981
RH Roca Honda Resources 2008, 2009

Table 9-8. Water Quality in Gallup Sandstone Wells - Minor Constituent

Roca Honda/San Mateo Area Ground Water Minor Constituent Quality Data For Gallup Sandstone (µg/L unless otherwise specified)																											
WELL LOCATION				**Source Data**	**Sample Date**	**Ba** mg/L	**B** mg/L	**Se** mg/L	**Zn**	**Cu**	**Pb**	**As**	**Cr**	**Co**	**Mn**	**Fe**	**Cd**	**Ni**	**Mo**	**Hg**	**Ag**	**Al**	**Gross Alpha** pCi/L	**Ra-226** pCi/L	**Th-230** pCi/L	**Ra-228** pCi/L	**U** mg/L
Well ID #	**Township (N)**	**Range (W)**	**Section**																								
32	13	8	23	RH	8/21/2008	ND	0.4	ND	ND	ND	ND	ND	ND	ND	0.01	0.06	ND	ND	ND	ND	ND	ND	2.2	0.13	1.8	1.2	ND
16	13	8	17	RH	8/25/2008	ND	.03	ND	.02	ND	ND	ND	ND	ND	.02	ND	ND	ND	ND	ND	ND	ND	3.9	0.85	0.7	1.1	ND
16				RH	11/13/2008	ND	.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.7	0.32	-0.2	-0.05	ND
16				RH	2/12/2009	ND	0.4	ND	0.05	0.01	ND	ND	ND	ND	0.08	13.8	ND	ND	ND	ND	ND	ND	6.0	0.71	0.04	0.13	ND

Data Source:

A NMEI 1974 (see particularly Table 7.5, Table 7.7)
B Cooper and John 1968 (see particularly Table 1)
C GMRC 1979a (see particularly Pt. 1: Table 2.6-2, Table 2.6-4, Table 2.2-19; also Pt. 1 Appendix B, Table B-1, Table B-3, Table B-4, Table B-6, Table B-7, Table B-9, Table B-10)
D GMRC 1979c (App. D to source E below) (see particularly Table 4)
E GMRC 1979d (see particularly Table II-4, Table III-1)
F Metric Corp. 2005b
F[a] Metric Corp. 2005a (see particularly Figure 7, Table 1)
G RGRC 1994
H NMED DP-61 file
I Brod and Stone 1981
RH Roca Honda Resources 2008, 2009

Table 9-9. Water Quality in Westwater Canyon Member Wells - Major Constituents

Roca Honda/San Mateo Area Ground Water Major Constituent Quality Data For Westwater Canyon Member (mg/L unless otherwise specified)																					
WELL LOCATION				Source Data	Sample Date	Specific conductance (µmhos)	pH (s.u.)	Temp °F	Hardness (mg/L as $CaCO_3$)	Alkalinity (as $CaCO_3$)	Ca (dissolved)	Mg	Na (dissolved)	K (dissolved)	Bicarbonate as HCO_3	Sulfate as SO_4	Cl	F	Silica as SiO_2	Nitrogen Nitrate as NO_3	TDS
Well ID #	Township (N)	Range (W)	Section																		
116				RH	8/19/2008	3458	6.48	63.94	1960	175	544	146	236	2		2080	57	0.6	15.6	19.7	3290
116				RH	11/13/2008	3374	6.89	51.51	1890	175	518	144	240	6	213	1970	52	0.7	16.9	21.3	3330
116				RH	2/10/2009	3467	7.31	50.43	1930	172	538	142	240	6	210	1940	48	0.7	18.3	20.1	3310
114				RH	9/18/2008	3246	6.64	59.44	1770	175	504	125	208	10	213	1910	51	0.5	20.0	24.3	3140
114				RH	2/18/2009	3376	7.79	53.44	1870	188	524	135	215	11	229	1880	48	0.5	18.8	19.2	3210
113				RH	9/22/2008	3327	6.59	60.61	1980	168	548	147	236	7	205	2090	52	0.5	21.9	24.6	3320
113				RH	11/10/2008	3665	7.42	52.34	1960	173	539	148	224	6	212	2030	34	0.5	20.0	19.8	3280
113				RH	2/12/2009	3430	7.59	54.27	1840	168	507	138	231	6	205	2010	48	0.6	18.3	22.3	3440
138				RH	9/23/2008				1970	167	542	151	221	9	204	2040	51	0.3	22.7	22.8	3290
S1				RH	11/06/2008	798	8.16		63	176	19	4	169	3	203	204	4	0.7	29.2	ND	509
S1				RH	2/17/2009	722	8.06		48	171	14	3	139	2	200	205	3	0.7	20.2	ND	526
S4				RH	11/05/2008	775	7.93		99	177	31	5	137	3	205	201	3	0.6	27.8	ND	523
S4				RH	3/05/2009	762	8.2		85	176	26	5	126	3	214	194	2	0.6	21.7	ND	524
S3				RH	11/05/2008	640	7.96		67	170	21	3	134	2	198	152	3	0.8	32.5	ND	437
S3				RH	2/19/2009	661	8.01		53	168	18	2	123	3	205	148	3	0.7	25	ND	425
73	13	8	24	I	1974	900					4	0.5	240	2	280	265	10			0.8	650
112	13	9	22	I	8/24/1977	2,720					285	91	230	9.2	192	1,188	54			47	2,255
113	13	9	22	I	2/26/1975	2,150											36			18	2,200
114	13	9	22	I	2/26/1975	3,100											40			4.7	2,000
119	13	9	23	I	Mar-75	1,300											4.8			0.06	720

Data Source:

A NMEI 1974 (see particularly Table 7.5, Table 7.7)
B Cooper and John 1968 (see particularly Table 1)
C GMRC 1979a (see particularly Pt. 1: Table 2.6-2, Table 2.6-4, Table 2.2-19; also Pt. 1 Appendix B, Table B-1, Table B-3, Table B-4, Table B-6, Table B-7, Table B-9, Table B-10)
D GMRC 1979c (App. D to source E below) (see particularly Table 4)
E GMRC 1979d (see particularly Table II-4, Table III-1)
F Metric Corp. 2005b
F[a] Metric Corp. 2005a (see particularly Figure 7, Table 1)
G RGRC 1994
H NMED DP-61 file
I Brod and Stone 1981
RH Roca Honda Resources 2008, 2009 (S1, S3, and S4 are RHR Monitoring Wells)

Table 9-10. Water Quality in Westwater Canyon Member Wells - Minor Constituents

oca Honda/San Mateo Area Ground Water Minor Constituent Quality Data For Westwater Canyon Member (ug/L unless otherwise specified)

WELL LOCATION				Source Data	Sample Date	Ba mg/L	B mg/L	Se mg/L	Zn	Cu	Pb	As	Cr	Co	Mn	Fe	Cd	Ni	Mo	Hg	Ag	Al	Gross Alpha pCi/L	Ra-226 pCi/L	Th-230 pCi/L	Ra-228 pCi/L	U mg/L
Well ID #	Township (N)	Range (W)	Section																								
116				RH	8/19/2008	ND	0.3	0.079	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22.6	0.35	0.0	0.77	0.0109
116				RH	11/13/2008	ND	0.2	0.061	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17.9	0.37	0.0	0.50	0.0106
116				RH	2/10/2009	ND	0.2	0.064	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	23.7	0.27	0.05	0.58	0.0121
114				RH	9/18/2008	0.2	0.2	0.048	.02	ND	ND	ND	ND	ND	0.07	ND	ND	ND	ND	ND	ND	ND	50.4	0.96	1.8	0.79	0.0199
114				RH	2/18/2009	ND	0.3	0.039	0.04	ND	ND	ND	ND	ND	0.07	ND	ND	ND	ND	ND	ND	ND	50.3	0.45	0.2	0.90	0.0217
113				RH	9/22/2008	ND	0.3	0.027	.02	ND	ND	0.001	ND	ND	0.11	ND	ND	ND	ND	ND	ND	ND	25.4	0.26	1.8	-0.3	0.0158
113				RH	11/10/2008	ND	0.2	0.024	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	28.2	0.27	0.3	0.35	0.0155
113				RH	2/12/2009	ND	ND	0.023	0.46	ND	ND	ND	ND	ND	0.17	11.0	ND	ND	ND	ND	ND	0.2	21.0	0.31	0.1	0.32	0.0169
138				RH	9/23/2008	ND	0.3	0.31	.02	0.01	ND	ND	ND	ND	0.01	ND	ND	ND	ND	ND	ND	ND	44.4	0.12	0.3	0.38	0.0329
S1				RH	11/06/2008	ND	0.2	ND	ND	ND	ND	0.003	ND	ND	0.02	ND	ND	ND	ND	ND	ND	ND	229	69.0	0.7	0.79	0.0023
S1				RH	2/17/2009	ND	0.1	ND	ND	ND	ND	0.003	ND	ND	0.01	ND	ND	ND	ND	ND	ND	ND	290	56.0	0.2	1.0	0.0019
S4				RH	11/05/2008	ND	0.2	ND	ND	ND	ND	0.004	ND	ND	0.02	0.05	ND	ND	ND	ND	ND	ND	8.5	.26	0.0	0.93	0.002
S4				RH	3/05/2009	ND	ND	ND	0.3	ND	ND	0.003	ND	ND	0.02	ND	0.03	ND	ND	ND	ND	ND	6.6	.32	0.2	-.2	0.0019
S3				RH	11/05/2008	ND	0.2	ND	ND	ND	ND	0.003	ND	ND	0.02	ND	ND	ND	ND	ND	ND	ND	22.2	4.6	0.0	.23	0.006
S3				RH	2/19/2009	ND	0.1	ND	ND	ND	ND	0.003	ND	ND	0.03	ND	ND	ND	ND	ND	ND	ND	21.9	4.0	0.04	.25	0.0066

Data Source:

A NMEI 1974 (see particularly Table 7.5, Table 7.7)
B Cooper and John 1968 (see particularly Table 1)
C GMRC 1979a (see particularly Pt. 1: Table 2.6-2, Table 2.6-4, Table 2.2-19; also Pt. 1 Appendix B, Table B-1, Table B-3, Table B-4, Table B-6, Table B-7, Table B-9, Table B-10)
D GMRC 1979c (App. D to source E below) (see particularly Table 4)
E GMRC 1979d (see particularly Table II-4, Table III-1)
F Metric Corp. 2005b
F[a] Metric Corp. 2005a (see particularly Figure 7, Table 1)
G RGRC 1994
H NMED DP-61 file
I Brod and Stone 1981
O OSE 2008
RH Roca Honda Resources 2008, 2009 (S1, S3, and S4 are RHR Monitoring Wells)

Table 9-12. Mine Dewatering Water Quality

Mine Dewatering Water Quality **Primarily Westwater Canyon Member, with Some Mixing with Dakota Sandstone** (except conductivity and pH, values are dissolved and in mg/L; radium and gross alpha in pCi/L)			
	11/05/1979	11/09/1979	11/07/1979
Constituent	Mt. Taylor	Bokum Marquez	Johnny M
TDS	696	1190	753
Conductivity (µmhos)	1061	1760	756
pH (s.u.)	9.02	8.43	7.85
As	0.007	<0.005	0.044
Ba	0.149	<0.001	0.212
Se	0.018	0.005	0.128
Mo	0.13	<0.01	0.612
NH_3	0.08	0.4	0.36
Na	225.4	361.1	101.2
Cl	11.9	38.7	8.53
SO_4	251.9	574.6	188.5
Ca	3.2	25.8	51.6
K	1.56	3.9	3.9
Bicarbonate	246	277.8	256
Cd	<0.001	<0.001	<0.001
Nitrate/Nitrite	0.25	0.18	0.36
Mg	0	0.6	15.6
V	<0.01	<0.01	1.408
Zn	<0.25	<0.25	<0.25
Al	1.12	0.53	17.8
Pb	<0.005	<0.005	0.008
Gross alpha	990±50	450±40	1,700±100
Ra-226	17±5	0.21± 0.06	Not analyzed
U	0.45	<0.005	5.09

µmhos = micromhos
NMEID 1980

Appendix 9-A

Water Quality Data
2008-2009 Sampling
Alluvial Wells

Table A-1 Alluvial Well Water Quality Data (Page 1 of 4)

WELL ID	120	120		120	120	121	21	21	21	21	115	115	115	33	33	33	UNITS	R.L.	METHOD
Date Sampled	8/6/08	11/18/08		2/18/09	5/26/09	8/18/08	8/21/08	11/8/08	2/11/09	5/19/09	9/16/08	11/13/08	5/26/09	9/23/08	11/17/08	5/19/09			
FIELD MEASUREMENTS																			
Water Level (Altitude)	6832	6832	6832	-		6838	7061	7061	12.12		6736	6722		7133	7132		ft.		
pH	7.13	7.71	7.71	9.29		9.16	6.99	7.78	7.66		7.10	7.71		-	7.52		s.u.	HANNA Multi-meter	
Conductivity	1218	1206	1206	1496		1573	601	669	649		765	875		-	1309		umhos/cm	HANNA Multi-meter	
Temperature	67.00	53.52	53.52	43.00		56.60	60.15	54.45	51.48		56.41	57.50		-	54.98		degrees F	HANNA Multi-meter	
Dissolved Oxygen	-	-	-	-		-	-	-	-		-	-		-	-		%	HANNA Multi-meter	
Total Dissolved Solids, TDS	-	603	603	748		-	-	334	325		-	437		-	655		mg/l	HANNA Multi-meter	
Turbidity	0	0	0	0		38.16	17.85	9.14	0.39		0	0		5.81	121		t.u.	HANNA Multi-meter	
MAJOR IONS																			
Alkalinity, Total as CaCO3	330	329	324	442	332	207	313	328	340	345	281	286	297	443	421	229	mg/l	1.0	A2320 B
Carbonate as CO3	ND	ND	ND	33	ND	45	ND	ND	ND	ND	ND	ND	7	ND	ND	9	mg/l	1.0	A2320 B
Bicarbonate as HCO3	400	401	395	472	405	161	382	401	415	421	343	349	348	540	514	261	mg/l	1.0	A2320 B
Hydroxide as OH	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	1.0	A2320 B
Calcium	69	54	67	10	65	4	54	56	41	43	49	47	43	71	71	4	mg/l	1	E200.7
Chloride	26	24	24	34	23	42	7	7	5	6	15	15	13	39	34	ND	mg/l	1	E300.0
Fluoride	1.3	1.6	1.4	2.8	1.3	0.5	1.0	1.1	1.1	1.1	1.1	1.1	1.1	0.9	0.7	1.1	mg/l	0.1	A4500-F C
Magnesium	25	20	25	4	25	4	16	16	15	13	9	9	8	17	17	1	mg/l	1	E200.7
Nitrogen, Ammonia as N	0.1	0.1	0.1	0.10	0.07	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E350.1
Nitrogen, Kjeldahl, Total as N	ND	ND	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.5	E351.2
Nitrogen, Nitrate as N	-	ND	ND	ND	ND	-	-	-	ND	ND	-	5.6	5.7	-	2.7	0.1	mg/l	0.1	E353.2
Nitrogen, Nitrate + Nitrite as N	-	ND	ND	ND	ND	-	-	ND	ND	ND	-	5.6	5.7	-	2.7	0.1	mg/l	0.05	E353.2
Nitrogen, Nitrite as N	ND	ND	ND	ND	ND	ND	0.14	ND	ND	ND	5.71	ND	ND	2.00	ND	ND	mg/l	0.1	A4500-NO2 B
Nitrogen, Total	ND	ND	ND	ND	ND	1.7	ND	ND	ND	ND	5.7	5.6	5.7	2.0	2.8	ND	mg/l	0.5	A4500-N A
Potassium	3	3	3	4	3	3	1	1	ND	ND	3	3	3	2	2	1	mg/l	1	E200.7
Silica	18.4	17.1	18.7	8.7	17.4	1.1	67.2	70.9	59.0	45.7	19.8	20.6	16.9	30.6	27.7	9.6	mg/l	0.2	E200.7
Sodium	227	279	232	313	186	368	78	86	81	76	15.4	157	144	263	264	88	mg/l	1	E200.7
Sulfate	356	364	334	273	338	452	22	26	16	19	137	129	123	300	264	1	mg/l	1	E300.0
NON-METALS																			
Organic Carbon, Total (TOC)	1.6	2.7	2.5	1.9	2.9	ND	ND	2.4	1	1.2	0.6	1.8	0.7	0.9	2.2	ND	mg/l	0.5	A5310 C
Carbon, Total	1.5	57.6	58.2	9.3	73.3	4.1	1.6	47.4	19.1	80.0	1.9	48.2	65.3	2.9	47.0	45.3	mg/l	9.7	SW9060
Phenolics, Total Recoverable	-	ND	ND	0.02	0.03	-	-	ND	ND	0.02	-	0.02	0.02	-	0.02	ND	mg/l	0.0	E420.1
Cyanide, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.005	Kelada mod
PHYSICAL PROPERTIES																			
Color	5.0	20.0	15.0	5.0	10.0	160.0	5.0	5.0	ND	ND	ND	5.0	ND	220.0	118	ND	c.u.	5.0	A2120 B
Conductivity	1370	1440	1350	1600	1330	1510	608.00	662	593	649	907	911	905	1500	1410	392	umhos/cm	1	A2510 B
Corrosivity	0.40	0.8	0.7	0.8	0.6	0.82	0.38	0.5	0.1	0.5	0.50	0.7	0.6	0.50	0.6	0.1	unitless		Calc.
Hardness as CaCO3	276	218	270	41	263	26	200	204	165	160	157	153	140	250	249	14	mg/l	1	A2340 B
Odor	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	T.O.N	1	A2150 B
pH	7.61	8.05	7.91	8.69	7.84	9.42	7.60	7.70	7.46	7.78	7.81	8.04	7.98	7.56	7.70	8.61	s.u.	0.01	A4500-H B
Solids, TDS @ 180 C	882	919	859	982	881	941	409.00	452	457	439	566	575	582	988	894	265	mg/l	10	A2540 C

Table A-1 Alluvial Well Water Quality Data (Page 2 of 4)

WELL ID	120	120		120	120	121	21	21	21	21	115	115	115	33	33	33	UNITS	R.L.	METHOD
Date Sampled	8/6/08	11/18/08		2/18/09	5/26/09	8/18/08	8/21/08	11/8/08	2/11/09	5/19/09	9/16/08	11/13/08	5/26/09	9/23/08	11/17/08	5/19/09			
METALS-DISSOLVED																			
Aluminum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.7
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Arsenic	ND	0.001	0.001	ND	ND	ND	0.003	0.003	0.003	0.003	ND	ND	ND	ND	ND	ND	mg/l	0.001	E200.8
Barium	ND	ND	ND	ND	ND	ND	0.10	0.1	0.2	0.1	ND	ND	ND	ND	ND	0.4	mg/l	0.1	E200.8
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.7
Boron	0.2	0.3	0.2	0.5	0.2	0.3	ND	0.1	ND	ND	0.2	0.2	0.2	0.3	0.3	ND	mg/l	0.1	E200.7
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Copper	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	mg/l	0.01	E200.8
Iron	ND	ND	ND	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05	ND	ND	mg/l	0.03	E200.8
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Manganese	0.07	0.07	0.08	0.01	0.10	ND	ND	ND	ND	ND	ND	ND	ND	0.26	0.14	ND	mg/l	0.01	E200.8
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.001	E245.1
Molybdenum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Nickel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Selenium	ND	0.002	0.002	ND	ND	ND	ND	ND	ND	ND	0.026	0.026	0.028	0.003	0.002	ND	mg/l	0.001	E200.8
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.10	E200.8
Uranium	0.0033	0.0027	0.0032	ND	0.0036	ND	0.0049	0.0053	0.0055	0.0051	0.1800	0.166	0.192	0.0085	0.0080	ND	mg/l	0.0003	E200.8
Vanadium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Zinc	ND	0.01	0.02	ND	ND	ND	ND	ND	ND	0.03	0.02	ND	0.03	ND	ND	0.02	mg/l	0.01	E200.8
METALS-TOTAL																			
Uranium	0.0032	0.0027	0.0031	ND	0.0035	ND	0.0055	0.0060	0.0057	0.0057	0.1700	0.169	0.185	0.0100	0.0074	ND	mg/l	0.0003	E200.8
RADIONUCLIDES-TOTAL																			
Gross Alpha	6.7	11.8	8.2	2.1	5.3	1.8	8.8	7.4	5.6	8.6	205.0	228	166	26.8	13.7	3.5	pCi/L		E900.0
Gross Alpha precision (+/-)	3.1	3.5	3.1	2.6	2.9	3.2	2.3	2.2	2.0	2.4	8.1	8.6	7.4	5.0	5.2	1.0	pCi/L		E900.0
Gross Alpha MDC	4.3	4.2	4.1	4.2	4.2	5.2	2.6	2.8	2.5	2.8	2.3	2.3	2.7	5.2	7.0	1.2	pCi/L		E900.0
Gross Beta	0.9	4.9	9.0	1.8	-3	3.6	3.5	6.1	-2	-2	54.4	66.4	71.8	5.4	8.9	2.3	pCi/L		E900.0
Gross Beta precision (+/-)	3.7	3.4	3.4	2.7	3.3	3.5	1.8	1.9	1.9	1.8	3.2	3.3	3.3	3.5	3.7	2.0	pCi/L		E900.0
Gross Beta MDC	6.2	5.5	5.5	4.4	5.7	5.8	2.9	3.0	3.3	3.0	3.9	3.8	3.8	5.7	6.0	3.4	pCi/L		E900.0
Radium 226	0.41	0.41	0.23	-0.06	0.51	-0.02	0.03	0.09	-0.2	-0.1	-0.10	-0.1	-0.1	-0.03	-0.3	0.3	pCi/L		E903.0
Radium 226 precision (+/-)	0.21	0.18	0.15	0.12	0.19	0.16	0.12	0.13	0.09	0.10	0.07	0.07	0.10	0.13	0.12	0.17	pCi/L		E903.0
Radium 226 MDC	0.27	0.22	0.21	0.23	0.22	0.28	0.20	0.20	0.21	0.20	0.17	0.17	0.22	0.24	0.29	0.22	pCi/L		E903.0
Radium 228	0.42	0.25	0.66	0.71	2.6	0.27	0.31	2.40	0.46	1.00	0.32	0.01	0.03	0	0.01	0.05	pCi/L		RA-05
Radium 228 precision (+/-)	0.67	0.71	0.73	0.71	0.78	0.72	0.68	0.82	0.71	0.75	0.72	0.71	0.67	0.80	1.0	0.8	pCi/L		RA-05
Radium 228 MDC	1.1	1.2	1.2	1.1	1.1	1.2	1.1	1.2	1.2	1.2	1.2	1.2	1.1	1.3	1.8	1.3	pCi/L		RA-05
Radon 222	636	373	421	208	567	-162	1510	298	1510	1030	732	909	1010	820	946	65	pCi/L	100	D5072-92
Radon 222 precision (+/-)	63.1	50.1	50.6	49.7	52.3	51.9	56.0	62.5	66.8	51.4	53.4	50.9	57.2	46.8	67.8	38.6	pCi/L		D5072-92
Thorium 228	0.0	0.1	0.2	0.05	0.03	0.0	0.0	0.1	0.009	-0.030	-0.1	0.1	0.1	1.1	0.2	0.1	pCi/L		E907.0
Thorium 228 precision (+/-)	0.1	0.2	0.2	0.09	0.07	0.2	0.1	0.1	0.07	0.07	0.2	0.1	0.1	0.9	0.1	0.1	pCi/L		E907.0
Thorium 228 MDC	-	-	-	0.2	0.1	-	-	-	0.1	0.2	-	-	0.2	-	-	0.2	pCi/L		E907.0
Thorium 230	0.1	0.1	0.0	0.1	-0.02	1.7	0.0	0.0	-0.02	-0.01	0.3	-0.1	-0.1	2.6	-0.2	-0.2	pCi/L		E907.0
Thorium 230 precision (+/-)	0.2	0.3	0.3	0.1	0.1	0.5	0.2	0.1	0.07	0.10	0.1	0.1	0.1	0.2	0.1	0.1	pCi/L		E907.0
Thorium 230 MDC	-	-	-	0.2	0.2	-	-	-	0.1	0.2	-	-	0.2	-	-	0.2	pCi/L		E907.0
Thorium 232	0.1	0.0	0.1	0.03	-0.04	0.0	0.0	0.0	0.008	0.050	0.0	0.0	0.0	0.5	0.0	-0.008	pCi/L		E907.0
Thorium 232 precision (+/-)	0.1	0.1	0.2	0.09	0.06	0.1	0.1	0.09	0.05	0.09	0.1	0.1	0.1	0.1	0.1	0.09	pCi/L		E907.0
Thorium 232 MDC	-	-	-	0.2	0.2	-	-	-	0.1	0.2	-	-	0.2	-	-	0.2	pCi/L		E907.0

Table A-1 Alluvial Well Water Quality Data (Page 3 of 4)

WELL ID	120	120		120	120	121	21	21	21	21	115	115	115	33	33	33	UNITS	R.L.	METHOD
Date Sampled	8/6/08	11/18/08		2/18/09	5/26/09	8/18/08	8/21/08	11/8/08	2/11/09	5/19/09	9/16/08	11/13/08	5/26/09	9/23/08	11/17/08	5/19/09			
DATA QUALITY																			
A/C Balance (+/- 5)	2.30	5.21	4.69	-3.58	-3.42	6.19	3.15	2.97	-3.66	-7.02	2.83	3.48	-1.11	0.30	4.44	-6.34	%		Calc.
Anions	14.80	14.9	14.2	15.6	14.4	14.80	6.95	7.39	7.34	7.48	9.36	9.28	9.34	16.40	15.1	4.7	meq/l		Calc.
Cations	15.50	16.5	15.6	14.5	13.4	16.70	7.40	7.84	6.82	6.50	9.91	9.95	9.13	16.50	16.5	4.1	meq/l		Calc.
Solids, Total Dissolved Calc.	909	964	904	916	862	998	412	480	439	422	586	583	560	1010	981	247	mg/l		Calc.
TDS Balance (0.80 - 1.20)	0.97	0.950	0.950	1.07	1.02	0.94	0.99	0.940	1.04	1.04	0.97	0.990	1.040	0.98	0.910	1.070			Calc.
VOLATILE ORGANIC COMPOUNDS																			
1,1,1,2-Tetrachloroethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,1,1-Trichloroethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,1,2,2-Tetrachloroethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,1,2-Trichloroethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,1-Dichloroethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,1-Dichloroethene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,1-Dichloropropene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,2,3-Trichloropropane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,2-Dibromoethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,2-Dichlorobenzene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,2-Dichloroethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,2-Dichloropropane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,3-Dichlorobenzene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,3-Dichloropropane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
1,4-Dichlorobenzene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
2,2-Dichloropropane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
2-Chloroethyl vinyl ether	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
2-Chlorotoluene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
4-Chlorotoluene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Benzene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Bromobenzene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Bromochloromethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Bromodichloromethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Bromoform	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Bromomethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Carbon tetrachloride	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Chlorobenzene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Chlorodibromomethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Chloroethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Chloroform	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Chloromethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
cis-1,2-Dichloroethene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
cis-1,3-Dichloropropene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Dibromomethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Dichlorodifluoromethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Ethylbenzene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
m+p-Xylenes	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Methyl ethyl ketone	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	20	E624
Methylene chloride	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
o-Xylene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Styrene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Tetrachloroethene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Toluene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
trans-1,2-Dichloroethene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
trans-1,3-Dichloropropene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Trichloroethene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Trichlorofluoromethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Vinyl chloride	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Xylenes, Total	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	1.0	E624
Surr: 1,2-Dichlorobenzene-d4	100.0	-	-		-	101.0	101.0	-		-	102.0	-	-	102.0	-	-	% REC	80-120	E624
Surr: Dibromofluormethane	99.0	-	-		-	103.0	103.0	-		-	96.0	-	-	102.0	-	-	% REC	80-120	E624
Surr: p-Bromofluorobenzene	91.0	-	-		-	99.0	100.0	-		-	99.0	-	-	99.0	-	-	% REC	80-120	E624
Surr: Toluene-d8	101.0	-	-		-	95.0	100.0	-		-	100.0	-	-	99.0	-	-	% REC	80-120	E624

Table A-1 Alluvial Well Water Quality Data (Page 4 of 4)

WELL ID	120	120		120	120	121	21	21	21	21	115	115	115	33	33	33	UNITS	R.L.	METHOD
Date Sampled	8/6/08	11/18/08		2/18/09	5/26/09	8/18/08	8/21/08	11/8/08	2/11/09	5/19/09	9/16/08	11/13/08	5/26/09	9/23/08	11/17/08	5/19/09			
SYNTHETIC ORGANIC COMPOUNDS																			
1,2,4-Trichlorobenzene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
2,4,6-Trichlorophenol	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
2,4-Dichlorophenol	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
2,4-Dimethylphenol	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
2,4-Dinitrophenol	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	50	E625
2,4-Dinitrotoluene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
2,6-Dinitrotoluene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
2-Chloronaphthalene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
2-Chlorophenol	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
2-Nitrophenol	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
3,3'-Dichlorobenzidine	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	20	E625
4,6-Dinitro-2-methylphenol	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	50	E625
4-Bromophenyl phenyl ether	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
4-Chloro-3-methylphenol	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
4-Chlorophenyl phenyl ether	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
4-Nitrophenol	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	50	E625
Acenaphthene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Acenaphthylene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Anthracene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Azobenzene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Benzidine	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	20	E625
Benzo(a)anthracene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Benzo(a)pyrene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Benzo(b)fluoranthene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Benzo(g,h,i)perylene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Benzo(k)fluorathene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
bis(-2-chloroethoxy)Methane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
bis(-2-chloroethyl)Ether	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
bis(2-chloroisopropyl)Ether	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
bis(2-ethylhexyl)Phthalate	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Butylbenzylphthalate	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Chrysene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Dibenzo(a,h)anthracene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Diethyl phthalate	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Dimethyl phthalate	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Di-n-butyl phthalate	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Di-n-octyl phthalate	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Fluoranthene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Fluorene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Hexachlorobenzene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Hexachlorobutadiene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	20	E625
Hexachlorocyclopentadiene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Hexachloroethane	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Ideno(1,2,3-cd)pyrene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Isophorone	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Naphthalene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
n-Nitrosodimethylamine	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
n-Nitroso-di-n-propylamine	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
n-Nitrosodiphenylamine	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Pentachlorophenol	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	50	E625
Phenanthrene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Phenol	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Pyrene	ND	-	-		-	ND	ND	-		-	ND	-	-	ND	-	-	ug/l	10	E625
Surr: 2,4,6-Tribromophenol	44.0	-	-		-	51.0	41.0	-		-	52.0	-	-	42.0	-	-	% REC	26-116	E625
Surr: 2-Fluorobiphenyl	53.0	-	-		-	60.0	49.0	-		-	54.0	-	-	48.0	-	-	% REC	25-94	E625
Surr: 2-Fluorophenol	28.0	-	-		-	24.0	27.0	-		-	34.0	-	-	31.0	-	-	% REC	11-67	E625
Surr: Nitrobenzene-d5	59.0	-	-		-	64.0	46.0	-		-	52.0	-	-	45.0	-	-	% REC	19-102	E625
Surr: Phenol-d5	26.0	-	-		-	29.0	25.0	-		-	32.0	-	-	27.0	-	-	% REC	15-54	E625
Surr: Terphenyl-d14	52.0	-	-		-	65.0	54.0	-		-	44.0	-	-	44.0	-	-	% REC	39-106	E625

Appendix 9-B

Water Quality Data
2008-2009 Sampling
Menefee Formation Wells

Table B-1 Menefee Formation Well Water Quality Data (Page 1 of 4)

WELL ID	27	27	27	27	87	87	87	87	62	62	62		62	100	100	100	100	7	7	7	7	UNITS	R.L.	METHOD
Date Sampled	8/6/08	11/13/08	2/16/09	5/19/09	8/12/08	11/12/08	2/16/09	5/19/09	8/20/08	11/11/08	2/18/09		5/26/09	8/21/08	11/8/08	2/11/09	5/19/09	9/17/08	11/16/08	2/16/09	5/18/09			
FIELD MEASUREMENTS																								
Water Level (Altitude)	7131	7131	-		7277	7277	-		7229	7229	-	-		7049	7047	29.78		7066	7067	-		ft.		
pH	6.82	7.38	7.73		7.78	8.54	8.46		7.40	8.03	8.39	8.39		6.97	7.81	7.56		8.30	9.53	8.69		s.u.	HANNA Multi-meter	
Conductivity	505	498	499		587	643	663		956	893	834	834		378	404	418		3742	4759	3976		umhos/cm	HANNA Multi-meter	
Temperature	68.73	56.39	46.60		68.89	53.70	46.42		57.90	58.55	55.17	55.17		56.59	50.93	53.93		62.45	55.35	55.02		degrees F	HANNA Multi-meter	
Dissolved Oxygen	-	-	-		-	-	-		-	-	-	-		-	-	-		-	-	-		%	HANNA Multi-meter	
Total Dissolved Solids, TDS	-	249	250		-	322	331		-	446	417	417		-	202	209		-	2377	1988		mg/l	HANNA Multi-meter	
Turbidity	0	0	0		0	0	0.75		0	0	0	0		83	68	54		233	253	246		t.u.	HANNA Multi-meter	
MAJOR IONS																								
Alkalinity, Total as CaCO3	250	249	248	257	309	329	326	344	340	328	321	320	329	130	187	208	211	976	1220	803	888	mg/l	1.0	A2320 B
Carbonate as CO3	ND	ND	ND	ND	ND	ND	ND	9	ND	ND	8	9	11	ND	ND	ND	ND	158	280	16	67	mg/l	1.0	A2320 B
Bicarbonate as HCO3	310	304	302	314	377	402	398	401	415	400	376	371	380	158	228	254	258	870	918	947	948	mg/l	1.0	A2320 B
Hydroxide as OH	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	1.0	A2320 B
Calcium	72	63	57	56	21	36	27	23	48	30	19	20	22	18	29	33	34	14	8	18	18	mg/l	1	E200.7
Chloride	6	6	6	5	4	5	4	4	106	45	35	35	40	13	8	4	4	92	82	77	76	mg/l	1	E300.0
Fluoride	0.4	0.4	0.4	0.5	1.8	1.5	1.6	1.7	0.6	0.6	0.6	0.6	0.6	0.2	0.3	0.5	0.5	2.8	2.8	2.8	2.8	mg/l	0.1	A4500-F C
Magnesium	11	10	9	9	7	11	9	8	14	9	6	6	7	5	9	10	10	4	4	5	5	mg/l	1	E200.7
Nitrogen, Ammonia as N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5	0.14	0.22	0.2	0.3	0.17	0.2	mg/l	0.1	E350.1
Nitrogen, Kjeldahl, Total as N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.8	ND	ND	1	0.9	1.0	0.7	mg/l	0.5	E351.2
Nitrogen, Nitrate as N	-	ND	ND	0.1	-	0.5	0.8	0.2	-	0.1	ND	0.1	0.1	-	-	ND	ND	-	ND	ND	ND	mg/l	0.1	E353.2
Nitrogen, Nitrate + Nitrite as N	-	ND	0.08	0.10	-	0.5	0.78	0.20	-	0.1	0.09	0.10	0.11	-	ND	ND	ND	-	ND	ND	ND	mg/l	0.05	E353.2
Nitrogen, Nitrite as N	0.07	ND	ND	ND	0.11	ND	ND	ND	0.13	ND	ND	ND	ND	ND	ND	ND	ND	0.05	ND	ND	ND	mg/l	0.1	A4500-NO2 B
Nitrogen, Total	ND	ND	ND	ND	ND	0.5	0.8	ND	ND	ND	ND	ND	ND	ND	0.8	ND	ND	1.0	0.9	1.0	0.7	mg/l	0.5	A4500-N A
Potassium	4	4	4	4	2	2	2	2	2	1	1	1	1	9	11	8	6	5	5	4	4	mg/l	1	E200.7
Silica	51.6	55.9	38.7	34.7	18.9	29.3	21.3	16.7	14.0	13.8	9.4	10.1	10.8	5.2	3.2	26.6	19.1	14.9	14.0	7.2	7.6	mg/l	0.2	E200.7
Sodium	38	34	35	41	135	129	113	111	188	183	154	156	168	39	39	35	34	1190	1260	986	1110	mg/l	1	E200.7
Sulfate	21	20	18	17	23	26	22	24	74	67	62	62	60	13	6	6	4	1260	1250	1300	1240	mg/l	1	E300.0
NON-METALS																								
Organic Carbon, Total (TOC)	0.7	1.8	0.8	0.8	0.6	1.4	0.8	0.8	1.0	1.9	0.9	0.9	0.8	1.5	3.2	1.1	0.9	19.8	31.7	23.4	2.7	mg/l	0.5	A5310 C
Carbon, Total	ND	46.5	124	56.2	ND	69.9	155	67	ND	56.0	7.7	7.5	69.4	1.4	27.4	2.9	44.4	4.0	206.0	184	186	mg/l	9.7	SW9060
Phenolics, Total Recoverable	-	0.02	0.021	0.040	-	ND	ND	0.04	-	ND	0.02	0.02	0.06	-	ND	ND	0.03	-	ND	ND	0.04	mg/l	0.0	E420.1
Cyanide, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.005	Kelada mod
PHYSICAL PROPERTIES																								
Color	ND	5.0	ND	ND	ND	ND	ND	ND	5.0	ND	ND	ND	ND	189.0	20.0	ND	70.0	235.0	263	40.0	200.0	c.u.	5.0	A2120 B
Conductivity	505	507	417	500	632	665	606	662	1070	909	812	816	873	287	337	300	380	4600.0	4860	4450	4320	umhos/cm	1	A2510 B
Corrosivity	0.00	0.5	0.4	0.5	0.58	0.7	0.7	0.8	0.59	0.3	0.3	0.4	0.5	-0.29	0.1	-0.2	0.1	1.50	1.8	0.8	1.3	unitless		Calc.
Hardness as CaCO3	224	196	179	176	83	118	105	91	176	110	72	76	84	64	108	124	128	50	37	65	64	mg/l	1	A2340 B
Odor	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	T.O.N	1	A2150 B
pH	7.17	7.71	7.62	7.79	8.20	8.04	8.17	8.33	7.87	7.82	8.02	8.03	8.11	7.73	7.79	7.41	7.61	9.09	9.54	8.38	8.77	s.u.	0.01	A4500-H B
Solids, TDS @ 180 C	338	330	297	338	3.67	424	413	425	616	520	502	491	529	181	229	279	241	3000.0	3320	2830	2910	mg/l	10	A2540 C

Table B-1 Menefee Formation Well Water Quality Data (Page 2 of 4)

WELL ID	27	27	27	27	87	87	87	87	62	62	62		62	100	100	100	100	7	7	7	7	UNITS	R.L.	METHOD
Date Sampled	8/6/08	11/13/08	2/16/09	5/19/09	8/12/08	11/12/08	2/16/09	5/19/09	8/20/08	11/11/08	2/18/09		5/26/09	8/21/08	11/8/08	2/11/09	5/19/09	9/17/08	11/16/08	2/16/09	5/18/09			
METALS-DISSOLVED																								
Aluminum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.7
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Arsenic	ND	ND	ND	ND	0.008	0.002	0.002	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.004	0.009	ND	0.002	mg/l	0.001	E200.8
Barium	0.2	0.2	0.2	0.2	0.2	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1	0.1	ND	ND	ND	ND	mg/l	0.1	E200.8
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.7
Boron	ND	ND	ND	ND	0.4	0.4	0.3	0.3	ND	0.1	0.1	0.1	0.1	ND	ND	ND	ND	0.4	0.5	0.5	0.5	mg/l	0.1	E200.7
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Copper	0.06	0.08	0.05	0.03	0.02	0.04	0.01	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Iron	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.12	0.51	0.57	0.54	mg/l	0.03	E200.8
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Manganese	ND	ND	ND	ND	ND	ND	ND	ND	0.01	ND	ND	ND	ND	0.10	0.30	0.26	0.21	0.01	0.01	0.06	0.06	mg/l	0.01	E200.8
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.001	E245.1
Molybdenum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Nickel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Selenium	ND	ND	0.001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002	ND	ND	ND	0.001	ND	mg/l	0.001	E200.8
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.10	E200.8
Uranium	0.0049	0.0041	0.0054	0.0049	0.0024	0.0015	0.0016	0.0014	0.0047	0.0027	0.0016	0.0016	0.0018	0.0005	ND	0.0036	0.0031	ND	0.0009	ND	ND	mg/l	0.0003	E200.8
Vanadium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Zinc	0.15	0.26	0.11	0.22	0.01	0.02	ND	0.02	0.03	0.03	0.02	0.02	0.03	ND	ND	ND	ND	0.08	0.08	0.05	0.02	mg/l	0.01	E200.8
METALS-TOTAL																								
Uranium	0.0049	0.0049	0.0051	0.4140	0.0025	0.0018	0.0016	0.0016	0.0048	0.0029	0.0016	0.0017	0.0017	0.0004	0.0009	0.0053	0.0024	0.0007	0.0004	ND	ND	mg/l	0.0003	E200.8
RADIONUCLIDES-TOTAL																								
Gross Alpha	5.5	5.8	5.3	11.1	8.0	8.4	2.0	7.3	4.2	5.5	3.1	3.5	3.8	1.9	6.6	6.3	8.2	6.9	48.9	15.8	35.9	pCi/L		E900.0
Gross Alpha precision (+/-)	1.9	1.4	1.5	2.3	2.1	2.0	1.4	1.7	2.9	2.2	1.8	1.7	1.9	1.0	1.6	1.6	2	7.5	16.2	9.3	12.4	pCi/L		E900.0
Gross Alpha MDC	2.4	1.6	1.9	2.6	2.4	2.2	2.1	1.8	4.4	2.9	2.5	2.4	2.7	1.4	1.8	1.9	2.2	11.6	21.3	13.4	16	pCi/L		E900.0
Gross Beta	-0.2	4.4	4.1	5.3	0.3	5.6	0.7	-0.8	0.6	-3.0	-3	-2	-2	3.5	14.1	5.3	8.2	-7.0	21.0	14.2	4.4	pCi/L		E900.0
Gross Beta precision (+/-)	1.9	1.7	1.7	1.7	1.4	1.7	1.6	2	2.7	2.3	2.1	1.7	2.2	1.7	1.9	1.9	1.7	8.2	8.7	8.5	11.5	pCi/L		E900.0
Gross Beta MDC	3.1	2.7	2.7	2.7	2.4	2.7	2.7	3.4	4.5	3.9	3.7	2.9	3.8	2.7	2.8	3.0	2.7	14.0	13.9	13.9	19.1	pCi/L		E900.0
Radium 226	-0.03	-0.07	-0.006	-0.1	0.12	-0.2	-0.08	-0.05	-0.10	-0.03	0.16	0.0	0.14	0.13	0.009	0.12	0.005	-0.06	0.89	1.3	0.37	pCi/L		E903.0
Radium 226 precision (+/-)	0.14	0.08	0.09	0.07	0.15	0.10	0.10	0.10	0.09	0.11	0.15	0.13	0.12	0.14	0.12	0.13	0.11	0.13	0.33	0.24	0.19	pCi/L		E903.0
Radium 226 MDC	0.26	0.16	0.17	0.18	0.23	0.24	0.22	0.2	0.22	0.20	0.22	0.23	0.18	0.22	0.20	0.19	0.19	0.24	0.38	0.16	0.24	pCi/L		E903.0
Radium 228	0.03	-0.2	1.3	-0.09	0.39	-0.4	2.1	-0.2	0.77	-0.3	0.85	0.55	0.7	0.79	1.5	0.60	0.58	0.1	0.14	2.6	0.45	pCi/L		RA-05
Radium 228 precision (+/-)	0.65	0.70	0.66	0.63	0.66	0.54	0.85	0.69	0.70	0.72	0.70	0.71	0.66	0.70	0.79	0.72	0.69	1.00	1.1	0.67	0.82	pCi/L		RA-05
Radium 228 MDC	1.1	1.2	1.0	1.1	1.1	0.9	1.3	1.2	1.1	1.2	1.1	1.1	1	1.1	1.2	1.2	1.1	1.7	1.8	0.95	1.3	pCi/L		RA-05
Radon 222	724	455	494	518	422	461	631	363	606	676	626	573	591	656	322	964	413	134	204	336	175	pCi/L	100	D5072-92
Radon 222 precision (+/-)	64.9	46.1	51.4	44.8	46.0	54.5	53.6	42.9	54.0	51.6	54.5	53.6	51.8	47.1	63.4	59.9	44.3	50.8	55.4	50.2	39.6	pCi/L		D5072-92
Thorium 228	0.1	0.0	0.08	0.03	-0.1	0.1	0.04	0.09	-0.1	0.0	0.04	0.05	0.02	0.1	0.1	0.3	0.05	-0.4	0.3	0.3	0.4	pCi/L		E907.0
Thorium 228 precision (+/-)	0.1	0.1	0.1	0.1	0.1	0.2	0.08	0.1	0.1	0.1	0.1	0.08	0.1	0.1	0.1	0.2	0.1	0.8	0.3	0.2	0.2	pCi/L		E907.0
Thorium 228 MDC	-	-	0.2	0.3	-	-	0.1	0.2	-	-	0.2	0.1	0.2	-	-	0.2	0.2	-	-	0.3	0.2	pCi/L		E907.0
Thorium 230	-0.2	-0.1	-0.1	0.02	-0.2	0.1	-0.02	0.2	1.7	0.0	0.02	-0.02	0.06	1.5	0.0	0.05	0.06	2.8	-0.5	-0.2	-0.02	pCi/L		E907.0
Thorium 230 precision (+/-)	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.5	0.1	0.1	0.1	0.2	0.5	0.1	0.09	0.2	0.3	0.1	0.2	0.2	pCi/L		E907.0
Thorium 230 MDC	-	-	0.2	0.3	-	-	0.2	0.2	-	-	0.2	0.2	0.3	-	-	0.2	0.2	-	-	0.4	0.3	pCi/L		E907.0
Thorium 232	0.0	0.0	-0.02	-0.02	-0.1	0.1	0.05	-0.01	0.0	0.0	0.08	0.01	-0.04	0.0	0.0	0.01	0.05	0.0	0.0	-0.07	-0.01	pCi/L		E907.0
Thorium 232 precision (+/-)	0.1	0.1	0.07	0.08	0.1	0.2	0.09	0.06	0.1	0.1	0.1	0.08	0.1	0.1	0.07	0.05	0.1	0.1	0.1	0.2	0.1	pCi/L		E907.0
Thorium 232 MDC	-	-	0.2	0.2	-	-	0.2	0.2	-	-	0.2	0.2	0.3	-	-	0.1	0.2	-	-	0.4	0.3	pCi/L		E907.0

Table B-1 Menefee Formation Well Water Quality Data (Page 3 of 4)

WELL ID	27	27	27	27	87	87	87	87	62	62	62		62	100	100	100	100	7	7	7	7	UNITS	R.L.	METHOD
Date Sampled	8/6/08	11/13/08	2/16/09	5/19/09	8/12/08	11/12/08	2/16/09	5/19/09	8/20/08	11/11/08	2/18/09		5/26/09	8/21/08	11/8/08	2/11/09	5/19/09	9/17/08	11/16/08	2/16/09	5/18/09			
DATA QUALITY																								
A/C Balance (+/- 5)	4.57	-0.732	-3.10	-2.59	4.74	6.15	-1.31	-6.35	1.63	4.80	-3.46	-2.06	0.0989	-0.82	0.667	-2.33	-2.88	4.15	2.59	-1.23	3.98	%		Calc.
Anions	5.69	5.56	5.52	5.68	6.87	7.37	7.24	7.58	11.30	9.26	8.73	8.69	9.01	3.25	4.12	4.43	4.45	48.60	52.9	45.4	45.9	meq/l		Calc.
Cations	6.24	5.48	5.19	5.39	7.56	8.34	7.05	6.68	11.70	10.2	8.14	8.34	9.03	3.19	4.17	4.23	4.2	52.80	55.7	44.3	49.7	meq/l		Calc.
Solids, Total Dissolved Calc.	317	331	327	331	391	447	405	402	644	550	482	486	511	177	301	256	244	3170	3360	2880	3000	mg/l		Calc.
TDS Balance (0.80 - 1.20)	1.07	1.00	0.910	1.020	0.94	0.950	1.02	1.06	0.96	0.950	1.04	1.01	1.04	1.02	0.760	1.09	0.99	0.95	0.990	0.980	0.970			Calc.
VOLATILE ORGANIC COMPOUNDS																								
1,1,1,2-Tetrachloroethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,1,1-Trichloroethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,1,2,2-Tetrachloroethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,1,2-Trichloroethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,1-Dichloroethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,1-Dichloroethene	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,1-Dichloropropene	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,2,3-Trichloropropane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,2-Dibromoethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,2-Dichlorobenzene	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,2-Dichloroethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,2-Dichloropropane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,3-Dichlorobenzene	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,3-Dichloropropane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
1,4-Dichlorobenzene	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
2,2-Dichloropropane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
2-Chloroethyl vinyl ether	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
2-Chlorotoluene	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
4-Chlorotoluene	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Benzene	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Bromobenzene	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Bromochloromethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Bromodichloromethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Bromoform	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Bromomethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Carbon tetrachloride	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Chlorobenzene	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Chlorodibromomethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Chloroethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Chloroform	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Chloromethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
cis-1,2-Dichloroethene	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
cis-1,3-Dichloropropene	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Dibromomethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Dichlorodifluoromethane	ND	-		-	ND	-		-	ND	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Ethylbenzene	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
m+p-Xylenes	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Methyl ethyl ketone	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	20	E624
Methylene chloride	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
o-Xylene	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Styrene	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Tetrachloroethene	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Toluene	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
trans-1,2-Dichloroethene	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
trans-1,3-Dichloropropene	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Trichloroethene	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Trichlorofluoromethane	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Vinyl chloride	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Xylenes, Total	ND	-		-	ND	-		-	-	-			-	ND	-		-	ND	-		-	ug/l	1.0	E624
Surr: 1,2-Dichlorobenzene-d4	100.0	-		-	98.0	-		-	-	-			-	92.0	-		-	102.0	-		-	% REC	80-120	E624
Surr: Dibromofluormethane	92.0	-		-	98.0	-		-	-	-			-	95.0	-		-	99.0	-		-	% REC	80-120	E624
Surr: p-Bromofluorobenzene	90.0	-		-	93.0	-		-	-	-			-	93.0	-		-	101.0	-		-	% REC	80-120	E624
Surr: Toluene-d8	96.0	-		-	92.0	-		-	-	-			-	97.0	-		-	98.0	-		-	% REC	80-120	E624

Table B-1 Menefee Formation Well Water Quality Data (Page 4 of 4)

WELL ID	27	27	27	27	87	87	87	87	62	62	62	62	100	100	100	100	7	7	7	7	UNITS	R.L.	METHOD
Date Sampled	8/6/08	11/13/08	2/16/09	5/19/09	8/12/08	11/12/08	2/16/09	5/19/09	8/20/08	11/11/08	2/18/09	5/26/09	8/21/08	11/8/08	2/11/09	5/19/09	9/17/08	11/16/08	2/16/09	5/18/09			
SYNTHETIC ORGANIC COMPOUNDS																							
1,2,4-Trichlorobenzene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
2,4,6-Trichlorophenol	ND	-		-	ND	-		?ND	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
2,4-Dichlorophenol	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
2,4-Dimethylphenol	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	ˆ		-	ug/l	10	E625
2,4-Dinitrophenol	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	50	E625
2,4-Dinitrotoluene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
2,6-Dinitrotoluene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
2-Chloronaphthalene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
2-Chlorophenol	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
2-Nitrophenol	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	0	E625
3,3'-Dichlorobenzidine	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	20	E625
4,6-Dinitro-2-methylphenol	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	50	E625
4-Bromophenyl phenyl ether	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
4-Chloro-3-methylphenol	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	AE6	E625
4-Chlorophenyl phenyl ether	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
4-Nitrophenol	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	50	E625
Acenaphthene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Acenaphthylene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Anthracene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Azobenzene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Benzidine	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	20	E625
Benzo(a)anthracene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Benzo(a)pyrene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Benzo(b)fluoranthene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Benzo(g,h,i)perylene	ND	-		-	ND	-		-	ND	-		-	ND	-		?	ND	-		-	ug/l	10	E625
Benzo(k)fluorathene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
bis(-2-chloroethoxy)Methane	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
bis(-2-chloroethyl)Ether	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
bis(2-chloroisopropyl)Ether	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
bis(2-ethylhexyl)Phthalate	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Butylbenzylphthalate	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Chrysene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Dibenzo(a,h)anthracene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Diethyl phthalate	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Dimethyl phthalate	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Di-n-butyl phthalate	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Di-n-octyl phthalate	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Fluoranthene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Fluorene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Hexachlorobenzene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Hexachlorobutadiene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	20	E625
Hexachlorocyclopentadiene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Hexachloroethane	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Ideno(1,2,3-cd)pyrene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Isophorone	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Naphthalene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
n-Nitrosodimethylamine	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
n-Nitroso-di-n-propylamine	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
n-Nitrosodiphenylamine	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Pentachlorophenol	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	50	E625
Phenanthrene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Phenol	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Pyrene	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ND	-		-	ug/l	10	E625
Surr: 2,4,6-Tribromophenol	47.0	-		-	55.0	-		-	45.0	-		-	44.0	-		-	34.0	-		-	% REC	26-116	E625
Surr: 2-Fluorobiphenyl	57.0	-		-	61.0	-		-	50.0	-		-	50.0	-		-	45.0	-		-	% REC	25-94	E625
Surr: 2-Fluorophenol	33.0	-		-	34.0	-		-	34.0	-		-	27.0	-		-	21.0	-		-	% REC	11-67	E625
Surr: Nitrobenzene-d5	60.0	-		-	54.0	-		-	57.0	-		-	49.0	-		-	49.0	-		-	% REC	19-102	E625
Surr: Phenol-d5	29.0	-		-	31.0	-		-	32.0	-		-	25.0	-		-	23.0	-		-	% REC	15-54	E625
Surr: Terphenyl-d14	50.0	-		-	71.0	-		-	51.0	-		-	45.0	-		-	39.0	-		-	% REC	39-106	E625

Appendix 9-C

Water Quality Data
2008-2009 Sampling
Point Lookout Sandstone Wells

Table C-1 Point Lookout Sandstone Well Water Quality Data (Page 1 of 4)

WELL ID	**90**	**90**	**90**	**90**	**22**	**22**	**22**	**22**	**102**	**102**	**102**	**UNITS**	**R.L.**	**METHOD**
Date Sampled	8/11/08	11/10/08	2/16/09	5/19/09	8/21/08	11/13/08	2/11/09	5/19/09	9/24/08	11/8/08	2/11/09			
FIELD MEASUREMENTS														
Water Level (Altitude)	6963	6963	-		6925	6920	-		6975	6974	-	ft.		
pH	8.03	8.92	9.03		-	8.53	8.76		-	8.82	8.83	s.u.	HANNA Multi-meter	
Conductivity	404	430	992		-	316	323		-	706	837	umhos/cm	HANNA Multi-meter	
Temperature	68.98	56.07	65.75		-	57.97	55.32		-	52.53	35.30	degrees F	HANNA Multi-meter	
Dissolved Oxygen	-	-	-		-	-	-		-	-	-	%	HANNA Multi-meter	
Total Dissolved Solids, TDS	-	215	496		-	249	162		-	353	418	mg/l	HANNA Multi-meter	
Turbidity	0	0	1.89		-	0	0.85		0	0	0	t.u.	HANNA Multi-meter	
MAJOR IONS														
Alkalinity, Total as CaCO3	215	230	475	228	172	174	172	178	586	389	454	mg/l	1.0	A2320 B
Carbonate as CO3	5	11	24	6	9	6	ND	6	22	15	8	mg/l	1.0	A2320 B
Bicarbonate as HCO3	253	259	531	265	192	200	210	204	670	443	537	mg/l	1.0	A2320 B
Hydroxide as OH	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	1.0	A2320 B
Calcium	5	4	3	3	6	6	4	5	4	3	2	mg/l	1	E200.7
Chloride	1	ND	8	ND	ND	ND	ND	ND	7	3	4	mg/l	1	E300.0
Fluoride	1.0	1.0	3.3	1.0	0.6	0.6	0.6	0.6	7.6	3.3	5.0	mg/l	0.1	A4500-F C
Magnesium	1	1	ND	1	2	2	2	2	1	1	ND	mg/l	1	E200.7
Nitrogen, Ammonia as N	ND	ND	0.13	0.09	ND	ND	0.07	0.07	0.2	0.1	0.17	mg/l	0.1	E350.1
Nitrogen, Kjeldahl, Total as N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.5	E351.2
Nitrogen, Nitrate as N	-	ND	ND	ND	-	0.2	ND	ND	-	ND	ND	mg/l	0.1	E353.2
Nitrogen, Nitrate + Nitrite as N	-	ND	ND	ND	-	0.20	ND	ND	-	ND	ND	mg/l	0.05	E353.2
Nitrogen, Nitrite as N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	A4500-NO2 B
Nitrogen, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.5	A4500-N A
Potassium	1	1	1	1	1	1	1	1	2	2	2	mg/l	1	E200.7
Silica	16.6	14.2	8.6	11.1	14.2	14.4	11.7	8.7	12.3	15.5	11.4	mg/l	0.2	E200.7
Sodium	101	104	229	79	77	78	68	69	311	195	192	mg/l	1	E200.7
Sulfate	2	3	44	1	6	6	4	5	ND	ND	ND	mg/l	1	E300.0
NON-METALS														
Organic Carbon, Total (TOC)	ND	1.2	0.5	ND	ND	0.8	ND	ND	ND	1.2	ND	mg/l	0.5	A5310 C
Carbon, Total	ND	34.0	204	45	ND	17.3	9.2	38.0	3.8	56.8	10.0	mg/l	9.7	SW9060
Phenolics, Total Recoverable	-	ND	ND	0.01	-	ND	ND	0.03	-	0.05	ND	mg/l	0.0	E420.1
Cyanide, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.005	Kelada mod
PHYSICAL PROPERTIES														
Color	ND	ND	ND	ND	ND	5.0	ND	ND	5.0	10.0	ND	c.u.	5.0	A2120 B
Conductivity	404	378	39	390	306	327	186	305	1090	723	808	umhos/cm	1	A2510 B
Corrosivity	0.04	0.1	0.3	0.1	-0.12	0.1	-0.1	0.1	0.10	0.1	0.0	unitless		Calc.
Hardness as CaCO3	18	16	11	14	21	22	18	18	15	12	10	mg/l	1	A2340 B
Odor	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	T.O.N	1	A2150 B
pH	8.42	8.52	8.62	8.64	8.29	8.49	8.40	8.57	8.29	8.52	8.43	s.u.	0.01	A4500-H B
Solids, TDS @ 180 C	249	258	626	261	204	212	221	204	655	446	554	mg/l	10	A2540 C

Table C-1 Point Lookout Sandstone Well Water Quality Data (Page 2 of 4)

WELL ID	90	90	90	90	22	22	22	22	102	102	102	UNITS	R.L.	METHOD
Date Sampled	8/11/08	11/10/08	2/16/09	5/19/09	8/21/08	11/13/08	2/11/09	5/19/09	9/24/08	11/8/08	2/11/09			
METALS-DISSOLVED														
Aluminum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.7
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	0.001	0.001	0.002	mg/l	0.001	E200.8
Barium	0.4	0.4	0.2	0.4	0.3	0.3	0.3	0.3	0.2	ND	0.1	mg/l	0.1	E200.8
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.7
Boron	0.1	0.1	0.4	ND	ND	ND	ND	ND	0.5	0.5	0.4	mg/l	0.1	E200.7
Cadmium	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Copper	0.02	ND	0.01	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Iron	0.03	ND	ND	ND	ND	0.03	0.04	ND	0.04	0.25	0.09	mg/l	0.03	E200.8
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Manganese	ND	ND	ND	ND	ND	ND	ND	ND	0.02	ND	ND	mg/l	0.01	E200.8
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.001	E245.1
Molybdenum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Nickel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.001	E200.8
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.10	E200.8
Uranium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.0003	E200.8
Vanadium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Zinc	0.09	ND	0.04	0.02	0.02	0.03	0.02	0.04	0.09	0.05	0.06	mg/l	0.01	E200.8
METALS-TOTAL														
Uranium	ND	ND	ND	ND	ND	ND	ND	ND	0.0003	ND	ND	mg/l	0.0003	E200.8
RADIONUCLIDES-TOTAL														
Gross Alpha	0.3	6.0	0.4	1.3	0.9	0.8	1.5	0.6	1.5	0.4	0.5	pCi/L		E900.0
Gross Alpha precision (+/-)	1.0	1.5	1.9	1.1	0.9	0.8	1	0.9	2.3	1.5	1.7	pCi/L		E900.0
Gross Alpha MDC	1.7	1.7	3.1	1.6	1.4	1.2	1.4	1.4	3.7	2.6	2.8	pCi/L		E900.0
Gross Beta	-2.0	6.7	-3	-2	-0.6	-0.06	-0.9	-2	-3.0	-2	-0.5	pCi/L		E900.0
Gross Beta precision (+/-)	1.8	1.8	2.3	1.5	1.6	1.6	1.7	1.5	2.7	1.9	1.9	pCi/L		E900.0
Gross Beta MDC	3.0	2.8	3.9	2.6	2.7	2.6	2.9	2.6	4.7	3.2	3.4	pCi/L		E900.0
Radium 226	0.24	0.01	-0.04	0.36	0.31	0.24	0.28	0.21	0.08	-0.01	0.06	pCi/L		E903.0
Radium 226 precision (+/-)	0.16	0.11	0.09	0.16	0.18	0.13	0.17	0.14	0.10	0.12	0.14	pCi/L		E903.0
Radium 226 MDC	0.22	0.19	0.18	0.18	0.23	0.17	0.22	0.19	0.16	0.21	0.22	pCi/L		E903.0
Radium 228	2.1	0.32	1.1	0.76	1.1	0.57	0.22	0.6	-0.2	1.6	1.3	pCi/L		RA-05
Radium 228 precision (+/-)	0.74	0.68	0.67	0.68	0.72	0.74	0.71	0.7	0.79	0.79	0.75	pCi/L		RA-05
Radium 228 MDC	1.1	1.1	1.0	1.1	1.1	1.2	1.2	1.1	1.3	1.2	1.2	pCi/L		RA-05
Radon 222	306	182	447	137	267	232	270	154	71	229	146	pCi/L	100	D5072-92
Radon 222 precision (+/-)	51.6	54.8	51.1	39.9	42.8	42.5	52.7	40.9	31.1	60.3	50.4	pCi/L		D5072-92
Thorium 228	0.1	0.0	0.01	0.07	0.0	0.0	0.6	0.05	-0.1	0.1	0.03	pCi/L		E907.0
Thorium 228 precision (+/-)	0.2	0.09	0.09	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.07	pCi/L		E907.0
Thorium 228 MDC	-	-	0.2	0.4	-	-	0.2	0.2	-	-	0.1	pCi/L		E907.0
Thorium 230	0.4	0.0	-0.05	-0.08	1.2	0.0	-0.05	-0.08	0.6	-0.5	0.1	pCi/L		E907.0
Thorium 230 precision (+/-)	0.4	0.1	0.1	0.4	0.5	0.1	0.1	0.1	0.1	0.4	0.09	pCi/L		E907.0
Thorium 230 MDC	-	-	0.3	0.4	-	-	0.2	0.3	-	-	0.1	pCi/L		E907.0
Thorium 232	0.1	0.0	-0.01	-0.03	0.0	0.0	0.006	-0.02	0.0	0.0	-0.003	pCi/L		E907.0
Thorium 232 precision (+/-)	0.1	0.08	0.1	0.2	0.1	0.1	0.06	0.1	0.1	0.3	0.03	pCi/L		E907.0
Thorium 232 MDC	-	-	0.2	0.5	-	-	0.1	0.2	-	-	0.1	pCi/L		E907.0

Table C-1 Point Lookout Sandstone Well Water Quality Data (Page 3 of 4)

WELL ID	90	90	90	90	22	22	22	22	102	102	102	UNITS	R.L.	METHOD
Date Sampled	8/11/08	11/10/08	2/16/09	5/19/09	8/21/08	11/13/08	2/11/09	5/19/09	9/24/08	11/8/08	2/11/09			
DATA QUALITY														
A/C Balance (+/- 5)	3.71	1.48	-2.80	-5.36	2.33	2.56	-3.46	-4.62	5.97	4.26	-4.60	%		Calc.
Anions	4.45	4.74	10.8	4.65	3.63	3.67	3.57	3.71	12.30	8.04	9.43	meq/l		Calc.
Cations	4.79	4.88	10.2	4.18	3.80	3.86	3.33	3.38	13.90	8.76	8.60	meq/l		Calc.
Solids, Total Dissolved Calc.	295	375	585	249	205	211	198	200	701	460	492	mg/l		Calc.
TDS Balance (0.80 - 1.20)	0.84	0.690	1.07	1.05	1.00	1.00	1.12	1.02	0.93	0.970	1.13			Calc.
VOLATILE ORGANIC COMPOUNDS														
1,1,1,2-Tetrachloroethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,1,1-Trichloroethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,1,2,2-Tetrachloroethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,1,2-Trichloroethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,1-Dichloroethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,1-Dichloroethene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,1-Dichloropropene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,2,3-Trichloropropane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,2-Dibromoethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,2-Dichlorobenzene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,2-Dichloroethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,2-Dichloropropane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,3-Dichlorobenzene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
1,3-Dichloropropane	ND	-		-	ND	-		-	ND	-		e al	1.0	E624
1,4-Dichlorobenzene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
2,2-Dichloropropane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
2-Chloroethyl vinyl ether	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
2-Chlorotoluene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
4-Chlorotoluene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Benzene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Bromobenzene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Bromochloromethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Bromodichloromethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Bromoform	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Bromomethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Carbon tetrachloride	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Chlorobenzene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Chlorodibromomethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Chloroethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Chloroform	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Chloromethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
cis-1,2-Dichloroethene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
cis-1,3-Dichloropropene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Dibromomethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Dichlorodifluoromethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Ethylbenzene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
m+p-Xylenes	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Methyl ethyl ketone	ND	-		-	ND	-		-	ND	-		ug/l	20	E624
Methylene chloride	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
o-Xylene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Styrene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Tetrachloroethene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Toluene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
trans-1,2-Dichloroethene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
trans-1,3-Dichloropropene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Trichloroethene	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Trichlorofluoromethane	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Vinyl chloride	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Xylenes, Total	ND	-		-	ND	-		-	ND	-		ug/l	1.0	E624
Surr: 1,2-Dichlorobenzene-d4	95.0	-		-	98.0	-		-	96.0	-		% REC	80-120	E624
Surr: Dibromofluormethane	110.0	-		-	98.0	-		-	118.0	-		% REC	80-120	E624
Surr: p-Bromofluorobenzene	97.0	-		-	98.0	-		-	105.0	-		% REC	80-120	E624
Surr: Toluene-d8	92.0	-		-	100.0	-		-	107.0	-		% REC	80-120	E624

Table C-1 Point Lookout Sandstone Well Water Quality Data (Page 4 of 4)

WELL ID	90	90	90	90	22	22	22	22	102	102	102	UNITS	R.L.	METHOD
Date Sampled	8/11/08	11/10/08	2/16/09	5/19/09	8/21/08	11/13/08	2/11/09	5/19/09	9/24/08	11/8/08	2/11/09			
SYNTHETIC ORGANIC COMPOUNDS														
1,2,4-Trichlorobenzene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
2,4,6-Trichlorophenol	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
2,4-Dichlorophenol	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
2,4-Dimethylphenol	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
2,4-Dinitrophenol	ND	-		-	ND	-		-	ND	-		ug/l	50	E625
2,4-Dinitrotoluene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
2,6-Dinitrotoluene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
2-Chloronaphthalene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
2-Chlorophenol	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
2-Nitrophenol	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
3,3'-Dichlorobenzidine	ND	-		-	ND	-		-	ND	-		ug/l	20	E625
4,6-Dinitro-2-methylphenol	ND	-		-	ND	-		-	ND	-		ug/l	50	E625
4-Bromophenyl phenyl ether	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
4-Chloro-3-methylphenol	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
4-Chlorophenyl phenyl ether	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
4-Nitrophenol	ND	-		-	ND	-		-	ND	-		ug/l	50	E625
Acenaphthene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Acenaphthylene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Anthracene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Azobenzene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Benzidine	ND	-		-	ND	-		-	ND	-		ug/l	20	E625
Benzo(a)anthracene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Benzo(a)pyrene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Benzo(b)fluoranthene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Benzo(g,h,i)perylene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Benzo(k)fluorathene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
bis(-2-chloroethoxy)Methane	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
bis(-2-chloroethyl)Ether	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
bis(2-chloroisopropyl)Ether	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
bis(2-ethylhexyl)Phthalate	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Butylbenzylphthalate	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Chrysene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Dibenzo(a,h)anthracene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Diethyl phthalate	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Dimethyl phthalate	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Di-n-butyl phthalate	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Di-n-octyl phthalate	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Fluoranthene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Fluorene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Hexachlorobenzene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Hexachlorobutadiene	ND	-		-	ND	-		-	ND	-		ug/l	20	E625
Hexachlorocyclopentadiene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Hexachloroethane	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Ideno(1,2,3-cd)pyrene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Isophorone	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Naphthalene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
n-Nitrosodimethylamine	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
n-Nitroso-di-n-propylamine	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
n-Nitrosodiphenylamine	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Pentachlorophenol	ND	-		-	ND	-		-	ND	-		ug/l	50	E625
Phenanthrene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Phenol	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Pyrene	ND	-		-	ND	-		-	ND	-		ug/l	10	E625
Surr: 2,4,6-Tribromophenol	45.0	-		-	54.0	-		-	46.0	-		% REC	26-116	E625
Surr: 2-Fluorobiphenyl	54.0	-		-	60.0	-		-	48.0	-		% REC	25-94	E625
Surr: 2-Fluorophenol	30.0	-		-	32.0	-		-	32.0	-		% REC	11-67	E625
Surr: Nitrobenzene-d5	51.0	-		-	62.0	-		-	47.0	-		% REC	19-102	E625
Surr: Phenol-d5	28.0	-		-	31.0	-		-	29.0	-		% REC	15-54	E625
Surr: Terphenyl-d14	51.0	-		-	66.0	-		-	60.0	-		% REC	39-106	E625

Appendix 9-D

Water Quality Data
2008-2009 Sampling
Gallup Sandstone Wells

Table D-1 Gallup Sandstone Well Water Quality Data (Page 1 of 4)

WELL ID	32	16	16	16	16	UNITS	R.L.	METHOD
Sampling Date	8/21/08	8/25/08	11/11/08	2/12/09	5/19/09			
FIELD MEASUREMENTS								
Water Level (Altitude)	6944	6946	6944	-		ft.		
pH	8.41	7.92	8.61	8.92		s.u.	HANNA Multi-meter	
Conductivity	797	947	961	932		umhos/cm	HANNA Multi-meter	
Temperature	61.57	60.80	56.10	55.77		degrees F	HANNA Multi-meter	
Dissolved Oxygen	-	-	-	-		%	HANNA Multi-meter	
Total Dissolved Solids, TDS	-	-	481	466		mg/l	HANNA Multi-meter	
Turbidity	1.69	19.43	28.47	61		t.u.	HANNA Multi-meter	
MAJOR IONS								
Alkalinity, Total as CaCO3	470	240	215	201	201	mg/l	1.0	A2320 B
Carbonate as CO3	38	ND	6	ND	10	mg/l	1.0	A2320 B
Bicarbonate as HCO3	496	293	250	245	226	mg/l	1.0	A2320 B
Hydroxide as OH	ND	ND	ND	ND	ND	mg/l	1.0	A2320 B
Calcium	2	32	24	17	14	mg/l	1	E200.7
Chloride	4	7	6	5	5	mg/l	1	E300.0
Fluoride	2.9	0.5	0.4	0.4	0.4	mg/l	0.1	A4500-F C
Magnesium	ND	32	28	22	20	mg/l	1	E200.7
Nitrogen, Ammonia as N	0.2	0.4	0.3	0.5	0.49	mg/l	0.1	E350.1
Nitrogen, Kjeldahl, Total as N	ND	0.6	ND	0.6	0.6	mg/l	0.5	E351.2
Nitrogen, Nitrate as N	-	-	ND	0.5	ND	mg/l	0.1	E353.2
Nitrogen, Nitrate + Nitrite as N	-	-	ND	0.49	ND	mg/l	0.05	E353.2
Nitrogen, Nitrite as N	ND	ND	ND	ND	ND	mg/l	0.1	A4500-NO2 B
Nitrogen, Total	ND	0.6	ND	1.1	0.6	mg/l	0.5	A4500-N A
Potassium	1	5	5	6	4	mg/l	1	E200.7
Silica	19.6	8.3	6.8	6.2	3.9	mg/l	0.2	E200.7
Sodium	237	169	172	152	158	mg/l	1	E200.7
Sulfate	8	285	265	258	229	mg/l	1	E300.0
NON-METALS								
Organic Carbon, Total (TOC)	ND	ND	0.8	1.1	1.2	mg/l	0.5	A5310 C
Carbon, Total	ND	2.1	42	3.5	40.7	mg/l	9.7	SW9060
Phenolics, Total Recoverable	-	-	ND	0.03	0.01	mg/l	0.0	E420.1
Cyanide, Total	ND	ND	ND	ND	ND	mg/l	0.005	Kelada mod
PHYSICAL PROPERTIES								
Color	5.0	185.0	40.0	-	20	c.u.	5.0	A2120 B
Conductivity	857	1030.0	993	932	907	umhos/cm	1	A2510 B
Corrosivity	0.07	0.53	0.6	0.6	0.7	unitless		Calc.
Hardness as CaCO3	6	213	173	135	119	mg/l	1	A2340 B
Odor	NOO	NOO	NOO	-	NOO	T.O.N	1	A2150 B
pH	8.64	8.14	8.37	8.58	8.75	s.u.	0.01	A4500-H B
Solids, TDS @ 180 C	546	647.0	610	613	578	mg/l	10	A2540 C

Table D-1 Gallup Sandstone Well Water Quality Data (Page 2 of 4)

WELL ID	32	16	16	16	16	UNITS	R.L.	METHOD
Sampling Date	8/21/08	8/25/08	11/11/08	2/12/09	5/19/09			
METALS-DISSOLVED								
Aluminum	ND	ND	ND	ND	ND	mg/l	0.1	E200.7
Antimony	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Arsenic	ND	ND	ND	ND	0.002	mg/l	0.001	E200.8
Barium	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Beryllium	ND	ND	ND	ND	ND	mg/l	0.01	E200.7
Boron	0.4	0.3	0.5	0.4	0.4	mg/l	0.1	E200.7
Cadmium	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Chromium	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Cobalt	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Copper	ND	ND	ND	0.01	ND	mg/l	0.01	E200.8
Iron	0.06	ND	ND	13.8	ND	mg/l	0.03	E200.8
Lead	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Manganese	0.01	0.02	ND	0.08	ND	mg/l	0.01	E200.8
Mercury	ND	ND	ND	ND	ND	mg/l	0.001	E245.1
Molybdenum	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Nickel	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Selenium	ND	ND	ND	ND	ND	mg/l	0.001	E200.8
Silver	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Thallium	ND	ND	ND	ND	ND	mg/l	0.10	E200.8
Uranium	ND	ND	ND	ND	ND	mg/l	0.0003	E200.8
Vanadium	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Zinc	ND	0.02	ND	0.05	ND	mg/l	0.01	E200.8
METALS-TOTAL								
Uranium	ND	0.0015	ND	ND	ND	mg/l	0.0003	E200.8
RADIONUCLIDES-TOTAL								
Gross Alpha	2.2	3.9	5.7	6.0	8.8	pCi/L		E900.0
Gross Alpha precision (+/-)	2.0	2.3	2.4	2.1	2.5	pCi/L		E900.0
Gross Alpha MDC	2.9	3.2	3.2	2.8	2.9	pCi/L		E900.0
Gross Beta	-5.0	-7.0	2.1	3.6	6.6	pCi/L		E900.0
Gross Beta precision (+/-)	2.2	2.4	2.4	2.0	1.9	pCi/L		E900.0
Gross Beta MDC	3.8	4.3	4.0	3.2	3.0	pCi/L		E900.0
Radium 226	0.13	0.85	0.32	0.71	0.48	pCi/L		E903.0
Radium 226 precision (+/-)	0.16	0.18	0.15	0.20	0.18	pCi/L		E903.0
Radium 226 MDC	0.24	0.13	0.20	0.18	0.20	pCi/L		E903.0
Radium 228	1.2	1.1	-0.05	0.13	0.53	pCi/L		RA-05
Radium 228 precision (+/-)	0.72	1.10	0.73	0.67	0.73	pCi/L		RA-05
Radium 228 MDC	1.1	1.7	1.2	1.1	1.2	pCi/L		RA-05
Radon 222	198	190	147	285	23.4	pCi/L	100	D5072-92
Radon 222 precision (+/-)	42.1	48.7	44.3	99.3	39.3	pCi/L		D5072-92
Thorium 228	0.2	0.4	0.2	0.2	0.2	pCi/L		E907.0
Thorium 228 precision (+/-)	0.2	0.2	0.2	0.1	0.1	pCi/L		E907.0
Thorium 228 MDC	-	-	-	0.1	0.2	pCi/L		E907.0
Thorium 230	1.8	0.7	-0.2	0.04	-0.07	pCi/L		E907.0
Thorium 230 precision (+/-)	0.7	0.3	0.1	0.08	0.10	pCi/L		E907.0
Thorium 230 MDC	-	-	-	0.1	0.2	pCi/L		E907.0
Thorium 232	0.2	0.0	0.0	0.0	0.009	pCi/L		E907.0
Thorium 232 precision (+/-)	0.2	0.1	0.1	0.03	0.07	pCi/L		E907.0
Thorium 232 MDC	-	-	-	0.08	0.20	pCi/L		E907.0

Table D-1 Gallup Sandstone Well Water Quality Data (Page 3 of 4)

WELL ID	32	16	16	16	16	UNITS	R.L.	METHOD
Sampling Date	8/21/08	8/25/08	11/11/08	2/12/09	5/19/09			
DATA QUALITY								
A/C Balance (+/- 5)	3.14	3.41	5.02	-0.651	2.330	%		Calc.
Anions	9.83	11.00	10.0	9.59	8.96	meq/l		Calc.
Cations	10.50	11.70	11.1	9.47	9.38	meq/l		Calc.
Solids, Total Dissolved Calc.	549	679	637	591	557	mg/l		Calc.
TDS Balance (0.80 - 1.20)	0.99	0.95	0.960	1.04	1.04			Calc.
VOLATILE ORGANIC COMPOUNDS								
1,1,1,2-Tetrachloroethane	ND	ND	-		-	ug/l	1.0	E624
1,1,1-Trichloroethane	ND	ND	-		-	ug/l	1.0	E624
1,1,2,2-Tetrachloroethane	ND	ND	-		-	ug/l	1.0	E624
1,1,2-Trichloroethane	ND	ND	-		-	ug/l	1.0	E624
1,1-Dichloroethane	ND	ND	-		-	ug/l	1.0	E624
1,1-Dichloroethene	ND	ND	-		-	ug/l	1.0	E624
1,1-Dichloropropene	ND	ND	-		-	ug/l	1.0	E624
1,2,3-Trichloropropane	ND	ND	-		-	ug/l	1.0	E624
1,2-Dibromoethane	ND	ND	-		-	ug/l	1.0	E624
1,2-Dichlorobenzene	ND	ND	-		-	ug/l	1.0	E624
1,2-Dichloroethane	ND	ND	-		-	ug/l	1.0	E624
1,2-Dichloropropane	ND	ND	-		-	ug/l	1.0	E624
1,3-Dichlorobenzene	ND	ND	-		-	ug/l	1.0	E624
1,3-Dichloropropane	ND	ND	-		-	ug/l	1.0	E624
1,4-Dichlorobenzene	ND	ND	-		-	ug/l	1.0	E624
2,2-Dichloropropane	ND	ND	-		-	ug/l	1.0	E624
2-Chloroethyl vinyl ether	ND	ND	-		-	ug/l	1.0	E624
2-Chlorotoluene	ND	ND	-		-	ug/l	1.0	E624
4-Chlorotoluene	ND	ND	-		-	ug/l	1.0	E624
Benzene	ND	ND	-		-	ug/l	1.0	E624
Bromobenzene	ND	ND	-		-	ug/l	1.0	E624
Bromochloromethane	ND	ND	-		-	ug/l	1.0	E624
Bromodichloromethane	ND	ND	-		-	ug/l	1.0	E624
Bromoform	ND	ND	-		-	ug/l	1.0	E624
Bromomethane	ND	ND	-		-	ug/l	1.0	E624
Carbon tetrachloride	ND	ND	-		-	ug/l	1.0	E624
Chlorobenzene	ND	ND	-		-	ug/l	1.0	E624
Chlorodibromomethane	ND	ND	-		-	ug/l	1.0	E624
Chloroethane	ND	ND	-		-	ug/l	1.0	E624
Chloroform	ND	ND	-		-	ug/l	1.0	E624
Chloromethane	ND	ND	-		-	ug/l	1.0	E624
cis-1,2-Dichloroethene	ND	ND	-		-	ug/l	1.0	E624
cis-1,3-Dichloropropene	ND	ND	-		-	ug/l	1.0	E624
Dibromomethane	ND	ND	-		-	ug/l	1.0	E624
Dichlorodifluoromethane	ND	ND	-		-	ug/l	1.0	E624
Ethylbenzene	ND	ND	-		-	ug/l	1.0	E624
m+p-Xylenes	ND	ND	-		-	ug/l	1.0	E624
Methyl ethyl ketone	ND	ND	-		-	ug/l	20	E624
Methylene chloride	ND	ND	-		-	ug/l	1.0	E624
o-Xylene	ND	ND	-		-	ug/l	1.0	E624
Styrene	ND	ND	-		-	ug/l	1.0	E624
Tetrachloroethene	ND	ND	-		-	ug/l	1.0	E624
Toluene	ND	ND	-		-	ug/l	1.0	E624
trans-1,2-Dichloroethene	ND	ND	-		-	ug/l	1.0	E624
trans-1,3-Dichloropropene	ND	ND	-		-	ug/l	1.0	E624
Trichloroethene	ND	ND	-		-	ug/l	1.0	E624
Trichlorofluoromethane	ND	ND	-		-	ug/l	1.0	E624
Vinyl chloride	ND	ND	-		-	ug/l	1.0	E624
Xylenes, Total	ND	ND	-		-	ug/l	1.0	E624
Surr: 1,2-Dichlorobenzene-d4	99.0	95.0	-		-	% REC	80-120	E624
Surr: Dibromofluormethane	95.0	106.0	-		-	% REC	80-120	E624
Surr: p-Bromofluorobenzene	96.0	102.0	-		-	% REC	80-120	E624
Surr: Toluene-d8	92.0	100.0	-		-	% REC	80-120	E624

Table D-1 Gallup Sandstone Well Water Quality Data (Page 4 of 4)

WELL ID	32	16	16	16	16	UNITS	R.L.	METHOD
Sampling Date	8/21/08	8/25/08	11/11/08	2/12/09	5/19/09			
SYNTHETIC ORGANIC COMPOUNDS								
1,2,4-Trichlorobenzene	ND	ND	-		-	ug/l	10	E625
2,4,6-Trichlorophenol	ND	ND	-		-	ug/l	10	E625
2,4-Dichlorophenol	ND	ND	-		-	ug/l	10	E625
2,4-Dimethylphenol	ND	ND	-		-	ug/l	10	E625
2,4-Dinitrophenol	ND	ND	-		-	ug/l	50	E625
2,4-Dinitrotoluene	ND	ND	-		-	ug/l	10	E625
2,6-Dinitrotoluene	ND	ND	-		-	ug/l	10	E625
2-Chloronaphthalene	ND	ND	-		-	ug/l	10	E625
2-Chlorophenol	ND	ND	-		-	ug/l	10	E625
2-Nitrophenol	ND	ND	-		-	ug/l	10	E625
3,3'-Dichlorobenzidine	ND	ND	-		-	ug/l	20	E625
4,6-Dinitro-2-methylphenol	ND	ND	-		-	ug/l	50	E625
4-Bromophenyl phenyl ether	ND	ND	-		-	ug/l	10	E625
4-Chloro-3-methylphenol	ND	ND	-		-	ug/l	10	E625
4-Chlorophenyl phenyl ether	ND	ND	-		-	ug/l	10	E625
4-Nitrophenol	ND	ND	-		-	ug/l	50	E625
Acenaphthene	ND	ND	-		-	ug/l	10	E625
Acenaphthylene	ND	ND	-		-	ug/l	10	E625
Anthracene	ND	ND	-		-	ug/l	10	E625
Azobenzene	ND	ND	-		-	ug/l	10	E625
Benzidine	ND	ND	-		-	ug/l	20	E625
Benzo(a)anthracene	ND	ND	-		-	ug/l	10	E625
Benzo(a)pyrene	ND	ND	-		-	ug/l	10	E625
Benzo(b)fluoranthene	ND	ND	-		-	ug/l	10	E625
Benzo(g,h,i)perylene	ND	ND	-		-	ug/l	10	E625
Benzo(k)fluorathene	ND	ND	-		-	ug/l	10	E625
bis(-2-chloroethoxy)Methane	ND	ND	-		-	ug/l	10	E625
bis(-2-chloroethyl)Ether	ND	ND	-		-	ug/l	10	E625
bis(2-chloroisopropyl)Ether	ND	ND	-		-	ug/l	10	E625
bis(2-ethylhexyl)Phthalate	ND	ND	-		-	ug/l	10	E625
Butylbenzylphthalate	ND	ND	-		-	ug/l	10	E625
Chrysene	ND	ND	-		-	ug/l	10	E625
Dibenzo(a,h)anthracene	ND	ND	-		-	ug/l	10	E625
Diethyl phthalate	ND	ND	-		-	ug/l	10	E625
Dimethyl phthalate	ND	ND	-		-	ug/l	10	E625
Di-n-butyl phthalate	ND	ND	-		-	ug/l	10	E625
Di-n-octyl phthalate	ND	ND	-		-	ug/l	10	E625
Fluoranthene	ND	ND	-		-	ug/l	10	E625
Fluorene	ND	ND	-		-	ug/l	10	E625
Hexachlorobenzene	ND	ND	-		-	ug/l	10	E625
Hexachlorobutadiene	ND	ND	-		-	ug/l	20	E625
Hexachlorocyclopentadiene	ND	ND	-		-	ug/l	10	E625
Hexachloroethane	ND	ND	-		-	ug/l	10	E625
Ideno(1,2,3-cd)pyrene	ND	ND	-		-	ug/l	10	E625
Isophorone	ND	ND	-		-	ug/l	10	E625
Naphthalene	ND	ND	-		-	ug/l	10	E625
n-Nitrosodimethylamine	ND	ND	-		-	ug/l	10	E625
n-Nitroso-di-n-propylamine	ND	ND	-		-	ug/l	10	E625
n-Nitrosodiphenylamine	ND	ND	-		-	ug/l	10	E625
Pentachlorophenol	ND	ND	-		-	ug/l	50	E625
Phenanthrene	ND	ND	-		-	ug/l	10	E625
Phenol	ND	ND	-		-	ug/l	10	E625
Pyrene	ND	ND	-		-	ug/l	10	E625
Surr: 2,4,6-Tribromophenol	42.0	45.0	-		-	% REC	26-116	E625
Surr: 2-Fluorobiphenyl	50.0	51.0	-		-	% REC	25-94	E625
Surr: 2-Fluorophenol	28.0	25.0	-		-	% REC	11-67	E625
Surr: Nitrobenzene-d5	55.0	52.0	-		-	% REC	19-102	E625
Surr: Phenol-d5	26.0	23.0	-		-	% REC	15-54	E625
Surr: Terphenyl-d14	59.0	51.0	-		-	% REC	39-106	E625

Appendix 9-E

Water Quality Data
2008-2009 Sampling
Westwater Canyon Member Regional Wells

Table E-1 Westwater Canyon Member Well Water Quality Data (Page 1 of 4)

WELL ID	116	116	116	116		114	114	114	113	113	113	113	138	UNITS	R.L.	METHOD
Sampling Date	8/19/08	11/13/08	2/10/09	5/21/09		9/18/08	2/18/09	5/26/09	9/22/08	11/10/08	2/12/09	5/26/09	9/23/08			
FIELD MEASUREMENTS																
Water Level (Altitude)	-	-	-			6725	-		6728	6733	-		6729	ft.		
pH	6.48	6.89	7.31			6.64	7.79		6.59	7.42	7.59		-	s.u.	HANNA Multi-meter	
Conductivity	3458	3374	3467			3246	3376		3327	3665	3430		-	umhos/cm	HANNA Multi-meter	
Temperature	63.94	51.51	50.43			59.44	53.44		60.61	52.34	54.27		-	degrees F	HANNA Multi-meter	
Dissolved Oxygen	-	-	-	-	-	-	-	-	-	-	-	-	-	%	HANNA Multi-meter	
Total Dissolved Solids, TDS	-	1687	1727			-	1688		-	1833	1715		-	mg/l	HANNA Multi-meter	
Turbidity	0	0	0			406	160		89	38.12	98		0	t.u.	HANNA Multi-meter	
MAJOR IONS																
Alkalinity, Total as CaCO3	175	175	172	182	183	175	188	172	168	173	168	179	167	mg/l	1.0	A2320 B
Carbonate as CO3	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	1.0	A2320 B
Bicarbonate as HCO3	-	213	210	222	224	213	229	210	205	212	205	219	204	mg/l	1.0	A2320 B
Hydroxide as OH	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	1.0	A2320 B
Calcium	544	518	538	496	504	504	524	433	548	539	507	501	542	mg/l	1	E200.7
Chloride	57	52	48	48	48	51	48	45	52	50	48	48	51	mg/l	1	E300.0
Fluoride	0.6	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.3	mg/l	0.1	A4500-F C
Magnesium	146	144	142	136	138	125	135	114	147	148	138	142	151	mg/l	1	E200.7
Nitrogen, Ammonia as N	ND	ND	ND	ND	ND	ND	ND	0.81	ND	ND	ND	ND	ND	mg/l	0.1	E350.1
Nitrogen, Kjeldahl, Total as N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.5	E351.2
Nitrogen, Nitrate as N	-	21.3	20.1	18.2	17.6	-	18.9	22.8	-	19.8	22.3	23.9	-	mg/l	0.1	E353.2
Nitrogen, Nitrate + Nitrite as N	-	21.3	20.1	18.20	17.6	-	19.2	23	-	19.8	22.3	23.9	-	mg/l	0.05	E353.2
Nitrogen, Nitrite as N	19.70	ND	ND	ND	ND	24.30	0.3	0.2	24.60	ND	ND	ND	22.80	mg/l	0.1	A4500-NO2 B
Nitrogen, Total	19.7	21.3	20.1	18.2	17.6	24.3	19.2	23.3	24.6	19.8	22.3	23.9	22.8	mg/l	0.5	A4500-N A
Potassium	6	6	6	6	6	10	11	11	7	6	6	7	9	mg/l	1	E200.7
Silica	15.6	16.9	18.3	18.7	18.8	20.0	18.8	18.9	21.9	20.0	18.3	21.6	22.7	mg/l	0.2	E200.7
Sodium	236	240	240	242	243	208	215	201	236	224	231	237	221	mg/l	1	E200.7
Sulfate	2080	1970	1940	1920	1910	1910	1880	1802	2090	2030	2010	2000	2040	mg/l	1	E300.0
NON-METALS																
Organic Carbon, Total (TOC)	2.6	3.3	2.7	2.9	2.9	4.9	4.2	6.2	2.2	3.9	3.2	2.6	2.5	mg/l	0.5	A5310 C
Carbon, Total	2.8	32.5	11.6	39.3	39.4	1.6	8.1	46.8	2.1	36.5	5.2	42.8	1.1	mg/l	9.7	SW9060
Phenolics, Total Recoverable	-	ND	0.03	ND	ND	-	0.01	0.02	-	ND	ND	ND	-	mg/l	0.0	E420.1
Cyanide, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.005	Kelada mod
PHYSICAL PROPERTIES																
Color	ND	ND	ND	ND	ND	10.0	5.0	5.0	256.0	5.0	-	ND	20.0	c.u.	5.0	A2120 B
Conductivity	3580	3590	3740	3540	3550	3490	3640	3350	3770	3820	3780	3640	3510	umhos/cm	1	A2510 B
Corrosivity	0.70	0.8	0.6	0.8	0.8	0.70	0.6	0.6	0.60	0.8	0.7	0.8	0.80	unitless		Calc.
Hardness as CaCO3	1960	1890	1930	1800	1830	1770	1870	1550	1980	1960	1840	1840	1970	mg/l	1	A2340 B
Odor	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	-	NOO	NOO	T.O.N	1	A2150 B
pH	7.45	7.56	7.38	7.52	7.52	7.45	7.35	7.48	7.37	7.54	7.51	7.54	7.56	s.u.	0.01	A4500-H B
Solids, TDS @ 180 C	3290	3330	3310	3260	3300	3140	3210	3100	3320	3280	3440	3390	3290	mg/l	10	A2540 C

Table E-1 Westwater Canyon Member Well Water Quality Data (Page 2 of 4)

WELL ID	116	116	116	116	114	114	114	113	113	113	113	138	UNITS	R.L.	METHOD
Sampling Date	8/19/08	11/13/08	2/10/09	5/21/09	9/18/08	2/18/09	5/26/09	9/22/08	11/10/08	2/12/09	5/26/09	9/23/08			
METALS-DISSOLVED															
Aluminum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2	ND	ND	mg/l	0.1	E200.7
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Arsenic	ND	ND	ND	ND	ND	ND	ND	0.001	0.001	ND	ND	ND	ND	mg/l	0.001	E200.8
Barium	ND	ND	ND	ND	ND	0.2	0.1	0.2	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.7
Boron	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.2	ND	0.3	0.3	mg/l	0.1	E200.7
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Copper	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	mg/l	0.01	E200.8
Iron	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.0	ND	ND	mg/l	0.03	E200.8
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Manganese	ND	ND	ND	ND	ND	0.07	0.07	0.06	0.11	ND	0.17	ND	0.01	mg/l	0.01	E200.8
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.001	E245.1
Molybdenum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Nickel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Selenium	0.079	0.061	0.064	0.052	0.053	0.048	0.039	0.047	0.027	0.024	0.023	0.027	0.031	mg/l	0.001	E200.8
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.10	E200.8
Uranium	0.0109	0.0106	0.0121	0.0103	0.0096	0.0199	0.0217	0.0208	0.0158	0.0155	0.0169	0.0161	0.0329	mg/l	0.0003	E200.8
Vanadium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Zinc	0.21	0.07	0.08	0.11	0.33	0.02	0.04	0.01	0.20	0.02	0.46	0.01	0.02	mg/l	0.01	E200.8
METALS-TOTAL															
Uranium	0.0119	0.0107	0.0118	0.0112	0.0113	0.0229	0.0222	0.0212	0.0221	0.0158	0.0176	0.0154	0.0348	mg/l	0.0003	E200.8
RADIONUCLIDES-TOTAL															
Gross Alpha	22.6	17.9	23.7	20.6	28.3	50.4	50.3	36	25.4	28.2	21.0	25.4	44.4	pCi/L		E900.0
Gross Alpha precision (+/-)	10.8	7.6	14.8	8.9	9.5	12.1	12	10.1	11.3	11.0	8.7	10.1	10.7	pCi/L		E900.0
Gross Alpha MDC	15.2	9.9	21.3	12.1	12.1	13.9	13.7	12.3	15.6	14.8	11.7	13.4	12.3	pCi/L		E900.0
Gross Beta	5.2	9.5	-6	7.8	10	16.9	27.1	15.4	6.0	6.0	2.0	-20.0	9.4	pCi/L		E900.0
Gross Beta precision (+/-)	8.2	8.2	17.4	10.6	10.6	8.3	8.7	10.8	8.3	11.2	8.4	8.4	8.6	pCi/L		E900.0
Gross Beta MDC	13.6	13.5	29.4	17.5	17.6	13.3	13.8	17.6	13.7	18.5	14.0	14.5	14.2	pCi/L		E900.0
Radium 226	0.35	0.37	0.27	0.47	0.47	0.96	0.45	0.47	0.26	0.27	0.31	-0.10	0.12	pCi/L		E903.0
Radium 226 precision (+/-)	0.17	0.15	0.16	0.16	0.16	0.20	0.19	0.19	0.13	0.14	0.14	0.10	0.10	pCi/L		E903.0
Radium 226 MDC	0.21	0.17	0.21	0.1	0.14	0.16	0.23	0.21	0.16	0.19	0.16	0.22	0.15	pCi/L		E903.0
Radium 228	0.77	0.50	0.58	1.3	1.30	0.79	0.90	0.50	-0.3	0.35	0.32	0.53	0.38	pCi/L		RA-05
Radium 228 precision (+/-)	0.74	0.73	0.72	0.65	0.62	0.83	0.72	0.67	0.78	0.68	0.63	0.71	0.81	pCi/L		RA-05
Radium 228 MDC	1.2	1.2	1.2	0.99	1.0	1.3	1.2	1.1	1.3	1.1	1.0	1.2	1.3	pCi/L		RA-05
Radon 222	812	824	819	813	674	127	106	634	1010	1120	1000	1130	756	pCi/L	100	D5072-92
Radon 222 precision (+/-)	53.5	49.3	67.2	101	98.6	67.5	48.5	53	66.3	64.5	108	59	45.5	pCi/L		D5072-92
Thorium 228	-	0.0	0.05	0.02	-0.01	0.2	0.2	0.2	0.0	0.3	0.1	0.1	0.1	pCi/L		E907.0
Thorium 228 precision (+/-)	-	0.2	0.1	0.1	0.3	0.6	0.2	0.2	0.8	0.3	0.2	0.1	0.4	pCi/L		E907.0
Thorium 228 MDC	-	-	0.2	0.3	0.7	-	0.2	0.3	-	-	0.3	0.3	-	pCi/L		E907.0
Thorium 230	0.0	0.2	0.1	0.1	-0.2	1.8	0.07	-0.04	1.8	0.3	-0.1	-0.1	0.3	pCi/L		E907.0
Thorium 230 precision (+/-)	0.2	0.1	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2	pCi/L		E907.0
Thorium 230 MDC	-	-	0.2	0.3	0.7	-	0.3	0.3	-	-	0.3	0.3	-	pCi/L		E907.0
Thorium 232	-	0.0	-0.04	-0.04	0.10	-0.1	0.1	-0.02	-0.1	0.0	-0.07	0.02	-0.1	pCi/L		E907.0
Thorium 232 precision (+/-)	-	0.1	0.07	0.09	0.30	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	pCi/L		E907.0
Thorium 232 MDC	-	-	0.2	0.3	0.6	-	0.2	0.2	-	-	0.3	0.3	-	pCi/L		E907.0

Table E-1 Westwater Canyon Member Well Water Quality Data (Page 3 of 4)

WELL ID	116	116	116	116		114	114	114	113	113	113	113	138	UNITS	R.L.	METHOD
Sampling Date	8/19/08	11/13/08	2/10/09	5/21/09		9/18/08	2/18/09	5/26/09	9/22/08	11/10/08	2/12/09	5/26/09	9/23/08			
DATA QUALITY																
A/C Balance (+/- 5)	-0.14	0.839	2.7	0.300	1.25	-1.90	1.27	-4.97	-0.28	0.339	-1.45	-1.08	0.37	%		Calc.
Anions	49.70	47.5	46.6	46.3	46.0	46.50	45.7	44.3	50.20	48.60	48.3	48.2	48.90	meq/l		Calc.
Cations	49.60	48.3	49.2	46.6	47.2	44.80	46.9	40.1	49.90	49.0	46.9	47.2	49.30	meq/l		Calc.
Solids, Total Dissolved Calc.	3260	3150	3130	3060	3060	3290	3040	2850	3290	3390	3170	3170	3210	mg/l		Calc.
TDS Balance (0.80 - 1.20)	1.01	1.06	1.06	1.07	1.08	0.95	1.06	1.09	1.01	0.970	1.09	1.07	1.02			Calc.
VOLATILE ORGANIC COMPOUNDS																
1,1,1,2-Tetrachloroethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,1,1-Trichloroethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,1,2,2-Tetrachloroethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,1,2-Trichloroethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,1-Dichloroethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,1-Dichloroethene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,1-Dichloropropene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,2,3-Trichloropropane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,2-Dibromoethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,2-Dichlorobenzene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,2-Dichloroethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,2-Dichloropropane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,3-Dichlorobenzene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,3-Dichloropropane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
1,4-Dichlorobenzene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
2,2-Dichloropropane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
2-Chloroethyl vinyl ether	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
2-Chlorotoluene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
4-Chlorotoluene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Benzene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Bromobenzene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Bromochloromethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Bromodichloromethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Bromoform	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Bromomethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Carbon tetrachloride	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Chlorobenzene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Chlorodibromomethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Chloroethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Chloroform	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Chloromethane	ND	-		-	??N	ND		-	ND	-		-	ND	ug/l	1.0	E624
cis-1,2-Dichloroethene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
cis-1,3-Dichloropropene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Dibromomethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Dichlorodifluoromethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Ethylbenzene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
m+p-Xylenes	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Methyl ethyl ketone	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	20	E624
Methylene chloride	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
o-Xylene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Styrene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Tetrachloroethene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Toluene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
trans-1,2-Dichloroethene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
trans-1,3-Dichloropropene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Trichloroethene	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Trichlorofluoromethane	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Vinyl chloride	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	□624
Xylenes, Total	ND	-		-	-	ND		-	ND	-		-	ND	ug/l	1.0	E624
Surr: 1,2-Dichlorobenzene-d4	87.0	-		-	-	102.0		-	104.0	-		-	102.0	% REC	80-120	E624
Surr: Dibromofluormethane	88.0	-		-	-	101.0		-	110.0	-		-	102.0	% REC	80-120	E624
Surr: p-Bromofluorobenzene	99.0	-		-	-	103.0		-	102.0	□□		-	100.0	% REC	80-120	E624
Surr: Toluene-d8	113.0	-		-	-	99.0		-	100.0	-		-	100.0	% REC	80-120	E624

Table E-1 Westwater Canyon Member Well Water Quality Data (Page 4 of 4)

WELL ID	116	116	116	116		114	114	114	113	113	113	113	138	UNITS	R.L.	METHOD
Sampling Date	8/19/08	11/13/08	2/10/09	5/21/09		9/18/08	2/18/09	5/26/09	9/22/08	11/10/08	2/12/09	5/26/09	9/23/08			
SYNTHETIC ORGANIC COMPOUNDS																
1,2,4-Trichlorobenzene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
2,4,6-Trichlorophenol	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
2,4-Dichlorophenol	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
2,4-Dimethylphenol	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
2,4-Dinitrophenol	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	50	E625
2,4-Dinitrotoluene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
2,6-Dinitrotoluene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
2-Chloronaphthalene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
2-Chlorophenol	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
2-Nitrophenol	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
3,3'-Dichlorobenzidine	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	20	E625
4,6-Dinitro-2-methylphenol	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	50	E625
4-Bromophenyl phenyl ether	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
4-Chloro-3-methylphenol	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
4-Chlorophenyl phenyl ether	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
4-Nitrophenol	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	50	E625
Acenaphthene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Acenaphthylene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Anthracene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Azobenzene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Benzidine	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	20	E625
Benzo(a)anthracene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Benzo(a)pyrene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Benzo(b)fluoranthene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Benzo(g,h,i)perylene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Benzo(k)fluorathene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
bis(-2-chloroethoxy)Methane	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
bis(-2-chloroethyl)Ether	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
bis(2-chloroisopropyl)Ether	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
bis(2-ethylhexyl)Phthalate	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Butylbenzylphthalate	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Chrysene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Dibenzo(a,h)anthracene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Diethyl phthalate	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Dimethyl phthalate	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Di-n-butyl phthalate	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Di-n-octyl phthalate	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Fluoranthene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Fluorene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	
Hexachlorobenzene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Hexachlorobutadiene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	20	E625
Hexachlorocyclopentadiene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Hexachloroethane	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Ideno(1,2,3-cd)pyrene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Isophorone	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Naphthalene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
n-Nitrosodimethylamine	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
n-Nitroso-di-n-propylamine	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
n-Nitrosodiphenylamine	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Pentachlorophenol	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	50	E625
Phenanthrene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Phenol	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Pyrene	-	ND		-	-	ND		-	ND	-		-	ND	ug/l	10	E625
Surr: 2,4,6-Tribromophenol	-	46.0		-	-	48.0		-	56.0	-		-	53.0	% REC	26-116	E625
Surr: 2-Fluorobiphenyl	-	40.0		-	-	52.0		-	58.0	-		-	55.0	% REC	25-94	E625
Surr: 2-Fluorophenol	-	30.0		-	-	32.0		-	38.0	-		-	36.0	% REC	11-67	E625
Surr: Nitrobenzene-d5	-	53.0		-	-	54.0		-	64.0	-		-	48.0	% REC	19-102	E625
Surr: Phenol-d5	-	31.0		-	-	32.0		-	36.0	-		-	27.0	% REC	15-54	E625
Surr: Terphenyl-d14	-	36.0		-	-	51.0		-	66.0	-		-	67.0	% REC	39-106	E625

Appendix 9-F

Water Quality Data
2008-2009 Sampling
Westwater Canyon Member Permit Area Wells

Table F-1 Westwater Canyon Member Pemit Area Well Water Quality Data (Page 1 of 5)

Well ID	S1							S4							S3							UNITS
Sample ID	**RH08-0008**	**RH08-0066**	**RH08-0066**	**RH08-0066a**	**RH08-0079**	**RH09-0016**	**RH09-0055**	**RH08-0067**	**RH08-0067**	**RH08-0067a**	**RH08-0067b**	**RH08-0077**	**RH09-0021**	**RH09-0054**	**RH08-0068**	**RH08-0068**	**RH08-0068a**	**RH08-0068b**	**RH08-0078**	**RH09-0023**	**RH09-0056**	
Collection Date	4/7/08	8/27/08	8/27/08	9/8/08	11/6/08	2/17/09	6/23/09	8/27/08	8/27/08	9/8/08	10/10/08	11/5/08	3/5/09	5/28/09	8/28/08	8/28/08	9/8/08	11/5/08	11/5/08	2/19/09	6/23/09	
Collection Time	19:20	10:00	10:00	10:15	12:45	13:40	12:15	14:15	14:15	10:30	10:00	10:45	10:50	9:45	10:15	10:15	10:45	12:15	13:45	10:25	14:15	
Comments	Initial	Q1	Q1<MQL	Q1-FT-RAD	Q2	Q3	Q4	Q1	Q1<MQL	Q1-FT-RAD	Q1-FT-NIT	Q2	Q3	Q4	Q1	Q1<MQL	Q1-FT-RAD	Q1-FT-RAD	Q2	Q3	Q4	
MAJOR IONS																						
Alkalinity, Total as CaCO3	-	-	-	-	176	171	171	-	-	-	-	177	176	172	-	-	-	-	170	168	175	mg/l
Carbonate as CO3	-	-	-	-	6	4	ND	-	-	-	-	5	ND	6	-	-	-	-	4	ND	ND	mg/l
Bicarbonate as CO3	-	-	-	-	203	200	209	-	-	-	-	205	214	198	-	-	-	-	198	205	214	mg/l
Hydroxide as OH	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Calcium	-	-	-	-	19	14	16	-	-	-	-	31	26	19	-	-	-	-	21	18	30	mg/l
Chloride	-	-	-	-	4	3	4	-	-	-	3	3	2	3	-	-	-	-	3	3	3	mg/l
Fluoride	-	-	-	-	0.7	0.7	0.6	-	-	-	0.6	0.6	0.6	0.7	-	-	-	-	0.8	0.7	0.6	mg/l
Magnesium	-	-	-	-	4	3	3	-	-	-	-	5	5	3	-	-	-	-	3	2	5	mg/l
Nitrogen, Ammonia as N	-	-	-	-	ND	ND	ND	-	-	-	-	0.2	0.13	0.05	-	-	-	-	ND	ND	0.11	mg/l
Nitrogen, Kjeldahl, Total as N	-	-	-	-	ND	ND	ND	-	-	-	0.6	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Nitrogen, Nitrate as N	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND		ND	mg/l
Nitrogen, Nitrate+Nitrite as N	-	-	-	-	ND	ND	ND	-	-	-	ND	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Nitrogen, Nitrite as N	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Nitrogen, Total	-	-	-	-	ND	ND	ND	-	-	-	0.6	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Potassium	-	-	-	-	3	2	2	-	-	-	-	3	3	2	-	-	-	-	2	3	3	mg/l
Silica	-	-	-	-	29.2	20.2	25.6	-	-	-	-	27.8	21.7	28.7	-	-	-	-	32.5	25	27.5	mg/l
Sodium	-	-	-	-	169	139	147	-	-	-	-	137	126	129	-	-	-	-	134	123	132	mg/l
Sulfate	-	-	-	-	204	205	209	-	-	-	206	201	194	156	-	-	-	-	152	148	208	mg/l
NON-METALS																						
Carbon, Total	-	-	-	-	47.9	ND	28	-	-	-	-	25.6	46	30.5	-	-	-	-	15.5	0.7	30.1	mg/l
Organic Carbon, Total (TOC)	-	-	-	-	1.2	3.9	3.7	-	-	-	-	1.0	ND	1.2	-	-	-	-	1.1	3.9	2.3	mg/l
Phenolics, Total Recoverable (Distilled)	-	-	-	-	ND	ND	0.06	-	-	-	-	ND	ND	0.02	-	-	-	-	ND	0.05	0.02	mg/l
Cyanide, Total	-	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	mg/l
PHYSICAL PROPERTIES																						
Chlorine, Residual Total	-	0.02	0.02	-	-	-	-	0.02	0.02	-	-	-	-	-	0.02	0.02	-	-	-	-	-	mg/l
Color	-	-	-	-	ND	ND	ND	-	-	-	-	ND	5	ND	-	-	-	-	ND	5.0	ND	c.u.
Conductivity	-	-	-	-	798	722	777	-	-	-	-	775	762	661	-	-	-	-	640	661	771	umhos/cm
Corrosivity	-	-	-	-	0.2	-0.02	-0.04	-	-	-	-	0.2	0.4	0.2	-	-	-	-	0.06	0.03	0.1	unitless
Hardness	-	-	-	-	63	48	52	-	-	-	-	99	85	60	-	-	-	-	67	53	95	mg/l
Odor	-	-	-	-	NOO	NOO	NOO	-	-	-	-	NOO	NOO	NOO	-	-	-	-	NOO	present	NOO	NOO
pH	-	-	-	-	8.16	8.06	8.00	-	-	-	8.59	7.93	8.20	8.12	-	-	-	-	7.96	8.01	7.87	s.u.
Solids, Total Dissolved TDS @ 180 C	-	-	-	-	509	526	525	-	-	-	527	523	524	435	-	-	-	-	437	425	529	mg/l
METALS - DISSOLVED																						
Aluminum	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Antimony	-	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	mg/l
Arsenic	-	0.003	0.0031	-	0.003	0.003	0.003	0.003	0.0035	-	-	0.004	0.003	0.003	0.004	0.0039	-	-	0.003	0.003	ND	mg/l
Barium	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Beryllium	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Boron	-	-	-	-	0.2	0.1	0.2	-	-	-	-	0.2	ND	0.2	-	-	-	-	0.2	0.1	0.2	mg/l
Cadmium	-	-	-	-	ND	ND	ND	-	-	-	-	ND	0.03	ND	-	-	-	-	ND	ND	ND	mg/l
Chromium	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Cobalt	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Copper	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Iron	-	-	-	-	ND	ND	ND	-	-	-	-	0.05	ND	0.03	-	-	-	-	ND	ND	0.04	mg/l
Lead	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Manganese	-	-	-	-	0.02	0.01	0.01	-	-	-	-	0.02	0.02	0.03	-	-	-	-	0.02	0.03	0.02	mg/l
Mercury	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Molybdenum	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Nickel	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	mg/l
Selenium	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	-	-	ND	ND	0.012	mg/l
Silver	ND	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Thallium	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	mg/l
Uranium	0.0032	-	-	-	0.0023	0.0019	0.002	-	-	-	-	0.0020	0.0019	0.0057	-	-	-	-	0.006	0.0066	0.0017	mg/l
Vanadium	ND	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	mg/l
Zinc	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	0.03	0.02	0.07	0.07	-	-	ND	ND	0.02	mg/l

Table F-1 Westwater Canyon Member Pemit Area Well Water Quality Data (Page 2 of 5)

Well ID	S1							S4							S3							UNITS
Sample ID	**RH08-0008**	**RH08-0066**	**RH08-0066**	**RH08-0066a**	**RH08-0079**	**RH09-0016**	**RH09-0055**	**RH08-0067**	**RH08-0067**	**RH08-0067a**	**RH08-0067b**	**RH08-0077**	**RH09-0021**	**RH09-0054**	**RH08-0068**	**RH08-0068**	**RH08-0068a**	**RH08-0068b**	**RH08-0078**	**RH09-0023**	**RH09-0056**	
Collection Date	4/7/08	8/27/08	8/27/08	9/8/08	11/6/08	2/17/09	6/23/09	8/27/08	8/27/08	9/8/08	10/10/08	11/5/08	3/5/09	5/28/09	8/28/08	8/28/08	9/8/08	11/5/08	11/5/08	2/19/09	6/23/09	
Collection Time	19:20	10:00	10:00	10:15	12:45	13:40	12:15	14:15	14:15	10:30	10:00	10:45	10:50	9:45	10:15	10:15	10:45	12:15	0.572916667	10:25	14:15	
Comments	Initial	Q1	Q1<MQL	Q1-FT-RAD	Q2	Q3	Q4	Q1	Q1<MQL	Q1-FT-RAD	Q1-FT-NIT	Q2	Q3	Q4	Q1	Q1<MQL	Q1-FT-RAD	Q1-FT-RAD	Q2	Q3	Q4	
METALS - TOTAL																						
Aluminum	-	ND	0.03	-	-	-	-	ND	0.063	-	-	-	-	-	ND	0.009	-	-	-	-	-	mg/l
Antimony	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Arsenic	-	ND	0.0034	-	-	-	-	ND	0.0038	-	-	-	-	-	0.0151	0.0077	-	-	-	-	-	mg/l
Barium	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Beryllium	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Boron	-	0.1	0.1	-	-	-	-	0.2	0.2	-	-	-	-	-	0.2	0.2	-	-	-	-	-	mg/l
Cadmium	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Chromium	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Cobalt	-	ND	ND	-	-	-	-	0.0008	0.0008	-	-	-	-	-	0.003	ND	-	-	-	-	-	mg/l
Copper	-	ND	ND	-	-	-	-	ND	0.0006	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Iron	0.51	-	-	-	-	-	-	-	-	-	0.04	-	-	-	-	-	-	-	-	-	-	mg/l
Lead	-	0.0005	0.0005	-	-	-	-	0.0006	0.0006	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Manganese	0.03	-	-	-	-	-	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-	-	mg/l
Mercury	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Molybdenum	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Nickel	-	0.0013	0.0013	-	-	-	-	0.0034	0.0034	-	-	-	-	-	0.002	0.0006	-	-	-	-	-	mg/l
Selenium	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Silver	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Thallium	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Uranium	-	0.0039	0.0036	-	0.0023	0.0022	0.0022	0.0022	0.0022	-	-	0.0018	0.0017	0.0091	0.0072	0.0071	-	-	0.0076	0.0069	0.0019	mg/l
Vanadium	-	ND	0.001	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
Zinc	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	mg/l
VOLATILE ORGANIC COMPOUNDS																						
1,1,1,2-Tetrachloroethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,1,1-Trichloroethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,1,2,2-Tetrachloroethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1.1.2-Trichloroethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,1-Dichloroethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,1-Dichloroethene (1,1-Dichloroethylene)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,1-Dichloropropene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,2,3-Trichloropropane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,2-Dibromoethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,2-Dichlorobenzene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,2-Dichloroethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,2-Dichloropropane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,3-Dichlorobenzene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,3-Dichloropropane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,4-Dichlorobenzene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
2,2-Dichloropropane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
2-Chloroethyl vinyl ether	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
2-Chlorotoluene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
4-Chlorotoluene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Benzene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Bromobenzene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Bromochloromethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Bromodichloromethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Bromoform	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Bromomethane (Methyl bromide)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Carbon tetrachloride	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Chlorobenzene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Chlorodibromomethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Chloroethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Chloroform	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Chloromethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
cis-1,2-Dichloroethene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l

Table F-1 Westwater Canyon Member Pemit Area Well Water Quality Data (Page 3 of 5)

Well ID	S1							S4							S3							UNITS
Sample ID	**RH08-0008**	**RH08-0066**	**RH08-0066**	**RH08-0066a**	**RH08-0079**	**RH09-0016**	**RH09-0055**	**RH08-0067**	**RH08-0067**	**RH08-0067a**	**RH08-0067b**	**RH08-0077**	**RH09-0021**	**RH09-0054**	**RH08-0068**	**RH08-0068**	**RH08-0068a**	**RH08-0068b**	**RH08-0078**	**RH09-0023**	**RH09-0056**	
Collection Date	4/7/08	8/27/08	8/27/08	9/8/08	11/6/08	2/17/09	6/23/09	8/27/08	8/27/08	9/8/08	10/10/08	11/5/08	3/5/09	5/28/09	8/28/08	8/28/08	9/8/08	11/5/08	11/5/08	2/19/09	6/23/09	
Collection Time	19:20	10:00	10:00	10:15	12:45	13:40	12:15	14:15	14:15	10:30	10:00	10:45	10:50	9:45	10:15	10:15	10:45	12:15	0.572916667	10:25	14:15	
Comments	Initial	Q1	Q1<MQL	Q1-FT-RAD	Q2	Q3	Q4	Q1	Q1<MQL	Q1-FT-RAD	Q1-FT-NIT	Q2	Q3	Q4	Q1	Q1<MQL	Q1-FT-RAD	Q1-FT-RAD	Q2	Q3	Q4	
VOLATILE ORGANIC COMPOUNDS																						
cis-1,3-Dichloropropene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Dibromomethane (ethylene dibromide)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Dichlorodifluoromethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Ethylbenzene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
m+p-Xylenes	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Methyl ethyl ketone	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Methylene chloride	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
o-Xylene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Styrene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Tetrachloroethene (tetrachloroethylene)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Toluene	-	3.3	3.3	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
trans-1,2-Dichloroethene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
trans-1,3-Dichloropropene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Trichloroethene (1,1,2-trichloroethylene)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Trichlorofluoromethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Vinyl chloride	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Xylenes, Total	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Surr: 1,2-Dichlorobenzene-d4	-	94.0	94.0	-	-	-	-	105	105	-	-	-	-	-	92.0	92.0	-	-	-	-	-	%REC
Surr: Dibromofluoromethane	-	97.0	97.0	-	-	-	-	95.0	95.0	-	-	-	-	-	98.0	98.0	-	-	-	-	-	%REC
Surr: p-Bromofluorobenzene	-	102	102	-	-	-	-	102	102	-	-	-	-	-	98.0	98.0	-	-	-	-	-	%REC
Surr: Toluene-d8	-	99.0	99.0	-	-	-	-	98.0	98.0	-	-	-	-	-	101	101	-	-	-	-	-	%REC
SYNTHETIC ORGANIC COMPOUNDS																						
1,2,4-Trichlorobenzene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,2-Dichlorobenzene	-	-	ND	-	-	-	-	-	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,3-Dichlorobenzene	-	-	ND	-	-	-	-	-	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
1,4-Dichlorobenzene	-	-	ND	-	-	-	-	-	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
2,4,6-Trichlorophenol	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
2,4-Dichlorophenol	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
2,4-Dimethylphenol	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
2,4-Dinitrophenol	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
2,4-Dinitrotoluene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
2,6-Dinitrotoluene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
2-Chloronaphthalene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
2-Chlorophenol	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
2-Nitrophenol	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
3,3'-Dichlorobenzidine	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
4,6-Dinitro-2-methylphenol	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
4-Bromophenyl phenyl ether	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
4-Chloro-3-methylphenol	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
4-Chlorophenyl phenyl ether	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
4-Nitrophenol	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Acenaphthene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Acenaphthylene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Anthracene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Azobenzene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Benzidine	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Benzo(a)anthracene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Benzo(a)pyrene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Benzo(b)fluoranthene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Benzo(g,h,i)perylene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Benzo(k)fluoranthene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
bis(-2-chloroethoxy)Methane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
bis(-2-chloroethyl)Ether	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
bis(2-chloroisopropyl)Ether	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
bis(2-ethylhexyl)Phthalate	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l

Table F-1 Westwater Canyon Member Pemit Area Well Water Quality Data (Page 4 of 5)

Well ID	S1							S4							S3							UNITS
Sample ID	**RH08-0008**	**RH08-0066**	**RH08-0066**	**RH08-0066a**	**RH08-0079**	**RH09-0016**	**RH09-0055**	**RH08-0067**	**RH08-0067**	**RH08-0067a**	**RH08-0067b**	**RH08-0077**	**RH09-0021**	**RH09-0054**	**RH08-0068**	**RH08-0068**	**RH08-0068a**	**RH08-0068b**	**RH08-0078**	**RH09-0023**	**RH09-0056**	
Collection Date	4/7/08	8/27/08	8/27/08	9/8/08	11/6/08	2/17/09	6/23/09	8/27/08	8/27/08	9/8/08	10/10/08	11/5/08	3/5/09	5/28/09	8/28/08	8/28/08	9/8/08	11/5/08	11/5/08	2/19/09	6/23/09	
Collection Time	19:20	10:00	10:00	10:15	12:45	13:40	12:15	14:15	14:15	10:30	10:00	10:45	10:50	9:45	10:15	10:15	10:45	12:15	0.572916667	10:25	14:15	
Comments	Initial	Q1	Q1<MQL	Q1-FT-RAD	Q2	Q3	Q4	Q1	Q1<MQL	Q1-FT-RAD	Q1-FT-NIT	Q2	Q3	Q4	Q1	Q1<MQL	Q1-FT-RAD	Q1-FT-RAD	Q2	Q3	Q4	
SYNTHETIC ORGANIC COMPOUNDS																						
Butylbenzylphthalate	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Chrysene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Dibenzo(a,h)anthracene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Diethyl phthalate	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Dimethyl phthalate	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Di-n-butyl phthalate	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Di-n-octyl phthalate	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Fluoranthene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Fluorene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Hexachlorobenzene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Hexachlorobutadiene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Hexachlorocyclopentadiene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Hexachloroethane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Indeno(1,2,3-cd)pyrene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Isophorone	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Naphthalene *(is this total?)*	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Nitrobenzene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
n-Nitrosodimethylamine	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
n-Nitrosodi-n-propylamine	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
n-Nitrosodiphenylamine	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Pentachlorophenol	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Phenanthrene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Phenol	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Pyrene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Surr: 2,4,6-Tribromophenol	-	41.0	41.0	-	-	-	-	50.0	50.0	-	-	-	-	-	46.0	46.0	-	-	-	-	-	%REC
Surr: 2-Fluorobiphenyl	-	42.0	42.0	-	-	-	-	56.0	56.0	-	-	-	-	-	51.0	51.0	-	-	-	-	-	%REC
Surr: 2-Fluorophenol	-	27.0	27.0	-	-	-	-	31.0	31.0	-	-	-	-	-	28.0	28.0	-	-	-	-	-	%REC
Surr: Nitrobenzene-d5	-	46.0	46.0	-	-	-	-	55.0	55.0	-	-	-	-	-	64.0	64.0	-	-	-	-	-	%REC
Surr: Phenol-d5	-	22.0	22.0	-	-	-	-	24.0	24.0	-	-	-	-	-	25.0	25.0	-	-	-	-	-	%REC
Surr: Terphenyl-d14	-	48.0	48.0	-	-	-	-	59.0	59.0	-	-	-	-	-	79.0	79.0	-	-	-	-	-	%REC
DIOXINS																						
2,3,7,8-Tetrachlorodibenzo-p-dioxin	-	-	ND	-	-	-	-	-	ND	-	-	-	-	-	-	ND	-	-	-	-	-	pg/l
PESTICIDES																						
4,4'-DDD	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
4,4'-DDE	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
4,4'-DDT	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Aldrin	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
alpha-BHC	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
alpha-Chlordane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
beta-BHC	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Chlordane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
delta-BHC	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Dieldrin	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Endosulfan I (alpha)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Endosulfan II (beta)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Endosulfan sulfate	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Endrin	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Endrin aldehyde	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Endril Ketone	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
gamma-BHC (Lindane)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
gamma-Chlordane	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Heptachlor	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Heptachlor epoxide	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Methoxychlor	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Toxaphene	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l

Table F-1 Westwater Canyon Member Pemit Area Well Water Quality Data (Page 5 of 5)

Well ID	S1							S4							S3							UNITS
Sample ID	**RH08-0008**	**RH08-0066**	**RH08-0066**	**RH08-0066a**	**RH08-0079**	**RH09-0016**	**RH09-0055**	**RH08-0067**	**RH08-0067**	**RH08-0067a**	**RH08-0067b**	**RH08-0077**	**RH09-0021**	**RH09-0054**	**RH08-0068**	**RH08-0068**	**RH08-0068a**	**RH08-0068b**	**RH08-0078**	**RH09-0023**	**RH09-0056**	
Collection Date	4/7/08	8/27/08	8/27/08	9/8/08	11/6/08	2/17/09	6/23/09	8/27/08	8/27/08	9/8/08	10/10/08	11/5/08	3/5/09	5/28/09	8/28/08	8/28/08	9/8/08	11/5/08	11/5/08	2/19/09	6/23/09	
Collection Time	19:20	10:00	10:00	10:15	12:45	13:40	12:15	14:15	14:15	10:30	10:00	10:45	10:50	9:45	10:15	10:15	10:45	12:15	0.572916667	10:25	14:15	
Comments	Initial	Q1	Q1<MQL	Q1-FT-RAD	Q2	Q3	Q4	Q1	Q1<MQL	Q1-FT-RAD	Q1-FT-NIT	Q2	Q3	Q4	Q1	Q1<MQL	Q1-FT-RAD	Q1-FT-RAD	Q2	Q3	Q4	
PESTICIDES																						
Aroclor 1016 (PCB)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Aroclor 1221 (PCB)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Aroclor 1232 (PCB)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Aroclor 1242 (PCB)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Aroclor 1248 (PCB)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Aroclor 1254 (PCB)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Aroclor 1260 (PCB)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Aroclor 1262 (PCB)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Aroclor 1268 (PCB)	-	ND	ND	-	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-	-	ug/l
Surr: Decachlorobiphenyl	-	70.0	70.0	-	-	-	-	93.0	93.0	-	-	-	-	-	97.0	97.0	-	-	-	-	-	%REC
Surr: Tetrachloro-m-xylene	-	57.0	57.0	-	-	-	-	82.0	82.0	-	-	-	-	-	84.0	84.0	-	-	-	-	-	%REC
RADIONUCLIDES																						
Uranium	-	-	-	3.0	-	-	-	-	-	1.7	-	-	-	-	-	-	5.0	-	-	-	-	ug/l
Gross Alpha	418	-	-	136	229	290.0	350.0	-	-	10.0	-	8.5	6.6	30.9	-	-	17.8	15.9	22.2	21.9	10.9	pCi/l
Gross Alpha precision (+/-)	9.7	-	-	5.9	8.2	8.5	9.3	-	-	2.1	-	2.0	2.1	3.1	-	-	2.3	2.2	2.6	2.5	2.1	pCi/l
Gross Alpha MDC	1.7	-	-	2.5	2.6	1.8	2.3	-	-	2.5	-	2.2	2.6	2.3	-	-	2.2	1.9	2.2	1.9	2.3	pCi/l
Gross Beta	178.0	-	-	35.2	72.0	88.4	117.0	-	-	0.3	-	5.6	3.3	7.1	-	-	3.3	7.1	4.9	9.4	8.7	pCi/l
Gross Beta precision (+/-)	3.6	-	-	2.4	3.1	2.9	3.6	-	-	1.8	-	2.3	2.1	1.8	-	-	1.9	1.9	1.7	1.7	2.1	pCi/l
Gross Beta MDC	2.6	-	-	3.0	3.4	2.8	3.3	-	-	3.0	-	3.8	3.4	2.9	-	-	3.0	3.0	2.7	2.6	3.3	pCi/l
Radium 226	62.9	-	-	28	69.0	56.0	65.0	-	-	0.45	-	0.26	0.32	3.6	-	-	3.1	2.0	4.6	4.0	0.18	pCi/l
Radium 226 precision (+/-)	1.40	-	-	1.1	1.80	1.50	1.60	-	-	0.17	-	0.25	0.14	0.36	-	-	0.37	0.51	0.42	0.40	0.14	pCi/l
Radium 226 MDC	0.20	-	-	0.22	0.21	0.20	0.21	-	-	0.19	-	0.34	0.17	0.18	-	-	0.21	0.36	0.14	0.18	0.19	pCi/l
Radium 228	0.90	-	-	-0.1	0.06	1.0	0.81	-	-	-0.04	-	0.93	-0.2	0.17	-	-	0.33	0.93	0.23	0.25	1.20	pCi/l
Radium 228 precsion (+/-)	0.70	-	-	0.66	0.79	0.90	0.66	-	-	0.67	-	1.5	0.52	0.62	-	-	0.69	1.60	0.67	0.81	0.64	pCi/l
Radium 228 MDC	1.2	-	-	1.1	1.3	1.4	1.0	-	-	1.1	-	2.5	0.90	1.0	-	-	1.1	2.5	1.1	1.3	0.98	pCi/l
Radium 226/228 Combined	63.8	-	-	27.9	69.1	57.0	65.8	-	-	0.4	-	1.2	0.12	3.8	-	-	3.4	2.9	4.8	4.3	1.4	pCi/l
Radon 222	120000	-	-	-	128000	73500	83100	-	-	-	-	1070	1070	19400	-	-	-	-	13800	11500	835	pCi/l
Radon 222 precision (+/-)	436.0	-	-	-	378.0	312	335.0	-	-	-	-	59.9	66.6	171.0	-	-	-	-	143.0	207.0	54.7	pCi/l
Thorium 228	-	-	-	-	0.00	0.01	0.1	-	-	-	-	0.0	0.07	0.06	-	-	-	0.1	0.00	0.04	0.06	pCi/l
Thorium 228 precision (+/-)	-	-	-	-	0.1	0.1	0.2	-	-	-	-	0.07	0.1	0.09	-	-	-	0.1	0.1	0.1	0.10	pCi/l
Thorium 230	6.0	-	-	0.3	0.7	0.2	0.2	-	-	0.0	-	0.0	0.2	-0.1	-	-	0.0	-0.1	0.0	0.04	-0.1	pCi/l
Thorium 230 precision (+/-)	0.6	-	-	0.2	0.3	0.2	0.3	-	-	0.05	-	0.09	0.1	0.1	-	-	0.09	0.1	0.1	0.1	0.10	pCi/l
Thorium 232	-	-	-	-	0.00	0.02	-0.02	-	-	-	-	0.0	-0.004	0.03	-	-	-	0.0	0.0	0.04	-0.02	pCi/l
Thorium 232 precision (+/-)	-	-	-	-	0.1	0.2	0.1	-	-	-	-	0.05	0.08	0.09	-	-	-	0.1	0.1	0.09	0.08	pCi/l
DATA QUALITY																						
A/C Balance (+/- 5)	-	-	-	-	4.72	-4.92	-2.58	-	-	-	-	1.16	-2.46	0.44	-	-	-	-	3.96	-0.753	-1.35	%
Anions	-	-	-	-	7.90	7.81	7.91	-	-	-	-	7.82	7.64	6.80	-	-	-	-	6.67	6.57	7.95	meq/l
Cations	-	-	-	-	8.68	7.08	7.51	-	-	-	-	8.01	7.27	6.86	-	-	-	-	7.22	6.47	7.74	meq/l
Solids, Total Dissolved Calc.	-	-	-	-	545	496	485	-	-	-	-	521	490	452	-	-	-	-	459	430	522	mg/l
TDS Balance (0.80 - 1.20)	-	-	-	-	0.930	1.06	1.08	-	-	-	-	1.00	1.07	0.960	-	-	-	-	0.950	0.990	1.01	

Appendix 9-G

Water Quality Data
2008-2009 Sampling
Multiple Aquifer/Unknown Formations of Completion

Table G-1 Multiple Aquifer/Unknow Formation Well Water Quality Data (Page 1 of 4)

WELL ID	□□□4	**47**	**111**	**111**	**111**	**111**	**106**	**83**	**83**	**5**	**12**	**12**	**12**			
Sampling Date	8/7/08	11/18/08	8/13/08	11/10/08	2/11/09	5/26/09	8/13/08	8/20/08	11/10/08	9/25/08	11/13/08	2/12/09	5/18/09	**UNITS**	**R.L.**	**METHOD**
Formation of Completion	Unk.	Unk.	Unk.	Unk.	Unk.	Unk.	Qal/Jmw	Kmf/Kpl	Kmf/Kpl	Kmf/Kpl	Kd/Jmw	Kd/Jmw	Kd/Jmw			
FIELD MEASUREMENTS																
Water Level (Altitude)	-	-	6641	6641	-		6835	7106	7106	7132	-	-		ft.		
pH	7.16	7.68	6.92	7.61	8.20	□	6.72	9.06	9.91	-	7.43	8.28		s.u.	HANNA Multi-meter	
Conductivity	1200	1233	670	718	712		3168	840	859	-	832	840		umhos/cm	HANNA Multi-meter	
Temperature	67.49	52.82	64.76	54.80	48.40		57.95	56.05	53.49	-	52.58	39.84		degrees F	HANNA Multi-meter	
Dissolved Oxygen	-	-	-	-	-		-	-	-	-	-	-		%	HANNA Multi-meter	
Total Dissolved Solids, TDS	-	616	-	351	356		-	-	429	-	416	420		mg/l	HANNA Multi-meter	
Turbidity	0	0	0	0	1.59		1.23	7.21	4.6	13.29	0	0		t.u.	HANNA Multi-meter	
MAJOR IONS																
Alkalinity, Total as CaCO3	330	321	253	260	256	269	154	465	466	333	267	261	275	mg/l	1.0	A2320 B
Carbonate as CO3	ND	ND	ND	ND	ND	ND	ND	82	79	28	ND	-	2	mg/l	1.0	A2320 B
Bicarbonate as HCO3	400	392	309	317	313	328	188	401	408	349	326	-	331	mg/l	1.0	A2320 B
Hydroxide as OH	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	mg/l	1.0	A2320 B
Calcium	68	68	87	87	75	78	524	ND	ND	2	51	46	48	mg/l	1	E200.7
Chloride	25	24	18	16	15	17	46	3	2	4	8	7	7	mg/l	1	E300.0
Fluoride	1.2	1.4	0.2	0.2	0.2	0.2	0.5	4.3	4.2	1.0	0.8	0.8	0.8	mg/l	0.1	A4500-F C
Magnesium	26	25	14	15	14	13	175	ND	ND	ND	15	13	14	mg/l	1	E200.7
Nitrogen, Ammonia as N	ND	ND	ND	ND	ND	ND	ND	0.2	0.2	0.1	ND	ND	ND	mg/l	0.1	E350.1
Nitrogen, Kjeldahl, Total as N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.5	E351.2
Nitrogen, Nitrate as N	-	ND	-	1.0	1.1	1.0	-	-	ND	-	ND	0.1	ND	mg/l	0.1	E353.2
Nitrogen, Nitrate + Nitrite as N	-	ND	-	1.0	1.09	1.07	-	-	ND	-	ND	0.11	ND	mg/l	0.05	E353.2
Nitrogen, Nitrite as N	ND	ND	1.08	ND	ND	ND	12.70	ND	ND	ND	ND	ND	ND	mg/l	0.1	A4500-NO2 B
Nitrogen, Total	ND	ND	1.1	1.0	1.1	1.1	12.7	ND	ND	ND	ND	ND	ND	mg/l	0.5	A4500-N A
Potassium	3	3	5	5	6	5	5	ND	ND	ND	4	3	4	mg/l	1	E200.7
Silica	121.0	18.7	19.0	17.4	16.0	116.5	11.8	2.3	1.9	10.1	22.3	19.4	21.4	mg/l	0.2	E200.7
Sodium	175	229	58	59	54	59	243	219	249	177	143	127	136	mg/l	1	E200.7
Sulfate	323	335	97	93	88	98	2440	4	2	57	177	176	169	mg/l	1	E300.0
NON-METALS																
Organic Carbon, Total (TOC)	1.2	2.4	ND	1.9	0.5	0.6	3.4	ND	4.6	0.7	1.5	0.6	0.6	mg/l	0.5	A5310 C
Carbon, Total	1.4	60.6	ND	36.8	6.3	61.0	3.6	ND	65.2	2.1	52	6.6	55.8	mg/l	9.7	SW9060
Phenolics, Total Recoverable	-	ND	-	ND	0.015	ND	-	-	ND	-	ND	ND	0.02	mg/l	0.0	E420.1
Cyanide, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.005	Kelada mod
PHYSICAL PROPERTIES																
Color	10.0	10.0	ND	ND	-	ND	5.0	5.0	5.0	20.0	ND	ND	ND	c.u.	5.0	A2120 B
Conductivity	1290	1350	726	722	668	732	3650	878.0	900.0	754	894	857	887	umhos/cm	1	A2510 B
Corrosivity	0.80	0.8	0.49	0.6	0.5	0.5	0.51	0.37	0.4	0.30	0.6	0.1	0.4	unitless		Calc.
Hardness as CaCO3	274	273	278	279	245	250	2030	2	2	6	189	168	179	mg/l	1	A2340 B
Odor	NOO	NOO	NOO	NOO	-	NOO	NOO	NOO	NOO	NOO	NOO	NOO	NOO	T.O.N	1	A2150 B
pH	7.99	7.97	7.60	7.69	7.63	7.66	7.33	9.30	9.34	8.95	7.90	7.52	7.81	s.u.	0.01	A4500-H B
Solids, TDS @ 180 C	859	868	444	435	463	461	3440	485.0	508	458	567	588	591	mg/l	10	A2540 C

Table G-1 Multiple Aquifer/Unknow Formation Well Water Quality Data (Page 2 of 4)

WELL ID	**47**	**47**	**111**	**111**	**111**	**111**	**106**	**83**	**83**	**5**	**12**	**12**	**12**	**UNITS**	**R.L.**	**METHOD**
Formation of Completion	Unk.	Unk.	Unk.	Unk.	Unk.	Unk.	Qal/Jmw	Kmf/Kpl	Kmf/Kpl	Kmf/Kpl	Kd/Jmw	Kd/Jmw	Kd/Jmw			
METALS-DISSOLVED																
Aluminum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.7
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Arsenic	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.001	E200.8
Barium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Beryllium	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.7
Boron	ND	0.2	ND	ND	ND	ND	0.1	0.7	0.7	0.4	0.2	0.2	0.2	mg/l	0.1	E200.7
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Copper	ND	ND	ND	ND	0.01	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Iron	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.42	ND	ND	ND	mg/l	0.03	E200.8
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Manganese	0.09	0.08	0.08	0.07	0.06	0.07	0.12	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.001	E245.1
Molybdenum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Nickel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.05	E200.8
Selenium	ND	0.002	0.071	0.074	0.071	0.082	0.008	ND	ND	ND	ND	ND	ND	mg/l	0.001	E200.8
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.01	E200.8
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.10	E200.8
Uranium	0.0046	0.0033	0.0586	0.0576	0.0603	0.0608	0.0106	ND	ND	ND	ND	ND	ND	mg/l	0.0003	E200.8
Vanadium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	mg/l	0.1	E200.8
Zinc	0.01	ND	0.02	0.01	0.02	0.02	ND	0.07	0.04	0.01	0.10	0.15	0.08	mg/l	0.01	E200.8
METALS-TOTAL																
Uranium	0.0034	0.0032	0.0625	0.0570	0.0573	0.0612	0.0112	ND	ND	0.0006	ND	ND	ND	mg/l	0.0003	E200.8
RADIONUCLIDES-TOTAL																
Gross Alpha	4.3	6.2	55.0	75.0	48.2	56.7	11.7	-0.9	2.4	2.8	2.1	3.4	2.1	pCi/L		E900.0
Gross Alpha precision (+/-)	2.8	3.0	4.4	5.0	3.7	4.5	9.9	2.0	2.1	1.2	1.6	1.6	2	pCi/L		E900.0
Gross Alpha MDC	4.2	4.1	2.9	2.6	2.2	2.7	15.2	3.6	3.2	1.6	2.3	2.2	3.1	pCi/L		E900.0
Gross Beta	4.2	0.9	20.3	29.7	27.3	22.4	0.9	-6.0	-3	-2.0	-1	12.0	3.3	pCi/L		E900.0
Gross Beta precision (+/-)	3.8	3.3	2.1	2.4	2.3	2.4	7.9	2.0	2.4	1.8	2.3	1.9	2.3	pCi/L		E900.0
Gross Beta MDC	6.2	5.5	2.9	3.2	3.1	3.4	13.2	3.6	4.1	3.0	3.8	2.8	3.7	pCi/L		E900.0
Radium 226	0.34	0.38	1.10	0.98	1.0	1.1	0.13	-0.02	-0.2	0.04	0.25	0.43	-0.1	pCi/L		E903.0
Radium 226 precision (+/-)	0.22	0.17	0.26	0.23	0.25	0.29	0.13	0.12	0.09	0.10	0.13	0.18	0.11	pCi/L		E903.0
Radium 226 MDC	0.30	□.21	0.23	0.21	0.20	0.26	0.19	0.22	0.22	0.16	0.17	0.22	0.23	pCi/L		E903.0
Radium 228	0.05	-0.05	0.61	2.1	0.62	1.3	2.1	0.1	2.4	-0.02	0.47	0.78	0.85	pCi/L		RA-05
Radium 228 precision (+/-)	0.66	0.70	0.71	0.81	0.76	0.87	0.78	0.67	0.83	0.79	0.73	0.73	0.8	pCi/L		RA-05
Radium 228 MDC	1.1	1.2	1.2	1.2	1.2	1.4	1.2	1.1	1.2	1.3	1.2	1.2	1.3	pCi/L		RA-05
Radon 222	600	484	1580	1190	1530	1520	493	133	145	205	87	257	36.5	pCi/L	100	D5072-92
Radon 222 precision (+/-)	55.1	51.2	63.8	65.7	115	63	51.7	48.8	54.6	67.9	39.5	101	37.9	pCi/L		D5072-92
Thorium 228	0.0	0.1	0.0	0.3	0.08	0.01	0.1	0.2	0.0	ND	1.7	0.03	0.09	pCi/L		E907.0
Thorium 228 precision (+/-)	0.1	0.2	0.2	0.3	0.1	0.1	0.2	0.3	0.08	0.2	0.5	0.08	0.1	pCi/L		E907.0
Thorium 228 MDC	-	-	-	-	0.2	0.2	-	-	-	-	-	0.2	0.3	pCi/L		E907.0
Thorium 230	-0.1	-0.1	1.3	-0.1	-0.01	0.10	1.1	3.1	0.0	0.5	-0.2	-0.07	-0.02	pCi/L		E907.0
Thorium 230 precision (+/-)	0.1	0.2	0.5	0.2	0.1	0.1	0.4	0.9	0.1	0.2	0.1	0.08	0.1	pCi/L		E907.0
Thorium 230 MDC	-	-	-	-	0.2	0.1	-	-	-	-	-	0.1	0.3	pCi/L		E907.0
Thorium 232	0.0	0.0	0.0	0.0	0.03	-0.008	0.0	0.0	0.0	0.0	0.0	0.03	-0.03	pCi/L		E907.0
Thorium 232 precision (+/-)	0.1	0.1	0.1	0.2	0.09	0.04	0.1	0.1	0.06	0.1	0.1	0.07	0.09	pCi/L		E907.0
Thorium 232 MDC	-	-	-	-	0.2	0.1	-	-	-	-	-	0.1	0.2	pCi/L		E907.0

Table G-1 Multiple Aquifer/Unknow Formation Well Water Quality Data (Page 3 of 4)

WELL ID	**47**	**47**	**111**	**111**	**111**	**111**	**106**	**83**	**83**	**5**	**12**	**12**	**12**	**UNITS**	**R.L.**	**METHOD**
Formation of Completion	Unk.	Unk.	Unk.	Unk.	Unk.	Unk.	Qal/Jmw	Kmf/Kpl	Kmf/Kpl	Kmf/Kpl	Kd/Jmw	Kd/Jmw	Kd/Jmw			
DATA QUALITY																
A/C Balance (+/- 5)	-2.93	4.58	3.56	3.73	-0.364	-1.870	-4.47	-0.28	6.35	-1.08	4.00	-0.94	1.83	%		Calc.
Anions	14.00	14.1	7.66	7.67	7.45	7.99	56.00	9.67	9.62	8.03	9.29	9.12	9.25	meq/l		Calc.
Cations	13.20	15.5	8.22	8.26	7.40	7.69	51.20	9.62	10.90	7.85	10.1	8.95	9.6	meq/l		Calc.
Solids, Total Dissolved Calc.	897	901	448	593	431	458	3590	514	571	456	578	554	572	mg/l		Calc.
TDS Balance (0.80 - 1.20)	0.96	0.960	0.99	0.730	1.07	1.01	0.96	0.94	0.890	1.00	0.980	1.06	1.03			Calc.
VOLATILE ORGANIC COMPOUNDS																
1,1,1,2-Tetrachloroethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,1,1-Trichloroethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,1,2,2-Tetrachloroethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,1,2-Trichloroethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,1-Dichloroethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,1-Dichloroethene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,1-Dichloropropene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,2,3-Trichloropropane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,2-Dibromoethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,2-Dichlorobenzene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,2-Dichloroethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,2-Dichloropropane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,3-Dichlorobenzene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,3-Dichloropropane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
1,4-Dichlorobenzene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
2,2-Dichloropropane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
2-Chloroethyl vinyl ether	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
2-Chlorotoluene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
4-Chlorotoluene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Benzene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Bromobenzene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Bromochloromethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Bromodichloromethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Bromoform	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Bromomethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Carbon tetrachloride	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Chlorobenzene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Chlorodibromomethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Chloroethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Chloroform	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Chloromethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
cis-1,2-Dichloroethene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
cis-1,3-Dichloropropene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Dibromomethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Dichlorodifluoromethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Ethylbenzene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
m+p-Xylenes	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Methyl ethyl ketone	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	20	E624
Methylene chloride	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
o-Xylene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Styrene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Tetrachloroethene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Toluene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
trans-1,2-Dichloroethene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
trans-1,3-Dichloropropene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Trichloroethene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Trichlorofluoromethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Vinyl chloride	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Xylenes, Total	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	1.0	E624
Surr: 1,2-Dichlorobenzene-d4	100.0	-	101.0	-		-	92.0	105.0	-	102.0	-		-	% REC	80-120	E624
Surr: Dibromofluormethane	98.0	-	90.0	-		-	102.0	98.0	-	122.0	-		-	% REC	80-120	E624
Surr: p-Bromofluorobenzene	98.0	-	98.0	-		-	94.0	109.0	-	116.0	-		-	% REC	80-120	E624
Surr: Toluene-d8	96.0	-	91.0	-		-	96.0	98.0	-	108.0	-		-	% REC	80-120	E624

Table G-1 Multiple Aquifer/Unknow Formation Well Water Quality Data (Page 4 of 4)

WELL ID	**47**	**47**	**111**	**111**	**111**	**111**	**106**	**83**	**83**	**5**	**12**	**12**	**12**	**UNITS**	**R.L.**	**METHOD**
Formation of Completion	Unk.	Unk.	Unk.	Unk.	Unk.	Unk.	Qal/Jmw	Kmf/Kpl	Kmf/Kpl	Kmf/Kpl	Kd/Jmw	Kd/Jmw	Kd/Jmw			
SYNTHETIC ORGANIC COMPOUNDS																
1,2,4-Trichlorobenzene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
2,4,6-Trichlorophenol	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
2,4-Dichlorophenol	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
2,4-Dimethylphenol	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
2,4-Dinitrophenol	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	50	E625
2,4-Dinitrotoluene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
2,6-Dinitrotoluene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
2-Chloronaphthalene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
2-Chlorophenol	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
2-Nitrophenol	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
3,3'-Dichlorobenzidine	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	20	E625
4,6-Dinitro-2-methylphenol	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	50	E625
4-Bromophenyl phenyl ether	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
4-Chloro-3-methylphenol	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
4-Chlorophenyl phenyl ether	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
4-Nitrophenol	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	50	E625
Acenaphthene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Acenaphthylene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Anthracene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Azobenzene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Benzidine	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	20	E625
Benzo(a)anthracene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Benzo(a)pyrene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Benzo(b)fluoranthene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Benzo(g,h,i)perylene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Benzo(k)fluorathene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
bis(-2-chloroethoxy)Methane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
bis(-2-chloroethyl)Ether	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
bis(2-chloroisopropyl)Ether	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
bis(2-ethylhexyl)Phthalate	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Butylbenzylphthalate	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Chrysene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Dibenzo(a,h)anthracene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Diethyl phthalate	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Dimethyl phthalate	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Di-n-butyl phthalate	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Di-n-octyl phthalate	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Fluoranthene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Fluorene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Hexachlorobenzene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Hexachlorobutadiene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	20	E625
Hexachlorocyclopentadiene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Hexachloroethane	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Ideno(1,2,3-cd)pyrene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Isophorone	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Naphthalene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
n-Nitrosodimethylamine	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
n-Nitroso-di-n-propylamine	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
n-Nitrosodiphenylamine	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Pentachlorophenol	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	50	E625
Phenanthrene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Phenol	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Pyrene	ND	-	ND	-		-	ND	ND	-	ND	-		-	ug/l	10	E625
Surr: 2,4,6-Tribromophenol	41.0	-	50.0	-		-	49.0	31.0	-	34.0	-		-	% REC	26-116	E625
Surr: 2-Fluorobiphenyl	43.0	-	53.0	-		-	52.0	47.0	-	41.0	-		-	% REC	25-94	E625
Surr: 2-Fluorophenol	28.0	-	34.0	-		-	31.0	19.0	-	23.0	-		-	% REC	11-67	E625
Surr: Nitrobenzene-d5	51.0	-	56.0	-		-	54.0	44.0	-	39.0	-		-	% REC	19-102	E625
Surr: Phenol-d5	22.0	-	31.0	-		-	29.0	25.0	-	25.0	-		-	% REC	15-54	E625
Surr: Terphenyl-d14	53.0	-	50.0	-		-	53.0	49.0	-	37.0	-		-	% REC	39-106	E625

Appendix 9-H

List of 142 Wells Used As Initial Regional Well Sampling Guide
(Corresponds to Plate 1 of SAP)

Table H-1. Wells Identified as being within 7 Miles of the Permit Area (Page 1 of 4)

Well ID	OSE File No.	Designation in Previous Inventories							T	R	Sec	1st Q	2nd Q	3rd Q	Easting	Northing	Producing Formation	Well Depth	DTW	Water Elevation	Date of Water Level Measurement	Elevation (ft)
		GMRC ER	NMEIBS	San Lucas Canyon	Polvadera Canyon	DP-61 Monitor Wells	NMMMR HR2	Metric Corp.														
1									13	7	30	4	2	1	262362.0	3912136.2	Jmw	4207	>500	7709		8209
2			17						13	7	30	4	3	2	262181.0	3911688.6		>1980	<300	8004		8304
3			16						13	7	33	2	3	4	265362.3	3910526.5		1500 approx	>400	8120	9/29/1972	8520
4				M-1					13	8	1		2	3	260080.1	3919137.6	*Kpl*	400				7162
5	RG 33107 EXPL								13	8	1	4	1	1	260480.2	3918556.4	*Kmf, Kpl*	394	72	7159	8/18/1979	7231
6							DK1		13	8	7	4	3	4	252786.4	3916502.3	Kd					7221
7									13	8	11	3	2	1	258514.1	3917001.6	Kmf	192.3	76.9	7121		7198
8		S-16							13	8	14	4	2	2	259531.5	3915409.5	Kmf					7185
9			1				MF1		13	8	14	4	2	2	259531.5	3915409.5	Kmf	200	71.5	7114	9/10/1962	7185
10							U1		13	8	17	2	2	3	254510.3	3916097.2						7182
11			20						13	8	17	2	4	1	254500.9	3915937.1						7169
12	B 00848							46	13	8	17	2	1	3	254110.0	3916112.0						7165
13	B 00848 S								13	8	17	2	1	3	254110.0	3916112.0						7165
14	B 00848 O							3,47	13	8	17	2	1	4	254310.0	3916112.0	Kd,Jmw	1611	1315	5863	4/1/1981	7178
15	B 00851								13	8	17	2	1	4	254310.0	3916112.0						7178
16	B 01084							50	13	8	17	2	3	2	254295.0	3915909.0	*Kg*	320	60	7092	1/1/1963	7152
17	B 01544								13	8	18	1	2	3	252103.0	3916155.0	*Kd*	715	624	6417	6/14/2003	7041
18	B 00390								13	8	18	2	2	1	252904.0	3916338.0	*Kd,Jmw*	1800	800	6333	12/31/1974	7133
19	B 00557							6	13	8	21	4	3	2	255825.0	3913453.0	Qal					7037
20		S-4	2				MF2		13	8	22	2	4	2	257901.8	3914231.9	Kmf	157.3	37.5	7066	10/23/1962	7103
21	B 00415 O-4							40	13	8	22	2	1	2	255983.0	3911840.0	*Qal*	32	15	7062	3/23/1978	7077
22	B 01085							7, 51?	13	8	22	2	4	2	257866.0	3914204.0	Kpl	476	90	7013	12/31/1920	7103
23	B 00415 O-3								13	8	22	4	2	2	256194.0	3912240.0	*Qal*	32	15	7055	3/23/1978	7070
24	B 00415 O-3								13	8	22	4	2	2	256194.0	3912240.0	Qal	32	15	7055	3/23/1978	7070
25	B 01442								13	8	22	4	4	4	257845.0	3913200.0	*Kpl*	620	87	7049	6/15/2000	7136
26							MF3		13	8	23	3	2	4	258686.9	3913537.5	Kmf					7172
27							MF4		13	8	23	3	4	2	258686.9	3913396.5	Kmf	305	37.5	7138	2/1/1978	7175
28								9	13	8	23	4	1	3	258857.4	3913552.2	Qal	79	34	7144		7178
29								61	13	8	23	4	2	4	259385.7	3913592.0	Qal	100				7224
30								10	13	8	23	4	3	1	258867.2	3913340.1	Qal	?				7185
31		S-10	3				MF5	11	13	8	23	4	3	2	259048.8	3913331.9	Kmf	92	35	7170	10/17/1972	7205
32	B 01442 EXP L-2								13	8	23	3	1	3	258063.0	3913591.0	Kg	1150	107	7016	5/28/2002	7123
33	B 00544								13	8	23	3	4	3	258355.0	3913491.0	Qal	68	30	7122	6/17/1978	7152
34	B 00815								13	8	23	3	4	2	258652.0	3913380.0	Kmf	300	260	6915	1981	7175
35	B 00734							12	13	8	23	4	4	1	259248.0	3913362.0	Qal	73				7224
36	B 00735								13	8	23	4	4	1	259248.0	3913362.0	Qal	65	30	7194	7/3/1980	7224
37	B 00736								13	8	23	4	4	2	259448.0	3913362.0						7247
38	B 00737							13	13	8	23	4	4	2	259448.0	3913362.0	Qal	80				7247
39								MW-1	13	8	24	1	2	1	260072.3	3914591.1	Kmf	63				7257
40						MW-3			13	8	24	1	2	4	260329.5	3914333.9	Qal	65				7274
41		S-14					MF7	19	13	8	24	1	4	1	260055.7	3914201.1	Kmf	285	55	7202		7257

Table H-1. Wells Identified as being within 7 Miles of the Permit Area (Page 2 of 4)

Well ID	OSE File No.	Designation in Previous Inventories							T	R	Sec	1st Q	2nd Q	3rd Q	Easting	Northing	Producing Formation	Well Depth	DTW	Water Elevation	Date of Water Level Measurement	Elevation (ft)
		GMRC ER	NMEIBS	San Lucas Canyon	Polvadera Canyon	DP-61 Monitor Wells	NMMMR HR2	Metric Corp.														
42							MF16		13	8	24	1	4	1	260055.7	3914201.1	Kmf	250	59	7198	Oct-72	7257
43						MW-1			13	8	24	1	4	2	260329.5	3914201.1	Qal	60				7277
44						MW-2			13	8	24	1	4	2	260329.5	3914201.1	Qal	65				7277
45		S-8						18	13	8	24	1	4	4	260329.5	3913919.1	Kmf	160				7290
46									13	8	24	1	4	4	260329.5	3913919.1	Kmf	160				7290
47	B 01429							55	13	8	24	2	2	2	261109.5	3914516.1	*Kmf*	245	90	7335		7425
48		S-13	4				MF8	24	13	8	24	2	2	3	260877.0	3914317.3	Kmf	?	184.5	7138	6/2/1973	7323
49	B 00404								13	8	24	2	3	4	260752.6	3913902.5						7333
50	B-516-(1)-S							27	13	8	24	2	4	3	260877.0	3913910.8	Kpl	1125	470	6899		7369
51	B-516-(1)-S-2							28	13	8	24	2	4	3	260877.0	3913910.8	Kpl	1045	453	6916		7369
52	B-516-(1)-S-3							29	13	8	24	2	4	3	260877.0	3913910.8	*Kpl*	1065				7369
53								MW-2	13	8	24	3	2	2	260321.2	3913786.4	*Qal*	44				7303
54						MW-4			13	8	24	3	2	4	260321.2	3913496.0	*Qal*	prob.60				7310
55						MW-5			13	8	24	3	2	2	260321.2	3913786.4	*Qal*	prob.60				7303
56			6				MF9	22	13	8	24	3	3	4	259898.1	3913126.6	Kmf	200	50	7247	pre-1962	7297
57			7				MF10	23	13	8	24	3	3	4	259898.1	3913128.6	Kmf	140	89.5	7207	9/10/1962	7297
58		S-9, S-19						21	13	8	24	3	4	2	260321.2	3913363.3	Kmf	250	15	7301		7316
59								MW-3	13	8	24	3	4	4	260304.6	3913122.7	*Qal*	46				7362
60								20	13	8	24	3	4	4	260304.6	3913122.7	*Qal*	?				7362
61							MF12		13	8	24	3	3	4	259898.1	3913131.0	Kmf	120	101	7196	2/1/1978	7297
62		S-12	5				MF11	25	13	8	24	3	3	4	259898.1	3913131.0	Kmf	200	87.4	7209	1976	7297
63							MF14		13	8	24	3	4	1	260039.1	3913371.6	Kmf	500	139	7141	3/1/1978	7280
64									13	8	24	3	4	2	260312.9	3913363.3	*Kmf*	250	15	7301		7316
65									13	8	24	3	4	2	260312.9	3913363.3	*Kmf*					7316
66		S-1							13	8	24	4	1	2	260736.0	3913769.8	*Kmf*	800	260	7092		7352
67		S-22							13	8	24	4	1	2	260736.0	3913769.8	*Km*	2000	700	6652		7352
68			SM2443						13	8	24	4	1	2	260736.0	3913769.8						7352
69								MW-5	13	8	24	4	1	1	260478.8	3913769.8	*Qal*	32.5				7326
70								MW-4	13	8	24	4	1	3	260453.9	3913496.0	*Qal*	47.5				7326
71	B-00516							26	13	8	24	4	2	1	260868.7	3913778.1	Kpl	925				7382
72									13	8	24	4	1	2	260727.7	3913778.1	*Km*	2000	700	6649	1976	7349
73	B-00516						Mw(W1)	26	13	8	24	2	3	4	260350.0	3913856.0	Jmw	3535	1062	6238	10/1/1976	7300
74	B-00524							17	13	8	24	3	4	4	260251.0	3913154.0	Kpl?	520	260	7089	1978	7349
75			8				MF15		13	8	25	1	1	2	259881.5	3912990.0	Kmf	150	43	7260	9/10/1962	7303
76			9a				MF17	32a	13	8	25	1	1	4	259889.8	3912699.6	Kmf,Qal	120	36	7303	9/1/1962	7339
77			9b				MF18	32b	13	8	25	1	1	4	259889.8	3912699.6	Kmf	250	80	7259	10/1/1972	7339
78		S-15	9						13	8	25	1	1	4	259889.8	3912699.6	Kmf		103.87	7235	1976	7339
79			10				A7	42	13	8	25	1	1	1	259632.6	3912981.7	Qal	21	19.5	7267	9/1/1962	7287
80			15				MF16	43	13	8	25	1	1	4	259881.5	3912699.6	Kmf	35	27	7312	10/11/1972	7339
81								45	13	8	25	1	1	4	259881.5	3912699.6	Kmf		103.9	7235		7339

Table H-1. Wells Identified as being within 7 Miles of the Permit Area (Page 3 of 4)

Well ID	OSE File No.	Designation in Previous Inventories							T	R	Sec	1st Q	2nd Q	3rd Q	Easting	Northing	Producing Formation	Well Depth	DTW	Water Elevation	Date of Water Level Measurement	Elevation (ft)
		GMRC ER	NMEIBS	San Lucas Canyon	Polvadera Canyon	DP-61 Monitor Wells	NMMMR HR2	Metric Corp.														
82	B-00428							44?	13	8	25	1	2	3	259997.7	3912716.2	Kpl,Kmf	325	75	7317	7/31/1971	7392
83		S-20							13	8	25	1	2	1	260006.0	3912990.0	Kpl		269.35	7044	1976	7313
84	B-00839							33	13	8	25	1			259920.0	3912641.0	Kmf	420	120	7229	9/8/1980	7349
85	B-00906							48	13	8	25	1	1		259733.0	3912847.0	*Kmf,Qal*	230	50	7250	6/22/1981	7300
86	B-00729								13	8	25	1	3	3	259618.0	3912339.0	*Kmf*					7333
87	B-00829							34	13	8	25	1	3	2	259818.0	3912539.0	Kmf,Qal	210	50	7352	8/18/1980	7402
88		S-11	12				MF19	38	13	8	26	2	1	1	258846.4	3912971.0	Kmf,Qal	40	33.4	7181	1976	7215
89							MF20		13	8	26	2	1	1	258848.9	3912971.0	Kmf	180	36	7179	8/1/1973	7215
90			11a				P2a		13	8	26	2	2	1	259251.0	3913006.6	Kpl	336	281	6973	9/11/1962	7254
91			11b				P2b(P3)		13	8	26	2	2	1	259251.0	3913006.6	Kmf	200	32.8	7221	10/24/1972	7254
92							MF21		13	8	26	2	2	2	259508.2	3912990.0	Kmf	57.5	21.5	7255	2/1/1978	7277
93	B-00428 S							37	13	8	26	2	1	2	259231.0	3912957.0	Kpl	703	210	7041		7251
94	B-01185							53	13	8	26	2	2		259332.0	3912858.0	Kmf	185	70	7200	4/21/1989	7270
95	B-00385							54	13	8	26	2	2	1	259231.0	3912957.0	*Kpl*	707	196	7055	10/27/1976	7251
96	B-00738							36	13	8	26	2	2	2	259431.0	3912957.0	Qal	80	36	7238	12/12/1979	7274
97								35	13	8	26	2	3	3	258812.0	3912368.0	*Kmf*					7261
98							MF22		13	8	27	1	3	3	256355.8	3912417.6	Kmf		24.2	7046	8/1/1977	7070
99	RG-43456		21					59	13	8	27	1	3	4	256604.0	3912429.0	*Kmf*	300				7080
100	B-01086							52	13	8	28	3	4	3	255202.0	3911899.0	*Kmf*	210	20	7050	1/1/1947	7070
101	B-00997								13	8	30				252287.0	3912456.0	*Km*					7267
102			22					41	13	8	33	2	3	4	255740.2	3910867.1	Kpl	600				7169
103							MF23(P4?)		13	8	33	2	3	4	255791.7	3910857.9	Kpl	500	113	7056	8/1/1977	7169
104	RG-43457							60	13	8	33	4	1	2	255750.0	3910641.0	*Kmf*	320	50	7142	1/1/1967	7192
105	B-01046								13	8	33	4	4	3	255937.0	3910028.0	*Tb*					7402
106	B-01190								13	9	11	3	3	3	248512.0	3916669.0	*Qal/Jmw*	390	37	6863	8/31/1989	6900
107							DK2		13	9	13	1	1	1	250096.7	3916461.4	*Km*	155	142.9	6799	2/1/1958	6942
108	B-00456								13	9	14	2	3		249391.0	3915949.0						6939
109	B-01104								13	9	14	4	3		249372.0	3915145.0	*Jmw*	303	247	6643	4/2/1986	6890
110							W2		13	9	15	3	4	3	247252.5	3915093.8	*Jmw*	260	223.7	6614	12/1/1957	6837
111	B-01115								13	9	15	3	4	4	247479.0	3915109.0	*Jmw*	478	204	6643	7/21/1986	6847
112							W6		13	9	22	1	1	1	246875.9	3914945.2	Jmw		220	6611		6831
113							W7		13	9	22	1	2	1	247232.7	3914945.2	Jmw	297	204.8	6632	12/1/1958	6837
114							W8		13	9	22	1	2	1	247232.7	3914945.2	Jmw	330	198.5	6639	10/1/1962	6837
115							A11		13	9	22	2	1	2	247916.5	3914915.5	Qal	130	37.1	6797	3/1/1975	6834
116	B-01636								13	9	22	1	2		247377.0	3914802.0	*Qal*	260	80	6744	5/10/2005	6824
117	B-00659								13	9	22	2	1	3	246883.0	3914717.0	*Jmw*	220	190	6641	1/18/1979	6831
118	B-00861								13	9	22	2	3	1	246981.0	3914003.0						6854
119							W9		13	9	23	2	1	2	249502.1	3914856.0	*Qal/Jmw*	280	50.5	6816	3/1/1976	6867
120			13				A12		13	9	24	2	2	1	251266.1	3914846.1	Qal	80	56.5	6856	12/1/1957	6913
121			14				A3		13	9	24	2	2	1a	251266.1	3914846.1	Qal	80	56.6	6856	12/1/1957	6913
122					Laguna Well				14	7	34?				267604.0	3920146.5						7805

Table H-1. Wells Identified as being within 7 Miles of the Permit Area (Page 4 of 4)

Well ID	OSE File No.	Designation in Previous Inventories							T	R	Sec	1st Q	2nd Q	3rd Q	Easting	Northing	Producing Formation	Well Depth	DTW	Water Elevation	Date of Water Level Measurement	Elevation (ft)
		GMRC ER	NMEIBS	San Lucas Canyon	Polvadera Canyon	DP-61 Monitor Wells	NMMMR HR2	Metric Corp.														
123		S-7							14	7	19	2	2	1	263316.3	3924150.0	Kpl					6913
124							DL2(1)		14	8	4	3	3	4	255438.2	3927730.8	Kcda		150.3	6982	10/16/1962	7133
125									14	8	4	3	3	4	255438.2	3927730.8			500	6633		7133
126					Section 4 Well				14	8	4	3	3	4	255438.2	3927730.8	Kcda					7133
127			18						14	8	12	2	3	4	260941.7	3926787.1	*Kmf,Kpu*					6972
128							MN1		14	8	15	2	4	4	258241.4	3925189.3	Km	1320	500	6701		7201
129					Polvadera Well				14	8	15	2	4	4	258241.4	3925189.3	Kd	830	670	6531	3/1/1979	7201
130			19						14	8	15	4	3	3	257531.2	3924423.1	Km	1320				7247
131				SL-1					14	8	25	2	1	2	260782.9	3922629.1	Qal	50				7021
132				SL-2					14	8	25	2	1	2	260782.9	3922629.1	Kpl	230				7021
133				SL-3					14	8	25	2	1	2	260782.9	3922629.1	Kmf	260				7021
134									14	9	36	3	1	3	250259.5	3920146.9	*Jmw*	1500	582	6511		7093
135									14	9	34	4	2	2	248570.5	3920456.0	*Jmw*	1004	508	6526		7034
136	B-00993								14	9	35	4	1	1	249310.1	3920610.5	Jmw	1398				7077
137	B-00993-S								14	9	36	4	1	3	250527.0	3920058.0	Jmw	1553	0	7133		7133
138									13	9	22				246874.0	3914825.0	Jmw	170	86	6645		6815
140															258825.0	3913271.0		66	18.6			
141															248514.0	3915237.0		>410				
142									13	9	22				247749.0	3915037.0						
143									13	9	22				247689.0	3915023.0						

Previous Inventory Designation:

GMRC ER	GMRC Environmental Report, 1979
NMEIBS	New Mexico Environmental Institute Environmental Baseline Study, 1974
San Lucas Canyon	GMRC "Hydrologic Effects of Tailings Pipeline and Mill Site Facilities, Mt. Taylor Uranium Mill Project," 1979 (App. D to GMRC Groundwater Discharge Plan, December, 1979)
Polvadera Canyon	GMRC Groundwater Discharge Plan (December, 1979).
DP-61 Monitor wells	NMED DP-61 file for GMRC
NMMMR HR2	NMMMR Hydrologic Sheet 2
Metric Corp.	Consultant report to RGRC, 12/2005, 3/2005