

**APPENDIX C
WATER-QUALITY DATA**

Water-Quality Data												
Parameter**	Sample Results											
	Sample Type*		GW Monitoring		GW Monitoring		GW Monitoring		GW Monitoring		GW Monitoring	
	Sample Station Name	Sample Date	12-18SA	6/5/10	12-18SA	10/4/10	12-18SA	2/15/11	12-18SA	6/17/11	12-18SA	9/12/11
Units												
Alkalinity (as CaCO ₃)			201	303	151	290	286	286	286	286	286	286
Ammonia	mol/L		0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Ammonia	mol/L		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Fluoride	mol/L		728	828	554	835	785	690	690	690	690	690
Laboratory conductivity	µmhos/cm		9.2	8.4	8.8	8.2	8.1	8.3	8.3	8.3	8.3	8.3
Laboratory pH	s.u.		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Nitrate/Nitrite	mol/L		563	650	373	480	550	540	540	540	540	540
Total Dissolved Solids	mol/L		22	43	3	46	34	35	35	35	35	35
Calcium	mol/L		22	31	13	33	33	33	33	33	33	33
Magnesium	mol/L		22	16	20	16	16	16	16	16	16	16
Potassium	mol/L		101	97	89	84	90	86	86	86	86	86
Sodium	mol/L		172	332	84	334	345	361	361	361	361	361
Bicarbonate	mol/L		36	8	48	5	5	5	5	5	5	5
Carbonate	mol/L		12	12	24	11	13	14	14	14	14	14
Chloride	mol/L		163	142	94	130	157	143	143	143	143	143
Sulfate	mol/L		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Aluminum, dissolved	mol/L		-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Arsenic, dissolved	mol/L		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Boron, dissolved	mol/L		-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Calcium, dissolved	mol/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Chromium, dissolved	mol/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mol/L		-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Iron, dissolved	mol/L		0.33	0.34	0.42	0.37	0.41	0.38	0.38	0.38	0.38	0.38
Iron, total	mol/L		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Lead, dissolved	mol/L		0.04	0.06	0.03	0.08	0.07	0.13	0.13	0.13	0.13	0.13
Manganese, total	mol/L		-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Mercury	mol/L		0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Molybdenum, dissolved	mol/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Nickel, dissolved	mol/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mol/L		-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Silver, dissolved	mol/L		0.003	0.001	0.001	0.001	0.001	0.003	0.003	0.003	0.003	0.003
Uranium, dissolved	mol/L		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Vanadium, dissolved	mol/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Zinc, dissolved	mol/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, dissolved	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lead 210, suspended	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Potassium 210, dissolved	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Potassium 210, suspended	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-226, dissolved	pCi/L		0.28	0.24	0.2	0.4	0.3	0.2	0.2	0.2	0.2	0.2
Ra-226, suspended	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-228, dissolved	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Th-230, dissolved	pCi/L		-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, suspended	pCi/L		-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Gross Alpha	pCi/L		2	2	2	4	2	2	2	2	2	2
Gross Beta	pCi/L		15.8	13	13.5	11.2	13.1	12.3	10.1	17.6	3.3	3.3

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than collection limit

(e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data													
Parameter**	Sample Type*	Sample Results											
		GW Monitoring		GW Monitoring		GW Monitoring		GW Monitoring		GW Monitoring		GW Monitoring	
		12-18SM	10/6/10	12-18SM	2/15/11	12-18SM	6/17/11	12-18SM	9/8/11	12-18SM	10/23/11	12-18OZ	6/18/10
		Units											
Alkalinity (as CaCO3)	mg/L	532	534	534	532	530	528	531	541	533	545	533	
Ammonia	mg/L	0.2	0.4	0.3	0.1	0.2	0.2	0.2	0.2	0.4	0.6	0.3	
Fluoride	mg/L	1.8	2.1	1.9	1.3	1.5	2	1.1	1.2	0.8	1.2	0.8	
Lab-on-line conductivity	µmhos/cm	1450	1450	1350	1200	1520	1550	1800	1640	2160	1700	1700	
Lab-on-line pH	pH	8.7	8.8	8.8	8.8	8.8	8.8	8.6	8.6	8.6	8.7	8.7	
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Total Dissolved Solids	mg/L	980	970	960	970	940	940	1340	1140	1490	1140	1140	
Calcium	mg/L	3	3	3	3	3	2	6	4	7	4	4	
Magnesium	mg/L	1	1	1	1	1	1	2	1	2	1	1	
Potassium	mg/L	6	6	4	4	4	4	5	4	4	4	4	
Sodium	mg/L	354	371	374	371	374	385	438	416	516	368	368	
Bicarbonate	mg/L	563	573	593	579	590	583	807	624	603	801	801	
Carbonate	mg/L	25	38	28	34	28	30	20	18	24	31	31	
Chloride	mg/L	3	4	4	5	4	4	7	4	6	4	4	
Sulfate	mg/L	212	218	242	221	206	213	480	286	543	320	320	
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Arsenic, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Boron, dissolved	mg/L	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Iron, dissolved	mg/L	-0.05	-0.05	-0.05	0.05	-0.05	0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Iron, total	mg/L	0.07	0.06	0.29	0.06	0.07	0.91	0.07	0.07	0.07	0.07	0.07	
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	
Silver, dissolved	mg/L	-0.004	-0.003	-0.003	-0.003	0.011	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	
Uranium, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Uranium, suspended	mg/L	-0.02	-0.02	-0.02	-0.003	-0.003	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Vanadium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Lead 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potassium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-226, dissolved	pCi/L	-0.2	0.2	-0.2	-0.2	-0.2	-0.2	8.16	5	12.01	5.8	5.8	
Ra-226, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Ra-228, dissolved	pCi/L	-1	2.27	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Gross Alpha	pCi/L	-3	-2	-5	-2	-3	222	177	157.5	177	83.9	83.9	
Gross Beta	pCi/L	-3	9.4	-8	-7	-5	26.5	24.1	43.2	24.1	21.7	21.7	

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detection (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Parameter**	Sample Type**	Water-Quality Data											
		Sample Results											
		GW Monitoring			GW Monitoring			GW Monitoring			GW Monitoring		
		12-18OZ			12-18OZ			12-18OZ			12-18OZ		
		2/15/11	6/8/11	9/8/11	10/23/11	3/10/10	6/18/10	12-18DM	8/10/10	10/6/10	12-18DM	2/15/11	6/17/11
Units													
Alkalinity (as CaCO3)	mg/L	552	550	538	543	468	415	418	411	428	428	428	
Ammonia	mg/L	0.4	-0.1	0.3	-0.1	2.4	1.4	0.9	0.6	0.7	0.7	0.7	
Fluoride	mg/L	1.1	1.3	1.2	0.9	1	0.9	1	1.2	1	1	1.2	
Acid-neutralizing capacity	meq/L	1559	1420	1740	1600	2400	2230	2150	2180	2080	2080	1740	
Barium	mg/L	8.7	8.8	8.7	8.7	11.5	11.2	13	9.7	9.5	9.4	9.4	
Bromide	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Calcium	mg/L	1150	1090	1080	1050	1140	1190	1260	1240	1290	1280	1280	
Chloride	mg/L	4	4	3	3	8	3	1	1	2	2	2	
Copper	mg/L	1	1	1	1	-1	-1	-1	-1	-1	-1	-1	
Iron	mg/L	4	4	3	3	8	3	1	1	2	2	2	
Magnesium	mg/L	1	1	1	1	-1	-1	-1	-1	-1	-1	-1	
Manganese	mg/L	4	4	3	3	8	3	1	1	2	2	2	
Nitrate	mg/L	453	421	444	434	427	405	470	476	541	527	527	
Phosphate	mg/L	526	584	605	610	-5	-5	158	256	324	324	333	
Sulfate	mg/L	24	38	23	26	171	200	172	121	121	96	78	
Silica	mg/L	4	5	6	6	378	382	395	402	513	503	503	
Sodium	mg/L	337	297	322	294	35	37	28	28	25	22	22	
Total Dissolved Solids	mg/L	-0.1	-0.1	-0.1	-0.1	0.8	0.5	0.3	0.1	-0.1	-0.1	-0.1	
Vanadium	mg/L	-0.005	-0.005	-0.005	-0.005	0.007	0.008	0.007	0.008	0.009	0.009	0.009	
Zinc	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Barium	mg/L	0.5	0.5	0.5	0.5	0.4	0.5	0.7	0.7	0.8	0.8	0.8	
Boron	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	
Calcium	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Iron, dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Lead, dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Nickel, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Nitrate, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	
Uranium, dissolved	mg/L	0.031	0.0268	0.046	0.0363	0.012	0.017	0.013	0.008	0.02	0.019	0.019	
Vanadium, suspended	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Zinc, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Lead 210, dissolved	mg/L	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Lead 210, suspended	mg/L	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
Potassium 210, dissolved	mg/L	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	
Potassium 210, suspended	mg/L	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	
Radium 226, dissolved	mg/L	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	
Radium 226, suspended	mg/L	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	
Radium 228, dissolved	mg/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Radium 228, suspended	mg/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Th-230, dissolved	mg/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Th-230, suspended	mg/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Gross Alpha	mg/L	64.1	20.7	76.5	66.7	4.7	3.2	3.2	3.2	3.2	3.2	3.2	
Gross Beta	mg/L	14.4	10.7	23	13.8	24.1	18.8	18.8	18.8	18.8	18.8	18.8	

Notes:

*Year Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detection limit (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported

Water-Quality Data												
Parameter**	Sample Results											
	Sample Type*		GW		Monitoring		GW		Monitoring		GW	
	Sample Station Name	Sample Date	Monitoring	12-18DM	Monitoring	14-18SA	Monitoring	14-18SA	Monitoring	14-18SA	Monitoring	14-18SA
Units												
Alkalinity (as CaCO ₃)			419	441	453	471	483	478	289	329	476	22
Ammonia	mg/L		0.5	0.1	0.1	-0.1	0.1	0.2	0.1	-0.1	-0.1	0.2
Fluoride	mg/L		1.2	1.2	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.7
Laboratory conductivity	umhos/cm		2390	2360	1650	1750	1800	1860	1480	1260	1640	1550
Laboratory pH	su		9.3	9	9.3	8.8	8.6	8.4	10.2	9.4	8.6	11
Nitrate/Nitrite	mg/L		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Total Dissolved Solids	mg/L		1240	1240	1160	1230	1230	1220	1010	1070	1190	820
Calcium	mg/L		2	3	14	17	18	22	6	7	22	2
Magnesium	mg/L		-1	-1	8	9	10	12	2	7	13	-1
Potassium	mg/L		12	11	17	11	11	13	19	14	12	18
Sodium	mg/L		530	557	383	381	391	400	335	347	416	302
Bicarbonate	mg/L		379	438	368	526	544	572	54	273	552	3
Carbonate	mg/L		65	50	91	24	10	5	127	64	14	83
Chloride	mg/L		478	484	89	90	68	67	168	77	84	68
Sulfate	mg/L		23	15	314	343	315	327	311	327	347	303
Aluminum, dissolved	mg/L		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Arsenic, dissolved	mg/L		0.007	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Boron, dissolved	mg/L		-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved	mg/L		0.8	0.8	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1
Cadmium, dissolved	mg/L		-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Chromium, dissolved	mg/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Iron, dissolved	mg/L		-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Iron, total	mg/L		-0.05	-0.05	0.1	0.14	0.14	0.15	0.11	0.16	0.21	0.17
Lead, dissolved	mg/L		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese, total	mg/L		-0.02	-0.02	0.04	0.04	0.04	0.07	0.02	0.02	0.06	0.05
Mercury	mg/L		-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Molybdenum, dissolved	mg/L		-0.02	-0.02	0.03	0.02	0.02	0.02	0.07	0.03	0.02	0.04
Nickel, dissolved	mg/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mg/L		0.023	0.008	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Silver, dissolved	mg/L		0.005	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
Uranium, dissolved	mg/L		-0.0003	-0.0003	0.007	0.007	0.007	0.007	0.0011	0.0046	0.0067	0.0003
Vanadium, dissolved	mg/L		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Zinc, dissolved	mg/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.04	0.03	-0.01	-0.01
Lead 210, dissolved	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lead 210, suspended	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Plutonium 210, dissolved	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Plutonium 210, suspended	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-226, dissolved	pCi/L		-0.2	-0.2	-0.2	0.27	0.26	0.5	-0.2	-0.2	0.3	0.2
Ra-226, suspended	pCi/L		-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-228, dissolved	pCi/L		1.4	1	-1	-1	-1	-1	-1	-1	-1	-1
Th-230, dissolved	pCi/L		-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, suspended	pCi/L		-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Gross Alpha	pCi/L		-4	-3	5.1	7.4	7.30	13.8	-4	4.2	-6	-3
Gross Beta	pCi/L		-1	-8	12.1	5.9	5.99	7.9	13.7	10.6	-8	13.1

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detection (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data													
Sample Results													
Parameter**	Sample Type*	Sample Station Name	Sample Date	Units	GW Monitoring	14-18SM	7/24/10	GW Monitoring	14-18SM	10/12/10	GW Monitoring	14-18SM	2/22/11
Parameter**	Sample Type*	Sample Station Name	Sample Date	Units	GW Monitoring	14-18SM	7/24/10	GW Monitoring	14-18SM	10/12/10	GW Monitoring	14-18SM	2/22/11
Alkalinity (as CaCO3)	mg/L	551	556	581	582	581	582	581	582	581	582	581	582
Ammonia	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Fluoride	mg/L	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Labonatory conductivity	µmhos/cm	1480	1520	1590	1590	1590	1590	1590	1590	1590	1590	1590	1590
Labonatory pH	pH	8.2	8.1	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
Nitrate/nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Total Dissolved Solids	mg/L	1020	1040	1010	1010	1010	1010	1010	1010	1010	1010	1010	1010
Calcium	mg/L	2	2	2	2	2	2	2	2	2	2	2	2
Magnesium	mg/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Potassium	mg/L	8	8	8	8	8	8	8	8	8	8	8	8
Sodium	mg/L	350	352	373	360	373	360	373	360	373	360	373	360
Bicarbonate	mg/L	328	328	328	328	328	328	328	328	328	328	328	328
Carbonate	mg/L	72	65	52	54	55	54	55	54	55	54	55	54
Chloride	mg/L	4	3	3	2	3	2	3	2	3	2	3	2
Sulfate	mg/L	232	241	238	230	241	238	230	241	238	230	241	238
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Arsenic, dissolved	mg/L	0.012	0.008	0.007	0.005	0.007	0.005	0.007	0.005	0.007	0.005	0.007	0.005
Boron, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Bromine, dissolved	mg/L	0.4	0.5	0.5	0.6	0.5	0.6	0.5	0.6	0.5	0.6	0.5	0.6
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Iron, dissolved	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Iron, total	mg/L	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Silver, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Uranium, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Uranium, suspended	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Vanadium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, dissolved	PC/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lead 210, suspended	PC/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Potassium 210, dissolved	PC/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Potassium 210, suspended	PC/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-226, dissolved	PC/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-226, suspended	PC/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-228, dissolved	PC/L	-1	1.29	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Th-230, dissolved	PC/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, suspended	PC/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Gross Alpha	PC/L	2.8	3.1	3.5	11.2	3.5	11.2	3.5	11.2	3.5	11.2	3.5	11.2
Gross Beta	PC/L	7.2	7.2	7.2	12.4	7.2	12.4	7.2	12.4	7.2	12.4	7.2	12.4

Notes:

*Water Type
GW=Ground water
SW=Surface water

**Negative number indicates value of less than detect (e.g. -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data																			
Parameter**	Sample Type*	Sample Results																	
		Sample Station Name		GW		Monitoring		GW		Monitoring		GW							
		14-18OZ		14-18OZ		14-18OZ		14-18OZ		14-18DM		14-18DM							
		Sample Date		10/11/10		2/22/11		6/8/11		9/6/11		10/23/11		3/29/10		6/16/10		7/24/10	
Units																			
Alkalinity (as CaCO3)	mg/L	520	518	510	506	505	526	439	472	416	472								
Ammonia	mg/L	0.6	0.6	0.5	0.5	0.3	0.4	0.6	0.9	0.5	0.5	0.9							
Fluoride	mg/L	0.5	0.4	0.5	0.5	0.4	0.4	0.4	1.1	1.1	1.1	1.1							
Laboratory conductivity	µmhos/cm	2180	2700	2550	2000	2890	2890	2030	2170	2180	2150								
Laboratory pH	s.u.	8.6	8.6	8.6	8.5	8.7	8.7	8.6	8.5	8.6	8.2								
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1							
Total Dissolved Solids	mg/L	1980	1930	2050	1980	1960	1900	1220	1250	1220	1200								
Calcium	mg/L	6	9	9	10	11	10	2	2	3	3								
Magnesium	mg/L	3	3	3	3	3	3	3	3	3	3								
Potassium	mg/L	7	6	7	7	7	6	34	22	15	13								
Sodium	mg/L	644	600	688	686	718	653	460	447	468	454								
Bicarbonate	mg/L	591	583	594	574	587	585	188	337	386	391								
Carbonate	mg/L	21	19	19	13	26	27	171	57	94	61								
Chloride	mg/L	10	9	11	10	11	11	449	382	437	438								
Sulfate	mg/L	637	826	870	854	823	820	23	4	1	1								
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.2	-0.1	-0.1	-0.1	-0.1							
Arsenic, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	0.008	0.005	-0.005	-0.005	-0.005							
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5							
Boron, dissolved	mg/L	0.4	0.5	0.4	0.5	0.5	0.4	0.6	0.7	0.8	0.9								
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002							
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01							
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01							
Copper, dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	0.06	-0.05	-0.05	-0.05	-0.05							
Iron, total	mg/L	0.1	0.2	0.2	0.1	0.2	0.2	2.92	0.23	0.33	0.15								
Iron, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02							
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02							
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001							
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02							
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01							
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	0.014	0.012	0.012	0.01	0.01							
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003							
Strontium, dissolved	mg/L	0.109	0.065	0.0757	0.0602	0.106	0.106	-0.001	-0.001	-0.001	-0.001	-0.001							
Titanium, suspended	mg/L	0.003	-0.02	-0.02	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003							
Vanadium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01							
Zinc, dissolved	mg/L	1.78			1.3	13.6	2		1.1	-1	-1	-1							
Lead 210, dissolved	pCi/L	1.04			2.6	2			-1	-1	-1	-1							
Lead 210, suspended	pCi/L	6.04			1.5	-1	-1		-1	-1	-1	-1							
Potassium 210, dissolved	pCi/L	-1			2.7	-1	-1		-1	-1	-1	-1							
Ra-226, dissolved	pCi/L	4.03	4.9	5.1	3.3	4.8	3.7	0.35	0.21	-0.2	0.2	0.2							
Ra-226, suspended	pCi/L	4.24			-0.2	0.4	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2							
Ra-228, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1							
Ra-228, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2							
Th-230, dissolved	pCi/L	0.95			-0.2	-0.2	-0.2		-0.2	-0.2	-0.2	-0.2							
Th-230, suspended	pCi/L	165.3	183	131	158	161	188	13.7	2.1	-3.1	28.3	28.3							
Gross Alpha	pCi/L	38.6	27.6	15.3	34.6	36	48.8	32.3	17.2	8.24	4.1	4.1							

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect (e.g. -0.01 is <0.01)

***Blank cells indicate that no data were reported

Appendix C: Water-Quality Data

Water-Quality Data												
Parameter**	Sample Results											
	Sample Type*		GW		Monitoring		GW		Monitoring		GW	
	Sample Station Name	Sample Date	14-18DM	14-18DM	14-18DM	14-18DM	14-18DM	14-18DM	14-18DM	14-18DM	21-18SA	21-18SA
Units												
Alkalinity (as CaCO ₃)			414	411	404	465	374	374	367	369	369	374
Ammonia	mg/L		0.5	0.4	0.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Chloride	mg/L		1.2	1.1	1.1	1.3	0.4	0.4	0.3	0.4	0.4	0.3
Laboratory conductivity	µmhos/cm		2940	1900	2220	2350	911	937	968	974	901	883
Laboratory pH	pH		9.3	9.1	9.1	8.9	8.2	8.2	8.1	8.2	8.1	8.2
Nitrate/Nitrite	mg/L		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Total Dissolved Solids	mg/L		1202	1270	1240	1160	620	640	620	610	640	683
Calcium	mg/L		3	3	3	3	31	26	36	30	27	37
Magnesium	mg/L		-1	-1	-1	-1	13	11	15	13	11	16
Potassium	mg/L		42	11	9	9	7	6	7	8	8	8
Sodium	mg/L		513	544	542	529	180	171	165	177	203	192
Bromide	mg/L		365	383	396	427	456	447	447	487	478	451
Carbonate	mg/L		68	68	48	33	-5	-5	-5	-5	-5	-5
Chloride	mg/L		513	528	526	508	19	17	18	17	22	28
Sulfate	mg/L		-1	-1	-1	-1	112	107	118	91	99	131
Ammonium, dissolved	mg/L		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Asenic, dissolved	mg/L		-0.005	0.007	0.008	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Boron, dissolved	mg/L		-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Calcium, dissolved	mg/L		0.8	0.8	0.8	0.8	0.1	0.1	0.1	0.1	0.1	0.1
Chromium, dissolved	mg/L		-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Copper, dissolved	mg/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Iron, dissolved	mg/L		-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Iron, total	mg/L		0.68	0.65	0.67	0.65	0.66	0.66	0.66	0.66	0.66	0.66
Lead, dissolved	mg/L		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese, total	mg/L		4.02	4.02	4.02	4.02	0.18	0.18	0.18	0.18	0.18	0.18
Mercury	mg/L		-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Molybdenum, dissolved	mg/L		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, dissolved	mg/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mg/L		0.016	0.026	0.026	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Silver, dissolved	mg/L		-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
Uranium, dissolved	mg/L		0.9066	-0.003	-0.003	-0.003	0.007	0.004	0.006	0.004	0.006	0.004
Uranium, suspended	mg/L		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Vanadium, dissolved	mg/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Zinc, dissolved	mg/L		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, dissolved	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lead 210, suspended	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Potassium 210, dissolved	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Potassium 210, suspended	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-226, dissolved	pCi/L		0.7	-0.2	-0.2	-0.2	0.41	0.24	0.23	0.3	-0.2	-0.2
Ra-226, suspended	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-228, dissolved	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-228, suspended	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Th-230, dissolved	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Th-230, suspended	pCi/L		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Gross Alpha	pCi/L		-1	-1	-1	-1	6.5	6.4	6.16	6.7	5.1	3.3
Gross Beta	pCi/L		-1	-1	-1	-1	7.4	10	6.98	5.3	-7	-7

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect

(e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data																
Sample Results																
Parameter**	Sample Type*	GW		GW		GW		GW		GW		GW				
		Monitoring		Monitoring		Monitoring		Monitoring		Monitoring		Monitoring				
		21-19SA	Sample Date	21-19SA	Sample Date	21-19SM	Sample Date	21-19SM	Sample Date	21-19SM	Sample Date	21-19SM	Sample Date			
Units																
Alkalinity (as CaCO3)		369		311		572		602		647		633		628		619
Ammonia		-0.1		-0.1		-0.1		0.2		1.1		0.6		0.1		-0.1
Fluoride		0.3		0.5		1		1		1.1		1.1		1.1		1.1
Lab conductivity		1130		1010		1770		1970		2000		1960		1740		1880
Lab conductivity		8.4		8.4		9.6		9.3		9.9		9.6		9.4		9.9
Nitrate/Nitrite		0.3		-0.1		-0.1		-0.1		-0.1		-0.1		-0.1		-0.1
Total Dissolved Solids		680		590		1270		1330		1310		1300		1340		1270
Calcium		37		20		2		2		1		1		1		1
Magnesium		15		11		-1		-1		-1		-1		-1		-1
Potassium		9		7		32		31		47		37		43		20
Sodium		204		188		426		439		461		447		480		516
Bicarbonate		440		381		552		552		591		491		560		643
Carbonate		5		6		145		99		218		138		101		61
Chloride		34		31		3		3		2		3		4		4
Sulfate		134		141		363		346		358		355		388		342
Aluminum, dissolved		-0.1		-0.1		-0.1		-0.1		-0.1		-0.1		-0.1		-0.1
Arsenic, dissolved		-0.005		-0.005		0.023		0.009		0.009		0.006		0.006		0.006
Barium, dissolved		-0.5		-0.5		-0.5		-0.5		-0.5		-0.5		-0.5		-0.5
Boron, dissolved		0.1		0.1		0.2		0.5		0.6		0.6		0.6		0.6
Cadmium, dissolved		-0.002		-0.002		-0.002		-0.002		-0.002		-0.002		-0.002		-0.002
Chromium, dissolved		-0.01		-0.01		-0.01		-0.01		-0.01		-0.01		-0.01		-0.01
Copper, dissolved		-0.01		-0.01		-0.01		-0.01		-0.01		-0.01		-0.01		-0.01
Iron, dissolved		0.05		0.11		-0.05		-0.05		-0.05		-0.05		-0.05		-0.05
Iron, total		3.65		3.3		-0.05		-0.05		-0.05		-0.05		-0.05		-0.05
Lead, dissolved		-0.02		-0.02		-0.02		-0.02		-0.02		-0.02		-0.02		-0.02
Lead, total		0.06		0.05		-0.02		-0.02		-0.02		-0.02		-0.02		-0.02
Manganese, total		-0.001		-0.001		-0.001		-0.001		-0.001		-0.001		-0.001		-0.001
Mercury		-0.001		-0.001		-0.001		-0.001		-0.001		-0.001		-0.001		-0.001
Molybdenum, dissolved		-0.02		-0.02		-0.02		-0.02		-0.02		-0.02		-0.02		-0.02
Nickel, dissolved		-0.01		-0.01		-0.01		-0.01		-0.01		-0.01		-0.01		-0.01
Selenium, dissolved		-0.005		-0.005		-0.005		-0.005		-0.005		-0.005		-0.005		-0.005
Silver, dissolved		-0.003		-0.003		-0.003		-0.003		-0.003		-0.003		-0.003		-0.003
Uranium, dissolved		0.0048		0.0017		0.003		0.003		0.004		0.003		0.0021		0.0006
Uranium, suspended		-0.003		-0.003		-0.003		-0.003		-0.003		-0.003		-0.003		-0.003
Vanadium, dissolved		-0.02		-0.02		-0.02		-0.02		-0.02		-0.02		-0.02		-0.02
Zinc, dissolved		0.04		-0.01		-0.01		-0.01		0.02		-0.01		-0.01		-0.01
Lead 210, dissolved		1.1		-1		-1		-1		-1		-1		-1		-1
Lead 210, suspended		-1		-1		-1		-1		-1		-1		-1		-1
Potassium 210, dissolved		-1		-1		-1		-1		-1		-1		-1		-1
Potassium 210, suspended		-1		-1		-1		-1		-1		-1		-1		-1
Ra-226, dissolved		0.4		-0.2		-0.2		-0.2		-0.2		-0.2		-0.2		-0.2
Ra-226, suspended		-0.2		-1		-1		-1		-1		-1		-1		-1
Ra-226, dissolved		-0.2		-1		-1		-1		-1		-1		-1		-1
Th-230, dissolved		-0.2		-1		-1		-1		-1		-1		-1		-1
Th-230, suspended		-0.2		-1		-1		-1		-1		-1		-1		-1
Gross Alpha		5.1		-3		3.1		5.4		6.6		12.2		-3		-6
Gross Beta		6.4		5.2		22.2		19		23.6		42.5		12.8		14.2

Notes:

*Water Type

GW-Ground water

SW-Surface water

**Negative number indicates value of less than detectable

(e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data												
Parameter**	Sample Type**	Sample Results										
		Sample Station Name										
		Sample Date										
		GW Monitoring 21-190Z 3/25/10	GW Monitoring 21-190Z 5/19/10	GW Monitoring 21-190Z 7/16/10	GW Monitoring 21-190Z 10/11/10	GW Monitoring 21-190Z 2/23/11	GW Monitoring 21-190Z 5/7/11	GW Monitoring 21-190Z 8/17/11	GW Monitoring 21-190Z 10/20/11	GW Monitoring 21-190Z 3/24/10	GW Monitoring 21-190M 5/19/10	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		
Alkalinity (as CaCO3)		529	520	523	535	537	532	523	527	408	413	
Ammonia	mg/L	0.3	0.4	0.5	0.4	0.4	0.4	0.3	0.5	0.6	0.9	
Fluoride	mg/L	0.5	0.5	0.5	0.4	0.5	0.4	0.4	0.4	1.2	1.1	
Laboratory conductivity	µmhos/cm	2190	2370	2260	2300	2200	2040	2540	2540	2000	2150	
Laboratory pH	pH	8.7	8.6	8.5	8.6	8.6	8.7	8.7	8.7	9.7	9.4	
Nitrate/Nitrite	mg/L	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	
Total Dissolved Solids	mg/L	1900	1670	1520	1590	1580	1640	1620	1630	1200	1250	
Calcium	mg/L	8	7	7	7	7	7	7	7	7	7	
Magnesium	mg/L	2	2	2	2	2	2	2	2	2	2	
Potassium	mg/L	5	6	5	5	6	5	5	5	5	5	
Sodium	mg/L	537	531	574	516	618	602	568	577	483	522	
Bicarbonate	mg/L	546	603	603	615	585	536	586	586	245	338	
Carbonate	mg/L	23	16	18	18	35	30	28	36	124	82	
Chloride	mg/L	7	9	8	9	9	9	9	10	473	555	
Sulfide	mg/L	634	678	667	605	639	650	660	623	11	4	
Aluminum, dissolved	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	
Arsenic, dissolved	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	
Barium, dissolved	mg/L	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Boron, dissolved	mg/L	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.7	0.6	
Calcium, dissolved	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	
Chromium, dissolved	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Copper, dissolved	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Iron, dissolved	mg/L	0.13	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Iron, total	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Lead, dissolved	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Manganese, total	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Mercury	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
Molybdenum, dissolved	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Nickel, dissolved	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Selenium, dissolved	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	
Silver, dissolved	mg/L	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	
Uranium, dissolved	mg/L	0.017	0.006	0.024	0.005	0.005	0.005	0.007	0.007	0.001	0.001	
Vanadium, suspended	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
Vanadium, dissolved	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Zinc, dissolved	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
Lead 210, dissolved	pCi/L	-1	-1	1.35	-1	-1	-1	1.9	-1	-1	1.15	
Lead 210, suspended	pCi/L	-1	-1	32.2	-1	-1	-1	1.5	-1	-1	1.23	
Potassium 210, dissolved	pCi/L	-1	-1	3.74	-1	-1	-1	-1	-1	-1	-1	
Potassium 210, suspended	pCi/L	-1	-1	25.4	-1	-1	-1	-1	-1	-1	-1	
Ra-226, dissolved	pCi/L	0.89	0.93	0.71	0.8	0.7	0.7	0.6	0.8	-0.2	-0.2	
Ra-226, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-228, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-228, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Th-230, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Th-230, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Gross Alpha	pCi/L	33.5	19	47.7	18.4	5	13.8	11.7	11.2	-2	2.3	
Gross Beta	pCi/L	8.2	6.1	17.1	7.1	-7	-7	8.1	-8	16.2	1.3	

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detection (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data													
Sample Results													
Parameter**	Sample Type*	Sample Date											
		Units											
		8/5/10	10/14/10	2/23/11	5/7/11	9/8/11	10/20/11	3/17/10	5/18/10	34-18SM	34-18SM	34-18SM	10/11/10
Alkalinity (as CaCO ₃)	mg/L	422	431	414	413	409	413	521	488	484	484	484	458
Ammonia	mg/L	0.2	0.8	0.3	0.3	0.3	0.3	0.5	1.6	1.4	1.2	1.2	1
Fluoride	mg/L	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.4	1.3	1.2	1.2	0.9
Ammonium	mg/L	2130	2170	2040	1920	2240	2340	2240	2160	2070	2070	1900	1800
Laboratory pH	s.u.	9.2	8.9	8.9	8.8	8.8	8.7	11.6	11.5	11.4	11.4	10.5	10.5
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Total Dissolved Solids	mg/L	1240	1250	1270	1220	1200	1240	1040	1100	1060	1060	1140	1140
Calcium	mg/L	3	3	3	4	4	4	2	1	1	1	1	1
Magnesium	mg/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Potassium	mg/L	17	14	11	10	8	8	31	31	28	26	23	23
Sodium	mg/L	467	449	518	509	488	538	358	342	369	369	383	383
Bicarbonate	mg/L	368	428	433	445	455	450	-5	-5	-5	-5	-5	-5
Carbonate	mg/L	62	49	38	29	22	188	173	173	189	189	250	250
Chloride	mg/L	425	438	530	555	501	504	6	5	4	4	3	3
Sulfate	mg/L	2	-1	-1	-1	-1	-1	293	285	304	304	367	367
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Arsenic, dissolved	mg/L	-0.003	-0.003	-0.005	0.005	0.002	-0.002	0.008	0.011	0.012	0.012	-0.003	-0.003
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved	mg/L	0.8	0.9	0.8	0.8	0.8	0.8	0.2	0.2	0.2	0.2	0.2	0.2
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, total	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Iron, dissolved	mg/L	0.17	0.09	0.08	0.14	0.11	0.08	0.07	0.12	0.12	0.11	0.07	0.07
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese, total	mg/L	-0.02	-0.02	-0.02	0.03	0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Nickel, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, total	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mg/L	0.006	0.013	0.018	0.021	0.025	0.007	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
Uranium, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Zinc, dissolved	mg/L	-0.01	-0.01	0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Polonium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Polonium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-226, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-226, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-228, dissolved	pCi/L	-1	-1	1.3	-1	2.2	-1	-1	-1	-1	-1	-1	-1
Ra-228, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Gross Alpha	pCi/L	3.53	4.5	5	4	4	4	4	4	4	4	4	4
Gross Beta	pCi/L	8.33	8.2	8	7	7	7	18.7	17.3	16.5	16.5	16.5	16.5

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data													
Sample Results													
Parameter**	Sample Type*	Sample Station Name											
		Sample Date											
		34-18SM 2/16/11	34-18SM 5/6/11	34-18SM 8/17/11	34-18SM 10/19/11	34-18OZ 3/29/10	34-18OZ 5/18/10	34-18OZ 7/13/10	34-18OZ 10/7/10	34-18OZ 2/18/11	34-18OZ 4/29/11		
Units													
Alkalinity (as CaCO3)	mg/L	558	559	540	537	486	485	487	504	507	502		
Ammonia	mg/L	0.5	0.3	-0.1	-0.1	0.4	0.4	0.4	0.4	0.3	0.5		
Fluoride	mg/L	0.9	0.9	1.1	1.1	0.6	0.6	0.5	0.6	0.5	0.5		
Laboratory conductivity	umhos/cm	1820	1720	2120	2090	2070	2220	2260	2230	2070	2090		
Laboratory pH	s.u.	9.8	9.7	9.8	9.4	9	8.7	8.7	8.6	8.6	8.6		
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Total Dissolved Solids	mg/L	1300	1330	1310	1310	1530	1560	1620	1560	1540	1560		
Calcium	mg/L	1	2	1	2	4	6	6	6	6	6		
Magnesium	mg/L	-1	1	1	-1	2	2	2	2	2	2		
Potassium	mg/L	21	18	15	15	8	6	5	6	7	6		
Sodium	mg/L	488	477	507	520	542	488	557	481	580	581		
Bicarbonate	mg/L	259	408	438	429	496	540	591	559	587	571		
Carbonate	mg/L	188	135	114	111	52	28	8	28	15	2		
Chloride	mg/L	3	4	5	5	6	8	8	6	7	7		
Sulfate	mg/L	418	433	456	410	606	670	583	578	631	647		
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Arsenic, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005		
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		
Boron, dissolved	mg/L	0.4	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.5		
Calcium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002		
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Iron, dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05		
Iron, total	mg/L	0.12	0.13	0.1	0.25	1.02	0.1	0.1	-0.05	-0.05	0.15		
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001		
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005		
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003		
Uranium, dissolved	mg/L	0.0008	0.0007	0.0008	0.0011	0.002	0.009	0.046	0.041	0.0427	0.0378		
Uranium, suspended	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003		
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Lead 210, dissolved	pCi/L	-1	-1	-1	-1	-1	1.88	3.02	3.1	3.1	3.1		
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	3.88	1.66	3.88	5.8	5.8		
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	4.71	8.73	4.71	8.73	5.6		
Potassium 210, suspended	pCi/L	-1	-1	-1	-1	-1	13.38	8.93	13.38	26.6	26.6		
Ra-226, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	5.97	9.08	9.68	8.8	9.8	10		
Ra-226, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	0.49	-0.2	-0.2	-0.2	-0.2		
Ra-228, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Ra-228, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Gross Alpha	pCi/L	-4	-4	-4	-4	175.7	111.1	76	83.8	78.6	90		
Gross Beta	pCi/L	13.2	10.4	8.4	8	43.1	35.2	23.9	25.7	17.7	15.3		

Notes:

*Water Type
 GW=Ground water
 SW=Surface water

**Negative number indicates value of less than detection
 (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data													
Parameter**	Sample Type*	Sample Results											
		Sample Station Name											
		Sample Date											
		GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring
34-180Z	34-180Z	34-180Z	34-180Z	34-180Z	34-180Z	34-180Z	34-180Z	34-180Z	34-180Z	34-180Z	34-180Z	34-180Z	
8/16/11	10/19/11	3/17/10	5/18/10	8/4/10	10/11/10	2/16/11	5/6/11	8/17/11	10/19/11				
Units													
Alkalinity (as CaCO3)	mg/L	502	507	498	336	360	427	444	458	453	455	453	
Ammonia	mg/L	0.3	0.2	3.9	0.8	1.8	0.6	0.4	0.4	0.3	0.1	0.3	
Fluoride	mg/L	0.6	0.5	1.2	1.1	1.2	1	1	1.1	1.3	1.1	1.3	
Laboratory conductivity	µmho/cm	2360	2430	2170	2040	1980	2210	2130	2010	2500	2530	2500	
Laboratory pH	pH	8.7	8.7	11.7	10	10	9.3	9.1	9.1	8.9	8.8	8.9	
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Total Dissolved Solids	mg/L	1530	1540	870	1150	1110	1300	1320	1320	1310	1340	1310	
Calcium	mg/L	7	6	4	2	2	2	2	2	2	2	2	
Magnesium	mg/L	2	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potassium	mg/L	5	6	44	21	21	15	15	12	11	10	11	
Sodium	mg/L	562	568	302	473	405	452	498	556	556	540	540	
Bicarbonate	mg/L	564	561	-5	133	134	374	428	453	481	488	488	
Carbonate	mg/L	21	28	128	137	150	72	96	52	35	33	35	
Chloride	mg/L	7	8	139	523	371	422	526	576	575	547	547	
Sulfate	mg/L	661	591	29	12	15	6	4	-1	-1	-1	-1	
Aluminum, dissolved	mg/L	-0.1	-0.1	0.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Arsenic, dissolved	mg/L	-0.005	-0.005	0.007	0.007	0.008	-0.005	0.006	0.005	0.006	-0.003	0.006	
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Boron, dissolved	mg/L	0.5	0.5	0.3	0.5	0.6	0.8	0.9	1	0.9	1	0.9	
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Iron, dissolved	mg/L	-0.05	-0.05	0.07	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Iron, total	mg/L	-0.05	-0.05	0.38	0.11	0.29	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Molybdenum, dissolved	mg/L	-0.02	-0.02	0.05	0.02	0.02	0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Selenium, dissolved	mg/L	-0.005	-0.005	0.006	0.006	0.006	0.01	0.022	0.023	0.023	0.007	0.023	
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	
Uranium, dissolved	mg/L	0.0418	0.0355	-0.001	0.003	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Vanadium, dissolved	mg/L	-0.003	-0.003	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Zinc, dissolved	mg/L	-0.01	-0.01	0.06	0.02	-0.01	0.04	0.01	-0.01	0.02	0.02	-0.01	
Lead 210, dissolved	pCi/L	1.8	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Lead 210, suspended	pCi/L	9.1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potom 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potom 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-226, dissolved	pCi/L	8.3	12.1	-0.2	-0.2	-0.2	0.3	-0.2	0.2	-0.2	0.2	0.2	
Ra-226, suspended	pCi/L	-0.2	-0.2	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-228, dissolved	pCi/L	-0.2	-0.2	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Th-230, dissolved	pCi/L	-0.2	-0.2	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Th-230, suspended	pCi/L	-0.2	-0.2	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Gross Alpha	pCi/L	97.5	105	-2	-2	-2	3.1	-4	-4	-4	-4	-4	
Gross Beta	pCi/L	23.2	25.1	32.6	13.1	10.1	6.6	-7	-7	-7	-7	-7	

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect

(e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported

Appendix C: Water-Quality Data

Water-Quality Data													
Parameter**	Sample Type*	Sample Results											
		Sample Station Name											
		Sample Date											
		GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring
34-7SA	34-7SA	34-7SA	34-7SA	34-7SA	34-7SA	34-7SA	34-7SA	34-7SA	34-7SA	34-7SA	34-7SM	34-7SM	
3/25/10	6/5/10	7/22/10	10/4/10	2/15/11	6/17/11	9/12/11	11/8/11	3/30/10	5/20/10				
Units													
Alkalinity (as CaCO3)	mg/L	497	511	531	506	435	386	342	365	595	628		
Ammonia	mg/L	-0.1	-0.1	-0.1	0.4	0.6	0.6	0.4	0.3	-0.1	0.2		
Fluoride	mg/L	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.9	0.8		
laboratory conductivity	µmhos/cm	1160	1200	1270	1190	1010	892	1080	1020	1650	1840		
laboratory pH	s.u.	9.1	9.1	9.1	10.3	10.3	10.2	10.4	10.6	9.4	9.4		
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Total Dissolved Solids	mg/L	770	810	820	690	640	590	580	540	1150	1203		
Calcium	mg/L	2	2	2	3	4	2	2	2	2	2		
Magnesium	mg/L	-1	1	2	2	2	-1	2	-1	-1	-1		
Potassium	mg/L	16	11	11	13	9	7	7	7	14	13		
Sodium	mg/L	274	266	269	259	256	234	232	213	426	417		
Sulfate	mg/L	484	516	513	223	126	124	177	-5	508	631		
Carbonate	mg/L	90	63	163	193	199	177	168	218	107	66		
Chloride	mg/L	3	3	2	2	2	3	3	3	4	7		
Sulfide	mg/L	134	133	137	98	95	90	124	84	312	312		
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Arsenic, dissolved	mg/L	-0.005	-0.005	-0.003	-0.003	-0.005	-0.005	-0.005	-0.005	0.016	0.011		
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		
Boron, dissolved	mg/L	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.4	0.5		
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002		
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Iron, dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	0.07	-0.05	-0.05	-0.05	-0.05		
Iron, total	mg/L	-0.05	-0.05	0.15	0.15	0.06	0.8	0.6	0.8	0.8	0.11		
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001		
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Selenium, dissolved	mg/L	-0.005	-0.005	-0.003	-0.003	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005		
Silver, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	0.0006	-0.0003	-0.0003	-0.0003	-0.0003		
Uranium, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003		
Uranium, suspended	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Vanadium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Lead 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Potassium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Ra-226, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Ra-226, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Ra-228, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Ra-228, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Gross Alpha	pCi/L	2	3.8	2.85	2.4	2	2	2	2	4.7	6.2		
Gross Beta	pCi/L	7.6	7.7	7.27	7.1	6.2	4.1	4.6	5.4	8.7	10.3		

Notes:

*Water Type
 GW=Ground water
 SW=Surface water

**Negative number indicates value of less than detection
 (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported

Water-Quality Data														
Parameter**	Sample Type*	Sample Results												
		Sample Station Name												
		Sample Date	34-TSM	GW Monitoring	34-TSM	GW Monitoring	34-TSM	GW Monitoring	34-TSM	GW Monitoring	34-TSM	GW Monitoring	34-TSM	GW Monitoring
		8/10/10	10/13/10	2/14/11	6/8/11	9/7/11	10/24/11	3/30/10	34-70Z	5/20/10	34-70Z	7/8/10	34-70Z	10/13/10
Units														
Alkalinity (as CaCO3)	mg/L	647	658	872	677	683	685	632	622	666	568			
Ammonia	mg/L	0.2	0.5	0.3	-0.1	-0.1	0.3	0.4	0.3	0.5	0.3			
Fluoride	mg/L	0.9	0.8	0.8	1.1	1.1	1	0.4	0.5	0.5	0.4			
Laboratory conductivity	µmhos/cm	1903	1830	1730	1620	1980	2040	2130	2290	2250	2190			
Laboratory pH	s.u.	8	8.9	8.8	8.8	8.8	8.8	8.7	8.7	8.4	8.8			
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1			
Total Dissolved Solids	mg/L	1240	1260	1250	1260	1210	1290	1590	1590	1640	1550			
Calcium	mg/L	2	2	3	3	3	2	4	6	6	6			
Magnesium	mg/L	1	1	2	2	2	1	2	2	3	2			
Potassium	mg/L	10	10	8	8	7	12	7	12	5	8			
Sodium	mg/L	428	431	478	469	477	508	533	520	546	512			
Bicarbonate	mg/L	874	882	731	731	762	725	590	537	662	624			
Carbonate	mg/L	67	60	43	47	40	55	29	24	8	34			
Chloride	mg/L	3	3	4	4	4	4	5	5	4	4			
Sulfate	mg/L	298	300	307	308	272	303	690	844	563	512			
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1			
Arsenic, dissolved	mg/L	0.008	0.008	0.008	0.008	-0.005	0.008	-0.005	-0.005	-0.005	-0.005			
Barium, dissolved	mg/L	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3			
Boron, dissolved	mg/L	0.8	0.8	0.3	0.7	0.6	0.6	0.4	0.4	0.4	0.4			
Calcium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002			
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01			
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01			
Iron, dissolved	mg/L	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03			
Iron, total	mg/L	0.08	0.08	0.12	0.18	0.12	0.35	0.08	0.1	-0.03	-0.03			
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02			
Manganese, total	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02			
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001			
Molybdenum, dissolved	mg/L	-0.02	-0.02	0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02			
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01			
Selenium, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003			
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003			
Uranium, dissolved	mg/L	0.002	0.001	0.002	0.001	0.0005	0.0012	0.041	0.038	0.044	0.028			
Vanadium, suspended	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001			
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02			
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01			
Lead 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1			
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1			
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1			
Potassium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1			
Ra-226, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2			
Ra-226, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2			
Ra-228, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1			
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2			
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2			
Gross Alpha	pCi/L	4.1	10.1	4.9	-2	-7	-8	69.1	46.1	55.8	48.1			
Gross Beta	pCi/L	5.8	9.7	-7	-3	-13.8	-319	16.6	18.3	13.3	9.6			

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detectable (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data													
Parameter**	Sample Results												
	Sample Type*	Sample Station Name											
		Sample Date											
		GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring
		34-70Z	34-70Z	34-70Z	34-70Z	34-70Z	34-70Z	34-70Z	34-70Z	34-70Z	34-70Z	34-70Z	34-70Z
		2/14/11	6/7/11	9/7/11	10/24/11	3/30/10	5/20/10	8/10/10	10/13/10	2/14/11	6/8/11		
Units													
Alkalinity (as CaCO3)	mg/L	560	593	584	586	463	449	547	447	605	422		
Ammonia	mg/L	0.5	0.4	0.2	0.3	0.8	1.8	2.4	1.5	2.0	1.5		
Fluoride	mg/L	0.4	0.6	0.4	0.4	0.9	1.1	0.8	0.8	0.8	1.2		
Laboratory conductivity	µmhos/cm	2040	1520	2250	2400	2740	3080	3220	3100	3390	2880		
Laboratory pH	pH	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8		
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Total Dissolved Solids	mg/L	1550	1500	1450	1470	1500	1750	1900	1850	2130	1980		
Calcium	mg/L	6	5	5	5	3	2	3	2	6	2		
Magnesium	mg/L	2	2	2	2	2	2	2	2	2	2		
Potassium	mg/L	11	9	6	8	32	23	35	22	37	19		
Sodium	mg/L	560	555	555	562	588	722	888	845	807	703		
Bicarbonate	mg/L	632	624	642	629	168	143	53	288	324	247		
Carbonate	mg/L	37	44	34	43	195	198	312	166	132	132		
Chloride	mg/L	5	5	7	7	699	818	939	640	638	759		
Sulfate	mg/L	541	508	486	486	75	71	146	123	234	143		
Aluminum dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Arsenic dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	0.014	0.008	0.008	0.007	0.008	0.008		
Barium dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		
Boron dissolved	mg/L	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
Calcium dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002		
Chromium dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Copper dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Iron dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05		
Iron total	mg/L	-0.05	-0.05	-0.05	-0.05	1.02	1.61	10.2	2.22	3.75	6.25		
Lead dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Manganese total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001		
Molybdenum dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Nickel dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Selenium dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	0.017	0.023	0.016	0.014	0.025	0.024		
Silver dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003		
Lithium dissolved	mg/L	0.03	0.0272	0.0268	0.0262	0.001	0.002	-0.001	-0.001	-0.001	-0.001		
Uranium suspended	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Vanadium dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Zinc dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Ra-226, dissolved	pCi/L	1.1	0.9	0.9	0.9	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Ra-226, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Gross Alpha	pCi/L	43.3	26	54.1	62.2	3.5	4.4	20	10.5	16.3	12.6		
Gross Beta	pCi/L	14.3	4.4	18	9.3	16.4	10.5	28	16.3	12.6	3.1		

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data												
Parameter**	Sample Type*	Sample Results										
		GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring
		34-7DM	34-7DM	42-19SM	42-19SM	42-19SM	42-19SM	42-19SM	42-19SM	42-19SM	42-19SM	42-19SM
Sample Station Name	Sample Date	9/7/11	10/24/11	3/16/10	5/18/10	8/4/10	10/5/10	2/17/11	5/6/11	8/4/11	10/18/11	
Units												
Alkalinity (as CaCO3)	mg/L	421	404	420	282	303	316	386	430	470	518	
Ammonia	mg/L	1	1	2.8	1.4	1.2	0.8	0.4	0.4	0.3	0.4	
Fluoride	mg/L	1	1	1.6	1.5	1.5	1.4	1.2	1.1	1.1	1.4	
Laboratory conductivity	µmhos/cm	3330	3370	1690	1540	1560	1620	1760	1760	2110	2160	
Laboratory pH	s.u.	9.8	9.5	11.5	10.8	10.8	10.3	10.2	10	9.8	9.5	
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Total Dissolved Solids	mg/L	1540	1820	830	970	960	1040	1200	1300	1330	1350	
Calcium	mg/L	2	2	3	1	1	1	1	1	1	2	
Magnesium	mg/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potassium	mg/L	32	21	17	11	10	11	11	13	13	15	
Sodium	mg/L	719	718	275	325	342	323	447	440	490	542	
Carbonate	mg/L	205	287	-5	-5	12	64	123	222	295	383	
Chloride	mg/L	152	111	137	152	175	160	171	148	136	118	
Sulfate	mg/L	666	731	7	5	4	4	8	5	8	5	
Aluminum, dissolved	mg/L	152	118	179	405	371	414	462	469	574	457	
Arsenic, dissolved	mg/L	0.4	0.3	0.2	0.1	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Barium, dissolved	mg/L	0.01	-0.005	0.007	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	
Boron, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Cadmium, dissolved	mg/L	1	0.9	0.3	0.4	0.4	0.4	0.8	0.4	0.5	0.5	
Chromium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Iron, dissolved	mg/L	-0.01	-0.01	0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Iron, total	mg/L	0.4	0.1	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Lead, dissolved	mg/L	23.3	3.02	0.86	0.11	0.16	-0.05	0.08	-0.05	0.05	0.08	
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Mercury	mg/L	0.37	0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Molybdenum, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Nickel, dissolved	mg/L	-0.02	-0.02	0.05	0.03	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Selenium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Silver, dissolved	mg/L	0.03	0.006	-0.005	-0.005	-0.005	-0.005	0.017	-0.005	-0.005	-0.005	
Uranium, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	
Vanadium, dissolved	mg/L	0.0004	0.0004	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Zinc, dissolved	mg/L	-0.003	-0.003	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Lead 210, dissolved	pCi/L	-0.02	-0.02	0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potassium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-226, dissolved	pCi/L	-0.2	0.2	-0.2	-0.2	0.21	-0.2	-0.2	-0.2	-0.2	-0.2	
Ra-226, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Ra-228, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Gross Alpha	pCi/L	-7	-14	-2	-2	2.78	2.8	-5	-3	-4	-5.2	
Gross Beta	pCi/L	-10	-20	10.8	6.8	6.9	6	-7	-8	-9	-9	

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data													
Parameter**	Sample Results												
	Sample Type*	Sample Station Name											
		Sample Date											
		GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring
	42-190Z	42-190Z	42-190Z	42-190Z	42-190Z	42-190Z	42-190Z	42-190Z	42-190Z	42-190Z	42-190Z	42-190Z	42-190Z
	3/11/10	5/17/10	7/10/10	10/5/10	2/17/11	5/6/11	8/4/11	10/18/11	3/16/10	5/17/10			
Units													
Alkalinity (as CaCO3)		477	474	480	480	487	476	473					362
Ammonia	mg/L	0.3	0.3	0.6	0.4	0.6	0.3	0.4	0.4	2.5	0.4	2.5	2.1
Fluoride	mg/L	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	1.2	0.3	1.2	1.8
Laboratory conductivity	µmhos/cm	2080	1850	2200	2130	2000	1570	2340	2340	2000	2340	2000	1600
Laboratory pH	s.u.	8.6	8.6	8.7	8.7	8.6	8.6	8.7	8.6	11.5	8.6	11.5	10.9
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Total Dissolved Solids	mg/L	1500	1520	1650	1500	1500	1600	1500	1450	940	1450	940	960
Calcium	mg/L	6	6	6	7	6	5	7	6	6	7	6	4
Magnesium	mg/L	2	2	2	3	3	2	3	2	-1	3	2	-1
Potassium	mg/L	6	6	5	7	6	6	5	5	48	5	48	27
Sodium	mg/L	499	532	547	541	537	442	541	540	315	540	315	369
Bicarbonate	mg/L	538	518	543	533	566	522	537	537	5	537	5	5
Carbonate	mg/L	21	29	21	26	19	39	20	18	160	18	160	182
Chloride	mg/L	5	4	3	3	4	4	5	5	182	5	182	326
Sulfate	mg/L	538	540	595	600	589	389	602	575	42	575	42	30
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.4	-0.1	0.4	0.2
Arsenic, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	0.01	-0.005	0.01	0.01
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved	mg/L	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.5
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Iron, dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Iron, total	mg/L	6.11	6.05	6.05	6.05	6.05	6.05	6.05	6.05	6.21	6.05	6.21	6.35
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	0.06	-0.02	0.06	0.03
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	0.006	-0.005	0.006	0.005
Silver, dissolved	mg/L	0.011	0.01	0.01	0.009	0.006	0.0113	0.0066	0.0113	-0.001	-0.001	-0.001	-0.001
Uranium, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.04	-0.01	0.04	-0.01
Lead 210, dissolved	pCi/L	-1	-1	1.4	1.4	1.4	1.4	1.4	1.4	-1	-1	-1	-1
Lead 210, suspended	pCi/L	1.36	1.36	1.86	1.86	1.86	1.86	2.2	1.8	-1	2.2	-1	-1
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Potassium 210, suspended	pCi/L	1.38	1.38	1.46	1.4	1.4	0.7	1.4	1.2	-0.2	1.2	-0.2	-0.2
Ra-226, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-226, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-228, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-228, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, dissolved	pCi/L	19.4	19.4	19.7	19.6	13.7	24.8	18.3	20.4	-2	20.4	-2	-2
Th-230, suspended	pCi/L	4.2	4.2	8.54	13.4	7.9	7.9	7.9	11.2	34.3	11.2	34.3	19.7

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data													
Sample Results													
Parameter**	Sample Type**	GW Monitoring 42-19DM	GW Monitoring 42-19DM	GW Monitoring 42-19DM	GW Monitoring 42-19DM	GW Monitoring 42-19DM	GW Monitoring 42-19DM	GW Monitoring 42-19DM	GW Monitoring 42-19DM	GW Domestic CSWELL01	GW Domestic CSWELL01	GW Domestic CSWELL01	GW Domestic CSWELL01
Sample Station Name	Sample Date	8/4/10	10/5/10	2/17/11	5/6/11	8/3/11	10/18/11	8/6/09	10/23/09	1/22/10	5/13/10		
Units													
Alkalinity (as CaCO ₃)	mg/L	386	443	431	445	443	452	792	653	633	633	637	
Ammonia	mg/L	0.6	0.4	0.4	0.4	0.4	0.5	-0.1	-0.1	-0.1	-0.1	-0.1	
Fluoride	mg/L	1.4	1.4	1.4	1.3	1.2	1.5	0.4	0.3	0.3	0.3	0.4	
Laboratory conductivity	µmhos/cm	1920	2040	1920	1880	2260	2240	2560	1880	1560	1560	1932	
Laboratory pH	pH	8.6	9.3	9.3	9.2	9.1	9	8.3	8.4	8.4	8.4	8.4	
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.4	0.1	-0.1	-0.1	0.8	
Total Dissolved Solids	mg/L	1090	1170	1140	1280	1230	1210	1920	1340	1030	1030	1610	
Calcium	mg/L	2	3	3	3	3	3	39	16	6	6	28	
Magnesium	mg/L	-1	-1	-1	-1	-1	-1	30	12	6	6	18	
Potassium	mg/L	11	10	11	11	11	11	14	9	8	8	11	
Sodium	mg/L	390	480	483	477	508	535	574	445	303	303	527	
Bicarbonate	mg/L	282	388	388	400	445	482	931	758	748	748	760	
Carbonate	mg/L	93	74	67	56	47	44	18	7	12	12	9	
Chloride	mg/L	345	365	451	477	463	452	8	3	2	2	8	
Sulfate	mg/L	9	7	5	3	3	2	609	366	224	224	558	
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Arsenic, dissolved	mg/L	0.006	-0.005	-0.005	0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Boron, dissolved	mg/L	0.7	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.3	0.3	0.4	
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Iron, dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Iron, total	mg/L	0.31	-0.05	0.1	0.06	0.1	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Selenium, dissolved	mg/L	0.012	0.01	0.017	0.017	0.017	0.007	0.006	0.006	-0.005	-0.005	-0.005	
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	
Uranium, dissolved	mg/L	-0.001	-0.001	-0.003	-0.003	-0.003	-0.003	0.014	0.006	0.004	0.004	0.015	
Uranium, suspended	mg/L	-0.001	-0.001	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Zinc, dissolved	mg/L	0.04	0.02	0.04	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Lead 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-226, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-226, suspended	pCi/L	-0.2	-0.2	0.2	-0.2	-0.2	-0.2	0.86	-0.2	0.38	0.38	0.3	
Ra-228, dissolved	pCi/L	-0.2	-0.2	-1	-1	-1	-1	1.68	1.44	-1	-1	-0.2	
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Th-230, suspended	pCi/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Gross Alpha	pCi/L	-3.5	-3	-3	-4	-3	-4	18.3	16.3	7.2	7.2	9.5	
Gross Beta	pCi/L	-6.8	-6.8	-7	-7	-6.1	-7	11.3	12.4	-3.96	-3.96	6.2	

Notes:

*Water Type

GW-Ground water

SW-Surface water

**Negative number indicates value of less than detection (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data												
Parameter**	Sample Type*	Sample Results										
		GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	GW Monitoring	
		42-190Z 3/11/10	42-190Z 5/17/10	42-190Z 7/10/10	42-190Z 10/5/10	42-190Z 2/17/11	42-190Z 5/6/11	42-190Z 8/4/11	42-190Z 10/18/11	42-190M 3/16/10	42-190M 5/17/10	
Alkalinity (as CaCO3)	mg/L	477	474	463	463	487	476	473	471	481	352	
Ammonia	mg/L	0.3	0.3	0.5	0.4	0.5	0.3	0.4	0.4	0.4	2.6	
Fluoride	mg/L	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	1.2	
Labonator conductivity	umhos/cm	2060	1850	2203	2133	2000	1570	2342	2280	2000	1600	
Labonator pH	s.u.	8.6	8.8	8.7	8.7	8.6	8.8	8.7	8.8	8.8	11.5	
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Total Dissolved Solids	mg/L	1500	1520	1650	1500	1500	1690	1500	1490	940	960	
Calcium	mg/L	6	6	6	7	7	5	7	7	5	4	
Magnesium	mg/L	2	2	2	3	3	2	3	2	1	1	
Potassium	mg/L	6	6	5	7	6	5	5	5	48	27	
Sodium	mg/L	495	532	547	541	537	442	541	543	315	368	
Bicarbonate	mg/L	536	519	543	533	556	522	537	537	5	4	
Carbonate	mg/L	21	26	21	26	19	30	20	18	180	185	
Chloride	mg/L	5	4	3	3	4	4	5	5	182	122	
Sulfate	mg/L	638	640	595	600	598	393	902	575	42	30	
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.4	0.2	
Arsenic, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	0.01	0.01	
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Boron, dissolved	mg/L	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Iron, dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Iron, total	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.21	0.38	
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	0.06	0.03	
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	0.008	-0.005	
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	
Uranium, dissolved	mg/L	0.011	0.01	0.01	0.009	0.009	0.013	0.0096	0.0093	-0.001	-0.001	
Uranium, suspended	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Vanadium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	0.02	-0.01	-0.01	0.04	-0.01	
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	1.5	3	3	-1	-1	
Lead 210, dissolved	pCi/L	-1	-1	1.4	1.4	1.4	1.5	2.2	2.2	-1	-1	
Lead 210, suspended	pCi/L	1.38	1.36	1.46	1.4	1.4	0.7	1.4	1.2	-0.2	-0.2	
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potassium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-226, dissolved	pCi/L	1.38	1.36	1.46	1.4	1.4	0.7	1.4	1.2	-0.2	-0.2	
Ra-226, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Ra-228, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-228, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Gross Alpha	pCi/L	19.4	15.4	16.7	19.6	13.7	24.8	16.3	20.4	-2	-2	
Gross Beta	pCi/L	4.2	9.8	8.54	13.4	7.8	-7	-7	11.2	34.3	18.7	

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detectable (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data													
Sample Results													
Parameter**	Sample Type*	Sample Station Name											
		Sample Date											
		Units											
		7/22/10	10/4/10	2/10/11	8/16/11	8/18/11	CSWELL01	GW	CSWELL01	GW	CSWELL01	GW	CSWELL01
		Domestic	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic	Domestic
		CSWELL01	CSWELL01	CSWELL01	CSWELL01	CSWELL01	CSWELL01	CSWELL01	CSWELL01	CSWELL01	CSWELL01	CSWELL01	CSWELL01
		7/22/10	10/4/10	2/10/11	8/16/11	8/18/11	8/18/11	11/21/11	8/27/09	10/21/09	1/22/10	5/13/10	5/13/10
Alkalinity (as CaCO ₃)	mg/L	64.2	64.6	64.1	67.3	45.6	64.7	64.7	56.9	59.7	59.7	59.7	59.7
Ammonia	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Fluoride	mg/L	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.7	0.7	0.6	0.6	0.6
Laboratory conductivity	µmhos/cm	2600	2100	1550	2600	2200	2480	2480	2560	2500	2500	2210	2210
Laboratory pH	pH	8.3	8.4	8.4	8.3	8.7	8.3	8.3	8.4	8.5	8.4	8.4	8.4
Nitrate/Nitrite	mg/L	0.9	0.5	0.1	1.2	0.1	0.1	0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Total Dissolved Solids	mg/L	1920	1430	1150	2520	1490	1830	1830	1780	1820	1820	1820	1820
Calcium	mg/L	4.3	22	10	62	35	39	39	16	16	16	16	16
Magnesium	mg/L	3.3	16	6	50	23	30	30	6	6	6	6	6
Potassium	mg/L	12	12	8	16	14	12	12	11	12	12	12	12
Sodium	mg/L	570	459	414	703	471	501	501	629	629	610	629	629
Carbonate	mg/L	772	763	759	821	554	737	737	774	774	710	774	774
Carbonate	mg/L	5	12	11	-3	28	24	24	18	18	9	13	13
Chloride	mg/L	7	4	3	14	3	13	13	16	8	7	11	11
Sulfate	mg/L	723	460	244	1110	644	680	680	794	680	680	727	727
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Arsenic, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved	mg/L	0.4	0.4	0.3	0.6	0.4	0.4	0.4	0.6	0.6	0.6	0.6	0.6
Calcium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Iron, dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	1.96	0.21	0.58	0.66	0.66
Iron, total	mg/L	-0.05	-0.05	-0.05	0.07	-0.05	-0.05	-0.05	5.92	2.73	1.84	1.73	1.73
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese, total	mg/L	-0.02	-0.02	-0.02	0.04	-0.02	-0.02	-0.02	0.07	0.06	0.04	0.03	0.03
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mg/L	0.009	0.007	-0.005	0.019	-0.005	0.008	0.008	-0.005	-0.005	-0.005	-0.005	-0.005
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	0.005	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
Uranium, dissolved	mg/L	0.02	0.011	0.004	0.0317	0.0041	0.014	0.014	-0.001	-0.001	-0.001	-0.001	-0.001
Uranium, suspended	mg/L	-0.001	-0.001	-0.001	-0.0003	-0.0003	-0.0003	-0.0003	-0.001	-0.001	-0.001	-0.001	-0.001
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Potassium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-226, dissolved	pCi/L	0.49	0.4	0.2	0.8	0.4	0.4	0.4	0.35	-0.2	0.3	0.3	0.3
Ra-226, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-228, dissolved	pCi/L	-1	1.5	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-228, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Gross Alpha	pCi/L	14.6	12.2	-5	23.9	-5	12.7	12.7	10.7	17.3	14.9	12	12
Gross Beta	pCi/L	13.2	4.3	-7	18.3	9.7	12.7	12.7	6.7	11.8	-10.2	10.3	10.3

Notes:

*Water Type

GW-Ground water

SW-Surface water

**Negative number indicates value of less than detect

(e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported

Appendix C: Water-Quality Data

Water-Quality Data													
Parameter**	Sample Results												
	Sample Type*		Sample Station Name										
	Sample Date		Sample Date										
	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units
Parameter**	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units
Alkalinity, as CaCO ₃	mg/L	593	598	594	589	600	592	499	519	527	521		
Ammonia	mg/L	0.4	0.6	0.5	0.4	0.3	0.4	-0.1	-0.1	-0.1	-0.1		
Fluoride	mg/L	0.6	0.6	0.5	0.5	0.5	0.6	0.3	0.3	0.3	0.2		
Hardness	mg/L	2540	2540	2540	2540	2540	2540	1500	1500	1370	1610		
Laboratory pH	g u	8.5	8.5	8.5	8.4	8.6	8.6	8.1	8.1	8.1	8.2		
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Total Dissolved Solids	mg/L	1920	1760	1760	1760	1760	1760	1100	1100	1180	1190		
Calcium	mg/L	17	15	15	15	16	14	87	87	67	78		
Magnesium	mg/L	6	6	6	6	6	5	36	34	33	38		
Potassium	mg/L	11	13	13	12	13	12	8	8	7	8		
Sodium	mg/L	562	558	601	570	612	548	258	232	251	246		
Bicarbonate	mg/L	687	680	657	669	686	673	606	633	642	638		
Carbonate	mg/L	13	14	15	8	23	26	-5	-5	-5	-5		
Chloride	mg/L	7	7	7	8	11	11	4	4	5	4		
Sulfate	mg/L	691	663	668	662	711	667	327	355	381	378		
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Arsenic, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005		
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		
Boron, dissolved	mg/L	0.5	0.5	0.4	0.4	0.5	0.4	0.2	0.2	0.2	0.2		
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002		
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Iron, dissolved	mg/L	0.88	0.9	0.54	0.48	0.22	0.18	0.49	1.55	1.17	0.82		
Iron, total	mg/L	1.73	1.71	1.22	1.61	1.48	1.47	32.8	17	7.38	8.39		
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Manganese, total	mg/L	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.11	0.17		
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001		
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005		
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003		
Uranium, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001		
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Lead 210, dissolved	pg/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Lead 210, suspended	pg/L	1.2	1.4	1.4	1.4	1.8	1.8	1.8	1.8	1.8	1.8		
Potassium 210, dissolved	pg/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Potassium 210, suspended	pg/L	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9		
Ra-226, dissolved	pg/L	0.2	0.4	0.3	0.3	0.3	0.4	0.2	-0.2	-0.2	-0.2		
Ra-226, suspended	pg/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Ra-228, dissolved	pg/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Th-230, dissolved	pg/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Th-230, suspended	pg/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Gross Alpha	pg/L	12.6	11.7	5.2	3.3	4	4	7.1	11.8	7.3	11.3		
Gross Beta	pg/L	7.1	7.2	-8	7	6.5	9.7	7.2	10	6.4	8.7		

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data									
Sample Results									
Sample Type*	Sample Station Name	GW Domestic HBWELL05	GW Domestic HBWELL05	GW Domestic HBWELL05	GW Domestic HBWELL05	GW Domestic HBWELL05	GW Domestic HBWELL05	GW Domestic P144030W	GW Domestic P31770W
Sample Date	Sample Date	2/10/11	6/29/11	8/12/11	11/21/11	3/23/11	8/24/10	8/18/11	11/18/09
Parameter**	Units								
Alkalinity (as CaCO3)	mg/L	543	538	536	541	768	443	438	501
Ammonia	mg/L	-0.1	-0.1	-0.1	-0.1	0.5	0.1	-0.1	-0.1
Fluoride	mg/L	0.2	0.3	0.3	0.3	2.5	0.1	0.2	0.3
Laboratory conductivity	µmhos/cm	1669	1530	1620	1620	1413	948	934	2510
Laboratory pH	s.u.	8.1	8.1	8.3	8.2	8.3	8	8.2	8.2
Nitrate/Nitrite	mg/L	-0.1	0.3	-0.1	0.7	-0.1	-0.1	-0.1	0.6
Total Dissolved Solids	mg/L	1100	1190	1200	1040	960	520	510	1600
Calcium	mg/L	79	89	83	93	3	49	45	57
Magnesium	mg/L	35	38	34	37	2	25	23	25
Potassium	mg/L	8	12	10	9	3	16	16	14
Sodium	mg/L	229	268	294	271	397	113	121	593
Bicarbonate	mg/L	562	557	563	560	886	541	554	612
Carbonate	mg/L	-5	-5	-5	-3	23	-3	-3	-5
Chloride	mg/L	4	6	5	6	48	1	2	21
Sulfate	mg/L	367	409	382	370	25	56	55	842
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Arsenic, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Barium, dissolved	mg/L	0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved	mg/L	0.2	0.2	-0.1	0.2	0.5	-0.1	0.3	0.3
Cadmium, dissolved	mg/L	-0.003	-0.003	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Iron, dissolved	mg/L	0.35	0.47	0.29	0.36	0.05	0.08	0.33	0.9
Iron, total	mg/L	2.4	8.02	47.5	21.3	0.1	0.13	0.38	0.91
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese, total	mg/L	0.15	0.08	0.09	0.07	0.08	0.06	0.06	0.15
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Stennum, dissolved	mg/L	0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
Uranium, dissolved	mg/L	0.013	0.0108	0.0108	0.0118	-0.001	0.024	0.0274	0.017
Uranium, suspended	mg/L	-0.003	0.0029	0.0029	-0.003	-0.001	-0.001	-0.0003	-0.001
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Zinc, dissolved	mg/L	-0.01	0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.02
Lead 210, dissolved	pCi/L	1.4	1	1	1	-1	-1	1.3	-1
Lead 210, suspended	pCi/L	1.7	6.8	-1	-1	-1	-1	-1	-1
Phonium 210, dissolved	pCi/L		-1	-1	-1	-1	-1	-1	-1
Phonium 210, suspended	pCi/L		1.8						
Ra-226, dissolved	pCi/L	0.2	0.2	0.2	0.2	0.27	0.8	0.9	0.32
Ra-226, suspended	pCi/L	0.2	1.2	1.2	-1	-1	-0.2	-0.2	-1
Th-230, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Gross Alpha	pCi/L	12.7	7.7	7.0	9.2	23.9	20.4	7.8	36.5
Gross Beta	pCi/L	7.4	8	12.1	23.8	17.9	12.9	12.9	17.1

Notes:

*Water Type

water type
GW=Ground water

GW=Ground water
SW=Surface water

^{†††} Negative number indicates value of less than detectic(e.g., -0.01 is <0.01)

Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data													
Sample Results													
Parameter**	Sample Type*	Sample Station Name	Sample Date	Units	GW Domestic P42868W 8/31/09	GW Domestic P42868W 6/7/11	GW Domestic P42868W 8/18/11	GW Domestic P61006W 8/31/09	GW Domestic P61006W 2/18/11	GW Domestic P61006W 6/7/11	GW Domestic P61006W 8/18/11	GW Domestic P61006W 12/7/11	GW Domestic P73217W 9/1/09
Alkalinity (as CaCO3)				meq/L	547	552	558	490	530	491	504	490	118
Ammonia				mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.6
Fluoride				mg/L	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.1	1.1
Laboratory conductivity				µmhos/cm	2550	1250	1375	1030	1163	880	1140	1010	841
Laboratory pH				s.u.	8.2	8.7	8.8	8.3	8.3	8.1	8.3	8.2	8
Nitrate/Nitrite				mg/L	1.1	-0.1	-0.1	-0.1	0.2	-0.1	-0.1	-0.1	-0.1
Total Dissolved Solids				mg/L	1950	810	810	790	680	640	650	650	550
Calcium				mg/L	74	3	2	18	18	18	15	18	22
Magnesium				mg/L	37	1	1	9	9	9	7	9	9
Potassium				mg/L	11	3	4	6	6	8	8	8	8
Sodium				mg/L	565	321	329	244	299	259	254	221	145
Bicarbonate				mg/L	609	616	623	578	636	598	594	591	142
Carbonate				mg/L	-5	17	29	9	5	-5	13	-5	-5
Chloride				mg/L	23	1	2	1	3	1	2	2	8
Sulfate				mg/L	665	117	116	74	158	70	78	78	260
Aluminum, dissolved				mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Arsenic, dissolved				mg/L	-0.05	0.02	0.016	-0.05	-0.05	0.05	-0.05	-0.05	-0.05
Barium, dissolved				mg/L	0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved				mg/L	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3
Calcium, dissolved				mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Chromium, dissolved				mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved				mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Iron, dissolved				mg/L	-0.05	0.06	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Iron, total				mg/L	0.05	-0.05	0.06	0.16	0.13	0.4	0.16	0.16	0.14
Lead, dissolved				mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese, total				mg/L	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Mercury				mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Molybdenum, dissolved				mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, dissolved				mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved				mg/L	0.006	-0.005	-0.005	-0.005	-0.005	0.006	-0.005	-0.005	-0.005
Silver, dissolved				mg/L	-0.003	-0.003	-0.003	0.002	-0.003	-0.003	-0.003	-0.003	-0.003
Lithium, dissolved				mg/L	0.071	-0.001	-0.003	0.002	0.0019	0.0016	0.0021	0.0023	-0.001
Lithium, suspended				mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Vanadium, dissolved				mg/L	0.06	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Zinc, dissolved				mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, dissolved				pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1
Lead 210, suspended				pCi/L	1.2	-1	-1	-1	-1	-1	-1	-1	-1
Potassium 210, dissolved				pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1
Potassium 210, suspended				pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-226, dissolved				pCi/L	0.43	-0.2	-0.2	1.13	0.6	0.6	0.6	0.6	-0.2
Ra-226, suspended				pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-228, dissolved				pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1
Th-230, dissolved				pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1
Th-230, suspended				pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1
Gross Alpha				pCi/L	35.8	-2	-2	4.8	6.9	5.2	7.4	7.4	-2
Gross Beta				pCi/L	14.4	-3	-4	3.8	10.3	5.3	7.3	10.1	4.1

Notes:

- *Water Type
- GW=Ground water
- SW=Surface water
- **Negative number indicates value of less than detect (e.g., -0.01 is <0.01)
- ***Blank cells indicate that no data were reported.

Water-Quality Data													
Sample Results													
Parameter**	Sample Type*	Sample Station Name	Sample Date	Units	GW Domestic	GW Domestic	GW Domestic	GW Domestic	GW Domestic	GW Domestic	GW Domestic	GW Domestic	GW Domestic
					TW01	TW01	TW01	TW01	TW01	TW01	TW01	TW01	TW01
					7/29/09	1/23/10	5/14/10	7/21/10	10/5/10	2/10/11	5/5/11	8/11/11	11/21/11
Alkalinity (as CaCO ₃)	mg/L	567			836	684	668	685	689	687	683	688	686
Ammonia	mg/L	-0.1			-0.1	-0.1	0.2	0.2	0.2	0.2	0.1	-0.1	0.2
Fluoride	mg/L	0.4			1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.2
Laboratory conductivity	µmhos/cm	1300			2000	2000	2150	2050	2020	1910	1770	2280	2010
Laboratory pH	s.u.	8.7			8.4	8.4	8.4	8.4	8.5	8.4	8.5	8.5	8.6
Nitrate/Nitrite	mg/L	0.1			-0.05	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Total Dissolved Solids	mg/L	510			1360	1440	1360	1430	1360	1440	1390	1470	1410
Calcium	mg/L	4			8	8	8	9	8	9	8	15	8
Magnesium	mg/L	2			4	4	4	5	4	4	4	8	4
Potassium	mg/L	4			7	8	7	7	8	8	8	10	8
Sodium	mg/L	553			508	457	473	477	473	507	534	528	492
Bicarbonate	mg/L	686			935	815	758	810	793	823	796	807	772
Carbonate	mg/L	24			42	10	16	13	23	8	16	16	32
Chloride	mg/L	1			8	5	7	4	4	5	6	6	7
Sulfate	mg/L	122			331	393	379	382	375	377	400	428	341
Aluminum, dissolved	mg/L	-0.1			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Arsenic, dissolved	mg/L	-0.005			-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Barium, dissolved	mg/L	-0.5			-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved	mg/L	0.3			0.59	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cadmium, dissolved	mg/L	-0.002			-0.0001	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Chromium, dissolved	mg/L	-0.01			-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L	-0.01			0.001	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Iron, dissolved	mg/L	-0.05			-0.03	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Iron, total	mg/L	0.22			0.04	0.08	0.08	0.08	0.12	0.05	0.07	0.18	0.11
Lead, dissolved	mg/L	-0.02			-0.002	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese, total	mg/L	-0.02			0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Mercury	mg/L	-0.01			-0.001	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Molybdenum, dissolved	mg/L	-0.02			-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, dissolved	mg/L	-0.01			-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mg/L	-0.005			0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Silver, dissolved	mg/L	0.004			-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Lithium, dissolved	mg/L												
Uranium, suspended	mg/L												
Vanadium, dissolved	mg/L	-0.02			-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Zinc, dissolved	mg/L	-0.01			-0.01	0.01	0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, dissolved	pCi/L												
Lead 210, suspended	pCi/L												
Potassium 210, dissolved	pCi/L												
Potassium 210, suspended	pCi/L												
Ra-226, dissolved	pCi/L	0.45			-0.2	0.2	0.32	-0.2	0.3	-0.2	0.3	0.3	0.3
Ra-226, suspended	pCi/L												
Ra-228, dissolved	pCi/L	1.17			-1	-1	-1	-1	-1	-1	-1	-1	-1
Th-230, dissolved	pCi/L												
Th-230, suspended	pCi/L												
Gross Alpha	pCi/L	10.8			-2	-2	-2	-3.7	4.2	-4	-4	-4	4.8
Gross Beta	pCi/L	7.3			-3	-4.11	5.8	8.58	4.4	-7	-7	-7	-8

Notes:

*Water Type
 GW=Ground water
 SW=Surface water

**Negative number indicates value of less than detect
 (e.g., -0.01 is < 0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data													
Sample Results													
Parameter**	Sample Type*	Sample Station Name											
		Sample Date											
		Units											
		Domestic	GW	Domestic	GW	Domestic	GW	Domestic	GW	Domestic	GW	Domestic	GW
		7/29/09	10/21/09	1/23/10	5/13/10	7/21/10	10/5/10	2/10/11	5/4/11	8/12/11	19XX18	8/6/09	
Alkalinity (as CaCO ₃)	mg/L	646	654	621	613	630	632	631	627	617	655	655	
Ammonia	mg/L	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.1	0.1	
Fluoride	mg/L	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	
Laboratory conductivity	µmhos/cm	2150	2110	2110	1849	2170	2169	2010	1770	2310	2410	2410	
Laboratory pH	s.u.	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.4	8.5	8.3	8.3	
Nitrate/Nitrite	mg/L	-0.05	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Total Dissolved Solids	mg/L	1500	1450	1550	1500	1500	1490	1590	1510	1490	1730	1730	
Calcium	mg/L	19	19	24	26	26	24	26	26	26	26	26	
Magnesium	mg/L	8	8	11	11	12	11	11	11	11	11	11	
Potassium	mg/L	11	11	12	11	13	13	14	12	13	13	13	
Sodium	mg/L	543	544	477	484	482	486	519	518	514	655	655	
Bicarbonate	mg/L	760	762	757	742	754	755	769	754	718	746	746	
Carbonate	mg/L	-5	18	-5	8	8	8	-5	15	18	27	27	
Chloride	mg/L	15	10	10	10	8	8	10	10	11	6	6	
Sulfate	mg/L	576	481	513	502	496	497	506	500	496	646	646	
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Ammonia, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	
Barium, dissolved	mg/L	0.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Boron, dissolved	mg/L	0.32	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
Cadmium, dissolved	mg/L	-0.001	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Copper, dissolved	mg/L	0.002	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Iron, dissolved	mg/L	0.06	0.06	0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Iron total	mg/L	0.11	0.22	0.13	-0.05	0.12	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Lead, dissolved	mg/L	-0.002	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Manganese total	mg/L	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	
Silver, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Uranium, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Uranium, suspended	mg/L	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Vanadium, dissolved	mg/L	0.02	0.01	0.02	0.01	0.03	0.01	0.01	0.01	0.01	0.01	0.01	
Zinc, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Lead 210, dissolved	pCi/L	-	-	-	-	-	-	-	-	-	-	-	
Lead 210, suspended	pCi/L	-	-	-	-	-	-	-	-	-	-	-	
Potassium 210, dissolved	pCi/L	-	-	-	-	-	-	-	-	-	-	-	
Potassium 210, suspended	pCi/L	-	-	-	-	-	-	-	-	-	-	-	
Ra-226, dissolved	pCi/L	0.45	0.31	0.46	0.46	0.41	1.1	0.4	0.6	0.4	0.4	0.4	
Ra-226, suspended	pCi/L	-	1.54	-	-	-	-	1.3	-	-	-	-	
Ra-228, dissolved	pCi/L	-	-	-	-	-	-	-	-	-	-	-	
Th-230, dissolved	pCi/L	-	-	-	-	-	-	-	-	-	-	-	
Th-230, suspended	pCi/L	2.4	4.4	3.1	-2	4.61	3.1	-5	-4	6.6	227	227	
Gross Alpha	pCi/L	-3	11.7	6.6	6.6	10.4	9.2	-3	9.6	9.6	52.3	52.3	

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported

Water-Quality Data													
Parameter**	Sample Type*	Sample Results											
		Sample Station Name											
		Sample Date											
		Units											
GW Industrial	GW Industrial	GW Industrial	GW Industrial	GW Industrial	GW Industrial	GW Industrial	GW Industrial	GW Industrial	GW Industrial	GW Industrial	GW Industrial	GW Industrial	GW Industrial
19XX18	19XX18	19XX18	19XX18	19XX18	19XX18	19XX18	19XX18	19XX18	19XX18	19XX18	19XX18	19XX18	19XX18
10/21/09	1/21/10	1/22/10	5/14/10	7/9/10	10/4/10	2/16/11	5/6/11	9/7/11	11/22/11				
Alkalinity (as CaCO3)	mg/L	659	555		521	531	534	567	536	537	537	537	537
Ammonia	mg/L	-0.1	0.2		-0.1	-0.1	-0.1	0.8	-0.1	-0.1	-0.1	-0.1	-0.1
Fluoride	mg/L	0.5	0.6		0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.5	0.5
Laboratory conductivity	umhos/cm	2360	2320		2360	2370	2390	2220	2070	2510	2420	2420	2420
Laboratory pH	s.u.	8.6	8.6		8.5	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
Nitrate/nitrite	mg/L	0.5	0.1		0.5	0.5	0.5	-0.1	0.5	0.3	0.3	0.3	0.3
Total Dissolved Solids	mg/L	1660	1590		1660	1750	1660	1680	1720	1650	1710	1710	1710
Calcium	mg/L	7	8		8	7	7	7	8	8	8	8	8
Magnesium	mg/L	2	3		3	3	3	2	3	2	2	2	2
Potassium	mg/L	5	4		4	4	5	4	4	5	5	5	5
Sodium	mg/L	629	580		469	543	542	592	614	593	569	569	569
Bicarbonate	mg/L	770	639		905	610	609	655	607	622	597	597	597
Carbonate	mg/L	17	19		15	19	21	18	23	17	28	28	28
Chloride	mg/L	7	6		8	7	6	6	8	6	10	10	10
Sulfate	mg/L	665	616		663	664	639	617	660	608	625	625	625
Aluminum, dissolved	mg/L	-0.1	-0.1		-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Arsenic, dissolved	mg/L	-0.005	-0.005		-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Barium, dissolved	mg/L	-0.5	-0.5		-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved	mg/L	0.5	0.5		0.5	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5
Cadmium, dissolved	mg/L	-0.002	-0.002		-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Chromium, dissolved	mg/L	-0.01	-0.01		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L	-0.01	-0.01		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Iron, dissolved	mg/L	-0.03	-0.03		-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03
Iron, total	mg/L	0.14	-0.05		-0.05	-0.05	-0.05	0.08	-0.05	-0.05	-0.05	-0.05	-0.05
Lead, dissolved	mg/L	-0.02	-0.02		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese, total	mg/L	-0.02	-0.02		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Mercury	mg/L	-0.001	-0.001		-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Molybdenum, dissolved	mg/L	-0.02	-0.02		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, dissolved	mg/L	-0.01	-0.01		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mg/L	-0.005	-0.005		-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Silver, dissolved	mg/L	0.085	0.074		0.088	0.087	0.078	0.078	0.078	0.0835	0.0837	0.0837	0.0837
Uranium, dissolved	mg/L	0.085			-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Uranium, suspended	mg/L	-0.02	-0.02		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Vanadium, dissolved	mg/L	-0.01	-0.01		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Zinc, dissolved	mg/L	-0.01	-0.01		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, dissolved	pCi/L	2.41			3.04	6.13		-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, suspended	pCi/L				1.43	2.8			1.7	13.4	13.4	13.4	13.4
Potassium 210, dissolved	pCi/L	-1			4.04	6.4			4	1.1	1.1	1.1	1.1
Potassium 210, suspended	pCi/L				3.91	5.9			-1	5.1	5.1	5.1	5.1
Ra-226, dissolved	pCi/L	47.23	37.3		43.7	39.4	42	31.1	37.1	35.6	37.5	37.5	37.5
Ra-226, suspended	pCi/L	1.65	1.35		0.31	0.28		-1	-0.2	0.7	0.7	0.7	0.7
Th-230, dissolved	pCi/L	-0.2			-0.2	-0.2	-1	-1	-1	-1	-1	-1	-1
Th-230, suspended	pCi/L				-0.2	-0.2			-0.2	-0.2	-0.2	-0.2	-0.2
Gross Alpha	pCi/L	185.2	282		267	167.1	324	267	190	233	207	207	207
Gross Beta	pCi/L	39.7	75		65.7	54	81.4	116	57.9	72.1	53.2	53.2	53.2

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detection (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data															
Parameter**	Sample Type*	Sample Results													
		Sample Station Name		Industrial		GW		Industrial		GW		Industrial		GW	
		Sample Date		22X-19		22X-19		22X-19		22X-19		22X-19		22X-19	
				1/21/10		1/22/10		5/14/10		7/9/10		10/4/10		2/17/11	
Units															
Alkalinity (as CaCO3)	mg/L		467		462	471		472	475		475	469		470	
Ammonia	mg/L		0.3		0.3	0.4		0.5	0.3		0.4	0.3		0.4	
Fluoride	mg/L		0.6		0.7	0.7		0.6	0.6		0.5	0.6		0.6	
Electrical conductivity	µmhos/cm		2039		1849	2070		2060	2010		1820	2190		2110	
Laboratory pH	s.u.		8.6		8.6	8.6		8.7	8.6		8.7	8.7		8.7	
Nitrate/nitrite	mg/L		-0.1		-0.1	-0.1		-0.1	-0.1		-0.1	-0.1		-0.1	
Total Dissolved Solids	mg/L		1460		1440	1520		1420	1470		1450	1450		1450	
Calcium	mg/L		6		6	8		5	6		5	6		6	
Magnesium	mg/L		2		2	2		2	2		2	1		2	
Potassium	mg/L		4		4	4		5	4		4	5		5	
Sodium	mg/L		444		465	507		474	537		522	506		508	
Bicarbonate	mg/L		528		520	547		523	527		515	515		509	
Carbonate	mg/L		21		13	26		26	26		26	28		28	
Chloride	mg/L		10		13	10		10	13		13	11		15	
Sulfate	mg/L		620		635	638		511	569		546	517		501	
Aluminum, dissolved	mg/L		-0.1		-0.1	-0.1		-0.1	-0.1		-0.1	-0.1		-0.1	
Arsenic, dissolved	mg/L		-0.005		-0.005	-0.005		-0.005	-0.005		-0.005	-0.005		-0.005	
Barium, dissolved	mg/L		-0.5		-0.5	-0.5		-0.5	-0.5		-0.5	-0.5		-0.5	
Boron, dissolved	mg/L		0.4		0.4	0.4		0.4	0.4		0.4	0.4		0.4	
Cadmium, dissolved	mg/L		-0.002		-0.002	-0.002		-0.002	-0.002		-0.002	-0.002		-0.002	
Chromium, dissolved	mg/L		-0.01		-0.01	-0.01		-0.01	-0.01		-0.01	-0.01		-0.01	
Copper, dissolved	mg/L		-0.01		-0.01	-0.01		-0.01	-0.01		-0.01	-0.01		-0.01	
Copper, dissolved	mg/L		0.06		0.06	0.06		0.06	0.05		0.05	0.05		0.05	
Iron, total	mg/L		0.07		0.05	0.06		0.06	0.06		0.05	0.05		0.05	
Lead, dissolved	mg/L		-0.02		-0.02	-0.02		-0.02	-0.02		-0.02	-0.02		-0.02	
Manganese, total	mg/L		-0.02		-0.02	-0.02		-0.02	-0.02		-0.02	-0.02		-0.02	
Mercury	mg/L		-0.001		-0.001	-0.001		-0.001	-0.001		-0.001	-0.001		-0.001	
Molybdenum, dissolved	mg/L		-0.02		-0.02	-0.02		-0.02	-0.02		-0.02	-0.02		-0.02	
Nickel, dissolved	mg/L		-0.01		-0.01	-0.01		-0.01	-0.01		-0.01	-0.01		-0.01	
Selenium, dissolved	mg/L		-0.005		-0.005	-0.005		-0.005	-0.005		-0.005	-0.005		-0.005	
Silver, dissolved	mg/L		0.02		0.022	0.021		0.02	0.021		0.02	0.016		0.016	
Uranium, suspended	mg/L		-0.02		-0.001	-0.001		-0.02	-0.02		-0.0003	-0.0003		0.001	
Vanadium, dissolved	mg/L		-0.01		-0.01	-0.01		-0.01	-0.01		-0.01	-0.01		-0.01	
Zinc, dissolved	mg/L		-0.01		-0.01	-0.01		-0.01	-0.01		-0.01	-0.01		-0.01	
Lead 210, dissolved	pCi/L		-1		-1	-1		-1	-1		-1	-1		-1	
Lead 210, suspended	pCi/L		1.21		1.46	1.21		1.21	1.8		1.1	1.8		3	
Potassium 210, dissolved	pCi/L		-1		-1	-1		-1	-1		-1	-1		-1	
Potassium 210, suspended	pCi/L		-1		-1	-1		-1	-1		-1	-1		-1	
Ra-226, dissolved	pCi/L		3.38		3.05	3.08		3.2	2.8		3.4	3.1		3.2	
Ra-226, suspended	pCi/L		-1		-0.2	-0.2		-0.2	-0.2		-0.2	-0.2		-0.2	
Th-230, dissolved	pCi/L		-0.2		-0.2	-0.2		-0.2	-0.2		-0.2	-0.2		-0.2	
Th-230, suspended	pCi/L		-0.2		-0.2	-0.2		-0.2	-0.2		-0.2	-0.2		-0.2	
Gross Alpha	pCi/L		46.3		45.3	38.5		47.6	42.6		40.3	48.2		30.1	
Gross Beta	pCi/L		1.3		9.3	12.3		12.1	9.4		12.2	8.2		8.2	

Notes:

*Water Type
GW=Ground water
SW=Surface water

**Negative number indicates value of less than detect (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported

Water-Quality Data														
Parameter**	Sample Results													
	Sample Type**		GW		Stock		GW		Stock		GW		Stock	
	Sample Station Name		CSWELL03		7/22/10		CSWELL03		10/4/10		CSWELL03		5/16/11	
	Sample Date		7/22/10		10/4/10		5/16/11		8/3/09		8/3/09		1/28/10	
Units														
Alkalinity (as CaCO3)			316	324	336	304	343	485	460	494	524	531		
Ammonia			0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Fluoride			0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	
Laboratory conductivity			545	617	654	542	732	1720	1520	1790	1800	1780	1760	
Laboratory pH			8.4	8.1	8.2	8.3	8.1	8.2	8	8	8.1	8.1	8.1	
Nitrate/Nitrite			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Total Dissolved Solids			390	380	370	370	440	1230	1140	1370	1310	1210	1210	
Cadmium			36	37	38	30	63	83	95	106	91	79	79	
Magnesium			18	19	20	17	47	52	55	55	52	41	41	
Potassium			9	9	9	9	14	15	14	17	17	20	20	
Sodium			78	74	82	85	26	248	178	238	257	275	275	
Bicarbonate			379	365	410	368	419	591	551	603	640	648	648	
Carbonate			-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	
Chloride			3	3	3	3	6	15	9	11	11	8	8	
Sulfate			28	28	32	32	53	411	422	542	437	403	403	
Aluminum, dissolved			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Arsenic, dissolved			-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	
Barium, dissolved			-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Boron, dissolved			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Cadmium, dissolved			-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	
Chromium, dissolved			-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Copper, dissolved			-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Iron, dissolved			0.55	0.83	0.5	0.44	0.21	0.55	0.55	0.55	0.55	0.55	0.55	
Iron, total			1.3	1.51	3.94	5.18	0.8	2.33	4.76	3.86	7.22	8.42	8.42	
Lead, dissolved			-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Manganese, total			0.34	0.32	0.32	0.21	0.02	0.15	0.25	0.25	0.9	0.21	0.21	
Mercury			-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Molybdenum, dissolved			-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Nickel, dissolved			-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Selenium, dissolved			0.006	-0.005	-0.005	-0.005	0.006	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	
Silver, dissolved			-0.003	-0.003	-0.003	0.003								
Uranium, dissolved			0.001	0.001	-0.001	0.001	0.01	0.006	0.006	0.006	0.004	0.002	0.002	
Uranium, suspended			-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Vanadium, dissolved			-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Zinc, dissolved			-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Lead 210, dissolved			-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Lead 210, suspended			-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potassium 210, dissolved			-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potassium 210, suspended			-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-226, dissolved			0.3	0.34	0.4	0.3	0.27	0.97	0.85	1.03	0.77	0.8	0.8	
Ra-226, suspended			-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Ra-228, dissolved			-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Th-230, dissolved			-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Th-230, suspended			-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Gross Alpha			2.5	5.53	3.5	2.9	5.8	8.8	7	7.1	8.73	10.1	10.1	
Gross Beta			7.1	7.36	8.3	6.7	12.2	9.3	11.2	17.5	17.3	15.4	15.4	

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect.

(e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data														
Parameter**	Sample Station Name	Sample Date	Sample Type*	Sample Results										
				GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
				Stock	Stock	Stock	Stock	Stock	Stock	Stock	Stock	Stock	Stock	Stock
HBWELL03	HBWELL03	HBWELL03	HBWELL03	HBWELL03	HBWELL03	HBWELL03	HBWELL03	HBWELL04	HBWELL04	HBWELL04	HBWELL04	HBWELL04	HBWELL04	
2/10/11	6/28/11	8/12/11	11/2/11	8/3/09	9/1/09	5/13/10	7/21/10	6/28/11						
Units														
Alkalinity (as CaCO3)	mg/L	531	493	503	525	351	444	354						
Ammonia	mg/L	0.2	-0.1	-0.1	0.2	-0.1	-0.1	-0.1						
Fluoride	mg/L	0.3	0.3	0.3	0.3	0.2	0.2	0.2						
Laboratory conductivity	umhos/cm	1660	2030	1990	1740	1740	1730	1640						
Laboratory pH	su	8	8	8.2	8.3	8	7.8	7.8						
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	1	1	0.8						
Total Dissolved Solids	mg/L	1360	1330	1350	1190	1420	1460	1360						
Calcium	mg/L	81	83	96	81	202	203	199						
Magnesium	mg/L	41	52	50	41	60	62	64						
Potassium	mg/L	20	17	19	21	7	7	7						
Sodium	mg/L	305	315	294	292	133	141	123						
Bicarbonate	mg/L	647	601	614	641	429	542	444						
Carbonate	mg/L	-5	-5	-5	-5	-5	-5	-5						
Chloride	mg/L	11	20	14	13	17	12	12						
Sulfate	mg/L	433	508	490	424	597	650	591						
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1						
Arsenic, dissolved	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.005						
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5						
Boron, dissolved	mg/L	0.2	0.2	0.1	0.1	0.1	0.1	0.1						
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002						
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01						
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01						
Iron, dissolved	mg/L	4.83	3.8	3.8	5.69	0.05	0.05	0.05						
Iron, total	mg/L	4.31	5.68	5.22	9.34	0.95	0.92	0.96						
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02						
Manganese, total	mg/L	0.2	0.23	0.25	0.23	0.06	0.08	0.07						
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001						
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02						
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01						
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005						
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003						
Uranium, dissolved	mg/L	0.002	0.004	0.003	0.0018	0.034	0.034	0.033						
Vanadium, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003						
Zinc, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02						
Lead 210, dissolved	pCi/L	1.3	1.3	1.1	1.1	1.8	1.8	1.8						
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1						
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1						
Potassium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1						
Ra-226, dissolved	pCi/L	0.7	0.5	0.5	0.6	0.28	0.31	0.31						
Ra-226, suspended	pCi/L	0.4	0.4	0.2	-0.2	-0.2	-0.2	-0.2						
Ra-228, dissolved	pCi/L	1.1	1.1	1.1	-1	-1	-1	-1						
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2						
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2						
Gross Alpha	pCi/L	-4	-5	-5	-4	20.7	18.1	15.2						
Gross Beta	pCi/L	12.5	16	13.4	18.2	7.9	9.1	17.4						

Notes:

*Water Type

GW-Ground water

SW-Surface water

**Negative number indicates value of less than detectable (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data													
Sample Results													
Parameter**	Sample Type*	Sample Station Name	Sample Date	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock
				8/12/11	11/21/11	8/27/09	11/18/09	8/11/10	10/6/10	3/1/11	5/17/11	8/17/11	12/8/11
Alkalinity (as CaCO3)	mg/L	365	336	415	331	322	313	326	322	322	322	322	322
Ammonia	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Fluoride	mg/L	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Laboratory conductivity	umhos/cm	1800	1830	923	889	822	755	748	944	944	944	944	944
Laboratory pH	su	8.1	7.8	7.8	8.1	8.1	8.1	8.1	7.9	8.1	8.1	8.1	8.1
Nitrate/Nitrite	mg/L	0.9	21.9	22.4	22.4	20	14.9	14.9	16.3	16.3	16.3	16.3	16.3
Total Dissolved Solids	mg/L	1350	1260	610	580	530	500	590	550	550	550	550	550
Calcium	mg/L	201	189	115	117	108	109	91	103	96	96	96	96
Magnesium	mg/L	56	60	30	31	27	23	27	26	26	26	26	26
Potassium	mg/L	8	8	5	5	5	5	5	5	5	5	5	5
Sodium	mg/L	137	132	39	38	34	34	33	33	33	33	33	33
Bicarbonate	mg/L	441	445	414	507	404	391	382	396	396	396	396	396
Carbonate	mg/L	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5
Chloride	mg/L	15	16	21	20	19	17	18	25	26	26	26	26
Sulfide	mg/L	597	576	46	41	45	45	45	41	38	38	38	38
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Arsenic, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Iron, dissolved	mg/L	0.87	0.53	0.11	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Iron, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Lead, dissolved	mg/L	0.08	0.07	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Manganese, total	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
Uranium, dissolved	mg/L	0.0291	0.0331	0.024	0.024	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Zinc, dissolved	mg/L	0.07	0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, dissolved	pCi/L	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Polonium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Polonium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-226, dissolved	pCi/L	0.3	0.3	-0.2	-0.2	0.3	-0.2	-0.2	0.3	-0.2	-0.2	-0.2	-0.2
Ra-226, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-228, dissolved	pCi/L	1.2	1.2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Gross Alpha	pCi/L	19.6	16.6	19.5	12.1	18.3	15.7	17.1	12.9	11.6	11.6	11.6	11.6
Gross Beta	pCi/L	14.4	10.3	6.4	7.3	8.8	10	4.1	4.1	4.1	4.1	4.1	4.1

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data													
Sample Results													
Parameter**	Sample Type*	Sample Station Name	Sample Date	Units	P21128P	P21128P	P21128P	P21128P	P21128P	P21128P	P21128P	P21128P	P21128P
					8/24/10	8/24/10	8/24/10	10/7/10	10/22/09	10/7/10	6/29/11	8/16/11	8/28/09
					GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock
Availability (as CaCO ₃)	mg/L				414	438	425	440	440	491	331	378	511
Ammonia	mg/L				-0.1	-0.1	-0.1	-0.1	-0.1	0.6	-0.1	-0.1	-0.1
Fluoride	mg/L				0.2	0.1	0.2	0.8	0.8	0.9	0.3	0.3	0.3
Laboratory conductivity	µmhos/cm				962	956	973	972	972	1120	895	881	1840
Laboratory pH	pH				8.4	8.4	8.5	8.5	8.5	8.5	8.4	8.4	8.4
Nitrate/nitrite	mg/L				1.3	1.1	1.6	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Total Dissolved Solids	mg/L				640	620	620	610	610	730	520	500	1320
Calcium	mg/L				19	13	20	12	12	6	24	24	120
Magnesium	mg/L				9	7	11	6	6	3	12	12	67
Potassium	mg/L				18	15	20	5	5	4	8	7	7
Sodium	mg/L				163	207	205	234	234	277	171	159	206
Bicarbonate	mg/L				481	514	492	500	500	536	443	448	624
Carbonate	mg/L				7	10	13	18	18	31	11	7	5
Chloride	mg/L				3	2	3	4	4	2	6	6	48
Sulfate	mg/L				96	91	96	85	85	112	62	60	245
Aluminum, dissolved	mg/L				0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Arsenic, dissolved	mg/L				-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Barium, dissolved	mg/L				-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved	mg/L				-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Cadmium, dissolved	mg/L				-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Chromium, dissolved	mg/L				-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L				-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Iron, dissolved	mg/L				0.1	-0.05	-0.05	-0.05	-0.05	0.07	0.8	0.6	-0.05
Iron, total	mg/L				5.81	16.5	0.13	0.22	0.22	0.11	1.32	1.57	-0.05
Lead, dissolved	mg/L				-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese, total	mg/L				0.17	0.51	-0.02	-0.02	-0.02	-0.02	0.38	0.04	0.07
Mercury	mg/L				-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Molybdenum, dissolved	mg/L				-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, dissolved	mg/L				-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mg/L				0.127	0.103	0.165	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Silver, dissolved	mg/L				-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
Uranium, dissolved	mg/L				0.388	0.271	0.375	0.003	0.003	-0.001	0.004	0.212	0.21
Vanadium, dissolved	mg/L				0.044	0.022	-0.02	-0.02	-0.02	-0.02	-0.003	-0.003	-0.003
Zinc, dissolved	mg/L				-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Lead 210, dissolved	pCi/L				1.76	1.74	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, suspended	pCi/L				1.28	1.8	-1	-1	-1	-1	-1	-1	-1
Plutonium 210, dissolved	pCi/L				-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-226, dissolved	pCi/L				0.21	0.3	0.3	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-228, suspended	pCi/L				0.91	0.7	-1	-1	-1	-1	-1	-1	-1
Ra-228, dissolved	pCi/L				-1	-1	-1	-1	-1	-1	-1	-1	-1
Th-230, dissolved	pCi/L				-0.58	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, suspended	pCi/L				0.49	0.209	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Gross Alpha	pCi/L				239	178	224	2.7	2.7	2.8	3.3	3.9	87.3
Gross Beta	pCi/L				123.2	128	67.9	4.1	4.1	4.1	5.3	4.7	37.3

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detection (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported

Water-Quality Data

Sample Results																					
Parameter**	Sample Type*	Sample Station Name																			
		P50113W		P50113W		P50113W		P50113W		P50883W		P50883W		P50883W		P50883W		P50883W		P50883W	
		10/6/10	3/1/11	5/17/11	8/17/11	12/6/11	8/24/10	10/7/10	6/28/11	8/16/11	8/31/09	10/6/10	3/1/11	5/17/11	8/17/11	12/6/11	8/24/10	10/7/10	6/28/11	8/16/11	8/31/09
Units																					
Alkalinity (as CaCO3)		534	535	534	527	524	256	340	348	342	557										
Ammonia	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Fluoride	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Laboratory conductivity	µmhos/cm	1640	1390	1260	1380	1360	588	688	775	753	1170										
Laboratory pH	s.u.	8	8.3	7.9	8.1	8.1	7.8	8.1	8.2	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
Nitrate/Nitrite	mg/L	28	12.2	19.1	11.1	11.1	30.5	0.1	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Total Dissolved Solids	mg/L	1130	1050	1070	600	600	1220	370	430	410	720										
Calcium	mg/L	64	94	60	33	33	118	33	44	46	45										
Magnesium	mg/L	54	51	50	45	45	64	16	20	21	19										
Potassium	mg/L	7	7	7	5	5	8	7	6	6	3										
Sodium	mg/L	202	201	193	139	139	209	81	95	95	293										
Bicarbonate	mg/L	652	653	642	642	642	639	381	414	408	411	591									
Carbonate	mg/L	-5	-5	-5	-5	-5	-5	-5	-5	-5	-5	32									
Chloride	mg/L	41	35	39	28	28	70	3	3	4	4	-1									
Sulfate	mg/L	231	219	193	111	111	203	36	44	45	44	83									
Aluminum, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Arsenic, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	0.007									
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Calcium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Iron, dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Iron, total	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	0.07									
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	0.17									
Manganese, total	mg/L	0.42	0.6	0.37	0.39	0.39	0.5	0.05	0.02	0.02	0.02	0.23									
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	0.09									
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mg/L	0.03	0.024	0.022	0.023	0.023	0.022	-0.003	-0.003	-0.003	-0.003	0.09									
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
Uranium, dissolved	mg/L	0.189	0.191	0.207	0.174	0.174	0.181	0.026	0.026	0.026	0.026	0.026									
Uranium, suspended	mg/L	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.001	-0.001	-0.001	-0.001	0.0003									
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.04									
Lead 210, dissolved	pCi/L	-	-	-	2.2	2.2	-	-	-	-	-	3.5									
Lead 210, suspended	pCi/L	-	-	-	1.4	1.4	-	-	-	-	-	3.4									
Polonium 210, dissolved	pCi/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polonium 210, suspended	pCi/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ra-226, dissolved	pCi/L	0.2	0.2	0.3	0.3	0.3	0.5	7.7	7.7	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-226, suspended	pCi/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ra-228, dissolved	pCi/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Th-230, dissolved	pCi/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Th-230, suspended	pCi/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross Alpha	pCi/L	100	117	101	69.7	73.3	15.4	16.9	16.9	14.8	14.8	14.8									
Gross Beta	pCi/L	33.1	51.9	40.7	27.1	33.1	10.1	8.4	8.4	12.3	12.3	12.3									

Notes:

*Water Type

GW-Ground water

SW-Surface water

**Negative number indicates value of less than detectable (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data													
Sample Results													
Parameter**	Sample Type*	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock	GW Stock
Sample Station Name	Sample Date	P61007W	P61007W	P61007W	P61007W	P71108W	P71108W	P71108W	P71108W	P71108W	P71108W	P71108W	P71108W
Units		2/16/11	6/7/11	12/7/11	8/27/09	11/18/09	6/23/10	8/11/10	3/1/11	5/17/11	12/8/11		
Alkalinity (as CaCO3)	mg/L	535	531	521	560	572	541	549	548	590	568		
Ammonia	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
Fluoride	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
Laboratory conductivity	µmhos/cm	1050	985	1110	2190	1930	1670	1680	1490	1600	1600		
Laboratory pH	pH	8.6	8.5	8.5	8.5	7.9	8.1	8.1	8.3	8.1	7.9		
Nitrate/Nitrite	mg/L	0.3	0.1	0.3	0.6	0.6	0.2	0.2	0.1	0.2	0.3		
Total Dissolved Solids	mg/L	730	720	720	1810	1460	1200	1180	1170	1460	1360		
Calcium	mg/L	3	3	3	76	75	70	68	64	62	63		
Magnesium	mg/L	1	1	2	98	79	71	68	56	67	63		
Potassium	mg/L	3	3	5	9	9	9	9	9	9	10		
Sodium	mg/L	293	295	280	381	328	230	242	202	329	348		
Bicarbonate	mg/L	617	619	603	707	698	650	670	670	720	718		
Carbonate	mg/L	18	15	16	5	5	5	5	5	5	5		
Chloride	mg/L	1	1	2	7	7	5	4	5	8	8		
Sulfate	mg/L	83	81	66	678	601	387	377	321	516	498		
Aluminum dissolved	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
Arsenic dissolved	mg/L	0.009	0.008	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003		
Barium dissolved	mg/L	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
Boron dissolved	mg/L	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
Cadmium dissolved	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002		
Chromium dissolved	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
Copper dissolved	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
Iron dissolved	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		
Iron, total	mg/L	0.08	0.3	1.5	0.07	0.07	0.05	0.05	0.05	0.05	0.05		
Lead dissolved	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
Manganese, total	mg/L	0.02	0.02	0.02	0.25	0.25	0.18	0.21	0.22	0.31	0.26		
Mercury	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001		
Molybdenum dissolved	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
Nickel dissolved	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		
Selenium dissolved	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005		
Silver dissolved	mg/L	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003		
Uranium dissolved	mg/L	0.0021	0.0041	0.0051	0.113	0.094	0.064	0.065	0.0639	0.067	0.0674		
Vanadium dissolved	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
Zinc dissolved	mg/L	0.03	0.01	0.01	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
Lead 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Potassium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Ra-226, dissolved	pCi/L	-0.2	1.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2		
Ra-226, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Ra-228, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Th-230, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Th-230, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Gross Alpha	pCi/L	2.8	5.2	3.9	57.7	49.2	40	37	37.6	50.2	54.4		
Gross Beta	pCi/L	-1	-1	-1	18.6	22.3	14.8	21.7	16.3	20.9	22.7		

Notes:

*Water Type
 GW=Ground water
 SW=Surface water

**Negative number indicates value of less than detect (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data													
Parameter**	Sample Type*	Sample Results											
		Sample Station Name		GW		Stock		GW		Stock		GW	
		P8466SW		P8466SW		P8466SW		P8466SW		P8466SW		P8466SW	
		8/11/10		10/6/10		3/1/11		5/17/11		8/17/11		12/6/11	
Units													
Alkalinity (as CaCO3)		402	412	412	420	471	464	455	531	533	531	531	
Ammonia		mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Fluoride		mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Laboratory conductivity		µmhos/cm	936	952	891	875	1120	1020	1179	1130	1179	1140	
Laboratory pH		s.u.	8	8	8.3	8	8	7.9	8.7	8.6	8.7	8.7	
Nitrate/Nitrite		mg/L	0.8	2	2.4	1.4	1.1	0.8	2.1	0.1	0.1	0.1	
Total Dissolved Solids		mg/L	590	630	620	700	660	650	660	740	740	750	
Calcium		mg/L	74	81	79	95	88	88	88	1	2	2	
Magnesium		mg/L	38	38	37	40	38	43	42	-1	-1	-1	
Potassium		mg/L	5	5	6	6	5	6	8	2	3	3	
Sodium		mg/L	78	83	75	81	83	87	68	268	272	272	
Bicarbonate		mg/L	495	503	502	512	575	566	555	600	600	595	
Carbonate		mg/L	-5	-5	-5	-5	-5	-5	-5	20	24	23	
Chloride		mg/L	8	8	8	10	11	13	13	1	1	1	
Sulfate		mg/L	98	107	107	108	109	108	119	96	102	95	
Aluminum, dissolved		mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Arsenic, dissolved		mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	0.007	0.007	0.007	
Barium, dissolved		mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Boron, dissolved		mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.1	0.1	0.1	
Cadmium, dissolved		mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	
Chromium, dissolved		mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Copper, dissolved		mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Iron, dissolved		mg/L	0.07	0.06	0.05	0.05	0.06	0.06	0.12	0.05	0.05	0.05	
Iron, total		mg/L	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	
Lead, dissolved		mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Manganese, total		mg/L	0.05	0.02	0.02	0.02	0.02	0.13	0.03	0.03	0.03	0.03	
Mercury		mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Molybdenum, dissolved		mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Nickel, dissolved		mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Selenium, dissolved		mg/L	0.009	0.007	0.005	0.01	0.005	0.005	0.005	-0.005	-0.005	-0.005	
Silver, dissolved		mg/L	-0.003	-0.003	-0.003	-0.003	0.004	-0.003	-0.003	-0.003	-0.003	-0.003	
Uranium, dissolved		mg/L	0.056	0.056	0.056	0.0612	0.0688	0.0617	0.0576	0.061	0.061	0.061	
Uranium, suspended		mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Vanadium, dissolved		mg/L	0.08	0.08	0.08	0.05	0.03	0.78	0.06	-0.01	-0.01	-0.01	
Zinc, dissolved		mg/L	-1	-1	-1	-1	-1	4	0.06	-0.01	-0.01	-0.01	
Lead 210, dissolved		pCi/L	-1	-1	-1	-1	-1	1.4	1.7	1.04	1.04	1.04	
Potassium 210, dissolved		pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potassium 210, suspended		pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-226, dissolved		pCi/L	0.33	0.3	0.4	0.5	0.3	0.7	0.5	0.2	0.2	0.2	
Ra-226, suspended		pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Ra-228, dissolved		pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Th-230, dissolved		pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Th-230, suspended		pCi/L	37.3	28.7	30.8	32.5	41.1	29.5	27.8	2.5	2.5	2.5	
Gross Alpha		pCi/L	15.2	16	16.4	11	17.6	23	14.5	1.8	1.8	1.8	

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detection (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data														
Sample Results														
Parameter**	Sample Type*		GW		GW		GW		GW		GW		GW	
	Sample Station Name		SBWELL01		SBWELL01		SBWELL01		SBWELL01		SBWELL01		SBWELL02	
	Sample Date		8/11/10		10/8/10		3/11/11		5/17/11		8/17/11		12/8/11	
Units														
Alkalinity (as CaCO3)	mg/L	532	535	537	538	524	527	387	387	468	481	481	481	
Ammonia	mg/L	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Fluoride	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Laboratory conductivity	umhos/cm	1140	1140	1120	1010	1240	1170	768	739	739	1010	658	658	
Laboratory pH	pH	8.7	8.7	8.6	8.7	8.8	8.6	8.1	8.2	8.3	8.3	8.3	8.3	
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Total Dissolved Solids	mg/L	770	750	770	740	720	790	480	480	650	650	650	650	
Calcium	mg/L	2	2	2	2	2	2	35	35	19	20	20	20	
Magnesium	mg/L	-1	-1	-1	-1	-1	-1	23	23	11	11	11	11	
Potassium	mg/L	3	3	3	3	3	3	15	16	12	12	12	12	
Sodium	mg/L	274	288	307	307	281	278	106	98	205	218	218	218	
Bicarbonate	mg/L	602	592	579	595	581	597	476	472	595	595	595	595	
Carbonate	mg/L	23	30	38	29	29	21	-5	-5	-6	-6	-6	-6	
Chloride	mg/L	96	94	92	93	94	98	40	37	78	83	83	83	
Sulfate	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Aluminum, dissolved	mg/L	0.006	0.007	0.006	0.007	0.006	0.007	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	
Arsenic, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	
Barium, dissolved	mg/L	0.1	-0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Boron, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	
Cadmium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Iron, dissolved	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Iron, total	mg/L	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	
Uranium, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	
Lead 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Lead 210, suspended	pCi/L	1.5	1.5	1.5	1.5	1.5	1.5	1.1	1.1	1.1	1.1	1.1	1.1	
Potassium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Potassium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-226, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Ra-226, suspended	pCi/L	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	
Ra-228, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
Ra-228, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	
Gross Alpha	pCi/L	3.4	2.8	2.8	2.8	2.8	2.8	4.1	3.65	2.7	2.7	2.7	2.7	
Gross Beta	pCi/L	-3	3.2	3.2	3.2	3.2	3.2	12.3	9.53	7.6	7.6	7.6	7.6	

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detectable (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data																						
Parameter**	Sample Results																					
	Sample Type**		GW			GW			GW			SW										
	Stock		Stock		Stock		Stock		Stock		Monitoring		Monitoring		Monitoring		Monitoring					
	SBWELL02	SBWELL02	SBWELL02	SBWELL02	7/28/10	TWVWELL03	TWVWELL03	5/5/11	TWVWELL03	TWVWELL03	3/9/10	4/13/10	3/18/11	4/6/11								
Sample Station Name	Sample Date	Units																				
Alkalinity (as CaCO3)	8/17/11	mg/L	488	380	633	598	581	588	581	331	497	591	421									
Ammonia		mg/L	0.1	-0.1	-0.1	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0.2	0.3	0.1								
Fluoride		mg/L	0.1	-0.1	1.3	1.5	1.5	1.2	1.5	0.2	0.2	0.3	0.1									
Laboratory conductivity		umhos/cm	1070	728	1440	1490	1620	1350	1620	735	1110	1360	871									
Laboratory pH		pH	8.3	8	8.8	8.7	8.6	8.8	8.6	8.2	8.7	8.3	8.5									
Nitrate-Nitrite		mg/L	-0.1	0.8	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.1	-0.1									
Total Dissolved Solids		mg/L	810	460	1000	970	970	990	970	589	760	980	641									
Calcium		mg/L	21	38	2	3	3	3	3	17	37	28	24									
Magnesium		mg/L	11	25	1	2	1	1	1	12	24	22	22									
Potassium		mg/L	12	16	7	4	4	4	4	11	11	13	17									
Sodium		mg/L	198	101	374	380	386	379	386	154	204	308	152									
Bicarbonate		mg/L	858	684	657	657	635	642	635	404	542	721	483									
Carbonate		mg/L	-5	-5	35	35	37	37	37	-5	-5	-5	-5									
Chloride		mg/L	1	2	2	2	2	2	2	7	8	10	12									
Sulfate		mg/L	79	39	201	195	207	207	198	98	147	178	102									
Aluminum, dissolved		mg/L	-0.1	-0.1	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005								
Arsenic, dissolved		mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005								
Barium, dissolved		mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5								
Boron, dissolved		mg/L	0.2	0.1	0.6	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1								
Cadmium, dissolved		mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002								
Chromium, dissolved		mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01								
Copper, dissolved		mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01								
Iron, dissolved		mg/L	0.11	0.35	0.05	-0.05	-0.05	-0.05	-0.05	0.33	0.38	0.32	-0.02	-0.02								
Iron, total		mg/L	0.18	0.55	-0.05	-0.05	-0.05	-0.05	-0.05	0.95	0.37	0.88	0.24	0.24								
Lead, dissolved		mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02								
Manganese, total		mg/L	0.05	0.06	-0.02	-0.02	-0.02	-0.02	-0.02	0.17	0.35	0.27	0.04	0.04								
Mercury		mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001								
Molybdenum, dissolved		mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02								
Nickel, dissolved		mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01								
Selenium, dissolved		mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005								
Silver, dissolved		mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003								
Uranium, dissolved		mg/L	0.0004	0.005	-0.001	-0.001	-0.001	-0.003	-0.003	0.008	0.011	0.014	0.0063	0.0063								
Uranium, suspended		mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003								
Vanadium, dissolved		mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02								
Zinc, dissolved		mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01								
Lead 210, dissolved		pCi/L	1.1	1.1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1								
Lead 210, suspended		pCi/L	2.1	2.1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1								
Polonium 210, dissolved		pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1								
Polonium 210, suspended		pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1								
Ra-226, dissolved		pCi/L	-0.2	0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2								
Ra-226, suspended		pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2								
Ra-228, dissolved		pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1								
Th-230, dissolved		pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2								
Th-230, suspended		pCi/L	-2	3.7	-3.1	6.7	-3	-2	-2	3.8	7.3	7	8.5	8.5								
Gross Alpha		pCi/L	10	13.3	-8.7	6.9	-4	-4	-4	8.6	9.7	8.1	12	12								

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data													
Parameter**	Sample Type*	Sample Results											
		Sample Station Name											
		Monitoring	SW	Monitoring	SW	Monitoring	SW	Monitoring	SW	Monitoring	SW	Monitoring	SW
		SW-1	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1
Sample Date	5/4/11	5/23/11	6/8/11	8/1/11	3/9/10	4/13/10	3/16/11	4/6/11	5/4/11	5/23/11			
Units													
Alkalinity (as CaCO3)	mg/L	471	316	462	559	118	900	133	332	558	235		
Ammonia	mg/L	0.3	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.2		
Fluoride	mg/L	0.2	0.2	0.2	0.3	-0.1	0.3	-0.1	0.1	0.2	0.1		
Labortory conductivity	umhos/cm	963	888	920	1300	263	1250	317	734	1060	654		
Labortory pH	pH	8.5	8.6	8.3	8.3	8.1	8.6	8.1	8.4	8.5	8.3		
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Total Dissolved Solids	mg/L	760	520	740	810	220	940	210	550	880	510		
Calcium	mg/L	28	25	30	32	14	58	19	44	57	61		
Magnesium	mg/L	24	19	24	28	8	29	7	16	28	23		
Potassium	mg/L	11	9	6	12	6	7	9	10	8	11		
Sodium	mg/L	222	132	192	250	37	216	42	120	225	72		
Bicarbonate	mg/L	550	371	552	674	144	655	162	393	633	261		
Carbonate	mg/L	12	9	5	5	3	38	5	6	24	5		
Chloride	mg/L	8	5	7	10	3	10	2	5	9	28		
Sulfate	mg/L	134	98	119	105	26	168	33	101	148	122		
Aluminum dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Arsenic dissolved	mg/L	-0.005	-0.005	0.006	0.01	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005		
Barium dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		
Boron dissolved	mg/L	0.1	-0.1	0.1	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Cadmium dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002		
Chromium dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Copper dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Iron dissolved	mg/L	0.1	0.08	0.18	0.2	0.26	0.14	0.12	0.12	0.09	0.08		
Iron total	mg/L	0.32	0.4	0.42	0.78	0.64	0.32	0.45	0.2	0.14	0.28		
Lead dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Manganese total	mg/L	0.12	0.06	0.42	0.84	0.11	0.05	0.08	0.03	-0.02	0.04		
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001		
Molybdenum dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Nickel dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Selenium dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005		
Silver dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003		
Uranium dissolved	mg/L	0.0102	0.0093	0.0098	0.0044	0.003	0.02	0.0028	0.0131	0.013	0.012		
Uranium suspended	mg/L	-0.001	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003		
Vanadium dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Zinc dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Lead 210 dissolved	pCi/L	1.3	1.2	1.2	1.9	-1	-1	-1	-1	-1	-1		
Lead 210 suspended	pCi/L	1.2	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Plutonium 210 dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Plutonium 210 suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Ra-226 dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Ra-226 suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-1	1.3	-1	-1	-1	-1		
Ra-228 dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
Ra-228 suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Th-230 dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2		
Th-230 suspended	pCi/L	10.5	5.9	5.1	3.3	4	7.9	2.5	8.6	5.7	8.6		
Gross Alpha	pCi/L	11.4	9.3	8.7	8.7	6	7.4	4.6	8.4	8.2	8.6		

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detection

(e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported

Sample Type*		Sample Results									
		Sample Station Name									
		Sample Date									
		Units									
Parameter**	SW Monitoring	SW Monitoring	SW Monitoring	SW Monitoring	SW Monitoring	SW Monitoring	SW Monitoring	SW Monitoring	SW Monitoring	SW Monitoring	SW Reservoir
Parameter**	SW-2	SW-2	SW-3	SW-3	SW-3	SW-3	SW-3	SW-3	SW-3	SW-3	CSRES02 (R-5)
Parameter**	6/8/11	8/11/11	3/9/10	4/13/10	3/15/11	4/8/11	5/4/11	5/23/11	6/8/11	8/6/09	
Alkalinity (as CaCO ₃)	mg/L	659	601	337	586	250	442	648	522	589	72
Ammonia	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.2	-0.1	-0.1	-0.1
Fluoride	mg/L	0.3	0.4	0.1	0.3	0.1	0.2	0.2	0.2	0.3	-0.1
Laboratory conductivity	µmhos/cm	1130	1930	794	1120	611	971	1140	993	1010	166
Laboratory pH	s.u.	8.5	8.5	8.3	8.8	8.4	8.7	8.4	8.7	8.4	7.9
Nitrate/Nitrite	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Total Dissolved Solids	mg/L	979	1210	580	803	420	740	950	790	820	903
Calcium	mg/L	62	30	24	32	20	35	46	32	45	20
Magnesium	mg/L	32	16	25	35	18	35	44	41	42	4
Potassium	mg/L	8	9	10	11	7	13	9	10	9	14
Sodium	mg/L	264	380	129	196	84	151	250	210	212	3
Bicarbonate	mg/L	754	929	435	619	294	498	755	675	699	88
Carbonate	mg/L	25	24	5	47	5	25	17	30	15	5
Chloride	mg/L	8	8	4	7	3	6	6	6	3	20
Sulfate	mg/L	116	205	92	102	82	149	149	192	89	-1
Aluminum, dissolved	mg/L	0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	0.3
Arsenic, dissolved	mg/L	0.066	-0.065	-0.065	-0.065	-0.065	-0.065	-0.065	-0.065	-0.065	0.028
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved	mg/L	0.1	0.2	-0.1	0.1	-0.1	0.1	0.2	0.1	0.1	-0.1
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Iron, dissolved	mg/L	0.11	0.07	0.34	0.07	0.18	0.11	0.28	0.1	0.48	8.32
Lead, dissolved	mg/L	0.18	0.34	0.87	0.98	0.4	0.31	0.93	0.6	0.91	15.1
Manganese, total	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Mercury	mg/L	0.03	0.05	0.17	0.21	0.1	0.66	0.65	0.12	0.71	1.05
Molybdenum, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Nickel, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium, dissolved	mg/L	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Silver, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
Uranium, dissolved	mg/L	0.00358	0.0036	0.009	0.014	0.01	0.0239	0.0176	0.0152	0.0096	-0.001
Uranium, suspended	mg/L	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, dissolved	pCi/L	-1	2	-1	-1	-1	3.3	1.7	-1	-1	-1
Lead 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	1.5	1.2	-1	-1
Polonium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Polonium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Ra-226, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-226, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-228, dissolved	pCi/L	1.7	-1	-1	-1	-1	-1	-1	-1	-1	-1
Th-230, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, suspended	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Gross Alpha	pCi/L	24	45	7.3	6	4.6	14.9	10.3	12.7	15	2.15
Gross Beta	pCi/L	4.7	9.2	11.2	9.8	6.2	8.9	6.3	6.3	12.4	16.9

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detection (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data									
Sample Results									
Parameter**	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir
Sample Type*	CSRES02 (R-5)	CSRES02 (R-5)	CSRES02 (R-5)	CSRES02 (R-5)	CSRES02 (R-5)	CSRES02 (R-5)	CSRES02 (R-3)	CSRES02 (R-3)	CSRES02 (R-3)
Sample Station Name	Reservoir	Reservoir	Reservoir	Reservoir	Reservoir	Reservoir	Reservoir	Reservoir	Reservoir
Sample Date	5/18/10	8/10/10	5/16/11	8/18/11	8/6/09	10/23/09	5/20/10	8/10/10	10/4/10
Alkalinity (as CaCO3)	mg/L	47	113	147	39	45	117	164	136
Ammonia	mg/L	-0.1	5.6	4	-0.1	-0.1	-0.1	0.6	0.1
Fluoride	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
laboratory conductivity	umhos/cm	108	240	327	78	100	298	441	444
laboratory pH	s.u.	7.7	8.1	7.5	7.5	8.4	10	8.6	8.7
Nitrate Nitrogen	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Total Dissolved Solids	mg/L	110	220	370	60	100	200	290	270
Calcium	mg/L	11	30	34	9	9	23	30	35
Magnesium	mg/L	2	5	7	2	8	14	14	12
Potassium	mg/L	9	17	23	6	10	9	8	14
Sodium	mg/L	-1	5	5	2	1	22	37	38
Bicarbonate	mg/L	58	138	179	47	54	56	190	149
Carbonate	mg/L	-5	-5	-5	-5	-5	43	5	9
Chloride	mg/L	3	6	9	1	1	3	5	3
Sulfate	mg/L	-1	3	1	-1	-1	32	48	81
Aluminum, dissolved	mg/L	0.2	1.4	0.2	0.4	-0.1	-0.1	-0.1	-0.1
Arsenic, dissolved	mg/L	-0.005	0.009	0.021	-0.005	0.006	0.007	-0.005	-0.005
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Boron, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper, undissolved	mg/L	0.2	0.92	0.2	0.28	0.06	0.05	-0.05	-0.05
Iron, total	mg/L	1.68	19.7	16.7	1.66	1.02	0.98	0.22	0.45
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese, total	mg/L	0.14	0.94	1.24	0.07	0.21	-0.02	0.07	0.08
Mercury	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Zinc, dissolved	mg/L	-0.005	0.006	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Cobalt, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Silver, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Uranium, dissolved	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Zinc, undissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210, dissolved	pCi/L	-1	-1	-1	-1	1.3	-1	-1	-1
Lead 210, suspended	pCi/L	3.26	-1	-1	1.8	-1	-1	-1	-1
Polonium 210, dissolved	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1
Polonium 210, suspended	pCi/L	-1	-1	-1	-1	-1	-1	-1	-1
Ra-226, dissolved	pCi/L	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-226, suspended	pCi/L	1.12	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-228, dissolved	pCi/L	1.22	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, dissolved	pCi/L	-0.28	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Th-230, suspended	pCi/L	3.85	7.4	-2	-2	-2	-2	-2	-2
Cross Alpha	pCi/L	10.3	20.3	28.7	5.4	8.2	8.9	12.1	8.6
Cross Beta	pCi/L	-	-	-	-	-	-	-	-

Notes:

Water Type

GW=Ground water

SW=Surface water
Negative number indicates value of less than detectic
(e.g., -0.01 is <0.01)

*** Blank cells indicate that no data were reported.

Water-Quality Data													
Parameter**	Sample Type*	Sample Results											
		Sample Station Name											
		SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir
		CSRES03 (R-3)	CSRES04 (R-4)	HBRES04 (R-2)	HBRES04 (R-2)	HBRES04 (R-2)	HBRES04 (R-2)	HBRES04 (R-2)	HBRES04 (R-2)	HBRES04 (R-2)	HBRES04 (R-2)	HBRES04 (R-2)	HBRES04 (R-2)
		8/18/11	8/6/09	8/4/09	10/22/09	19/10	4/14/10	7/21/10	10/5/10	3/1/11			
SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	SW Reservoir	
Sample Station Name	Sample Date	5/16/11	8/18/11	8/6/09	8/4/09	10/22/09	19/10	4/14/10	7/21/10	10/5/10	3/1/11		
Units													
Alkalinity (as CaCO3)		100	142	72	301	353	444	390	430	507	619		
Ammonia	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	0.3	-0.1	-0.1	-0.1	-0.1		
Fluoride	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	0.2	0.2	0.2	0.2	0.2		
Laboratory conductivity	umhos/cm	282	388	143	713	791	969	827	965	1090	1260		
Laboratory pH	s.u.	8.3	9.7	9.5	9.1	8.8	8.3	8.7	9.2	8.9	8.9		
Nitrate/Nitrite	mg/L	0.9	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Total Dissolved Solids	mg/L	220	280	109	460	520	683	580	640	730	820		
Calcium	mg/L	31	24	16	20	20	29	24	15	16	27		
Magnesium	mg/L	9	11	4	17	18	25	20	23	24	28		
Potassium	mg/L	6	12	7	10	12	14	11	12	14	15		
Sodium	mg/L	20	31	4	123	131	171	148	177	226	263		
Bicarbonate	mg/L	122	97	64	292	335	539	429	347	520	658		
Carbonate	mg/L	-5	37	11	37	23	-5	23	85	48	43		
Chloride	mg/L	2	4	-1	8	6	9	8	7	8	12		
Sulfate	mg/L	61	38	3	69	70	85	79	87	66	114		
Aluminum, dissolved	mg/L	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Arsenic, dissolved	mg/L	-0.005	0.01	0.09	0.01	0.06	-0.005	-0.005	0.008	0.007	0.007		
Barium, dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5		
Boron, dissolved	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		
Cadmium, dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002		
Chromium, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Copper, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Iron, dissolved	mg/L	0.07	-0.05	0.1	-0.05	-0.05	0.06	-0.05	-0.05	-0.05	-0.05		
Iron, total	mg/L	0.54	-0.05	0.46	0.12	0.14	0.1	0.25	0.07	0.13	0.4		
Lead, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Manganese, total	mg/L	-0.02	0.03	0.04	0.08	0.05	0.16	0.04	0.03	0.07	0.18		
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001		
Molybdenum, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Nickel, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Selenium, dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003		
Silver, dissolved	mg/L	0.001	0.0009	-0.0009	-0.0009	-0.0009	0.007	0.007	-0.007	-0.007	-0.007		
Uranium, dissolved	mg/L	-0.001	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003		
Vanadium, dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Zinc, dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01		
Lead 210, dissolved	pCi/L		1.6						-1				
Lead 210, suspended	pCi/L		-1						-1				
Potassium 210, dissolved	pCi/L		-1						-1				
Potassium 210, suspended	pCi/L		-1						-1				
Ra-226, dissolved	pCi/L	-0.2	-0.2	0.2	-0.2	-0.2	-0.2	0.2	-0.2	-0.2	-0.2		
Ra-226, suspended	pCi/L		-0.2						-0.2				
Ra-228, dissolved	pCi/L	-1	-1	-1	-1	1.1	-1	-1	-1	-1	-1		
Th-230, dissolved	pCi/L		-0.2						-0.2				
Th-230, suspended	pCi/L	-2	-2						-2				
Gross Alpha	pCi/L	7.9	8.3	6.9	8.1	22.9	5.5	3.1	7.34	9.5	9.5		
Gross Beta	pCi/L						12.7	11.3	11.3	13	10.8		

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detect (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported

Appendix C: Water-Quality Data

Water-Quality Data														
Parameter**	Sample Results													
	Sample Type*		SW		SW		SW		SW		SW		SW	
	Sample Station Name	Sample Date	Oshoto R. HBRES04 (R-2)	HBRES04 (R-2)	Oshoto R. HBRES04 (R-2)	SW	Reservoir	SW	Reservoir	SW	Reservoir	SW	Reservoir	SW
Units														
Alkalinity (as CaCO ₃)			423	374	1210	1700	573	1070	1220	564	856			
Ammonia			-0.1	-0.1	0.2	0.2	0.1	0.1	-0.1	-0.1	-0.1			
Fluoride			0.1	0.2	0.3	0.3	0.7	0.2	0.4	0.3	0.2			
Laboratory conductivity			869	964	1220	2910	1150	1900	2130	1130	1720			
Laboratory pH			8.8	9	9.2	9.9	8.8	9.3	9.4	8.8	9.5			
Nitrate/Nitrite			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1			
Total Dissolved Solids			630	960	970	1510	2320	940	1340	1560	1060			
Calcium			22	42	17	43	10	42	19	13	35			
Magnesium			22	22	46	43	46	56	36	43	41			
Potassium			11	10	31	27	10	57	18	10	22			
Sodium			160	168	212	739	236	363	494	238	370			
Bicarbonate			484	372	635	1130	965	608	1030	636	705			
Carbonate			16	42	71	169	548	45	167	226	44			
Chloride			7	9	12	21	8	19	8	6	11			
Sulfate			84	94	163	54	84	156	93	177	88			
Aluminum, dissolved			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1			
Arsenic, dissolved			0.005	0.008	0.006	0.016	0.002	0.005	0.043	0.015	0.005			
Barium, dissolved			-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5			
Boron, dissolved			-0.1	0.2	0.1	0.3	0.4	0.1	0.3	0.2	0.1			
Calcium, dissolved			-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002			
Chromium, dissolved			-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01			
Copper, dissolved			-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01			
Iron, dissolved			-0.05	-0.05	0.08	0.13	0.06	-0.05	0.14	0.08	0.14			
Iron, total			0.47	0.07	1.14	6.26	1.96	0.28	1.43	1.3	0.88			
Lead, dissolved			-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02			
Manganese, total			0.08	0.07	0.11	0.34	0.12	0.03	0.16	0.09	0.09			
Mercury			-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001			
Molybdenum, dissolved			-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02			
Nickel, dissolved			-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01			
Selenium, dissolved			-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005			
Silver, dissolved			-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003			
Uranium, dissolved			0.0067	0.0072	0.019	0.021	0.087	0.0478	0.0183	0.027	0.045			
Vanadium, dissolved			-0.0003	-0.0003	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001			
Zinc, dissolved			-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02			
Lead 210, dissolved			1.8	1.7	1.46	-1	-1	-1	-1	-1	-1			
Lead 210, suspended			-1	-1	1.53	-1	-1	-1	-1	-1	-1			
Potassium 210, dissolved			-1	-1	-1	-1	-1	-1	-1	-1	-1			
Potassium 210, suspended			-1	-1	-1	-1	-1	-1	-1	-1	-1			
Ra-226, dissolved			-0.2	-0.2	0.31	-0.2	-0.2	-0.2	0.3	-0.2	-0.2			
Ra-226, suspended			-0.2	-0.2	-0.2	0.3	-1	-1	-1	-1	-1			
Ra-226, dissolved			-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2			
Th-230, dissolved			-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2			
Th-230, suspended			-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2			
Gross Alpha			7.5	5.4	13.6	27.3	4.68	48.7	10.8	11.7	10.2			
Gross Beta			4.9	7.1	12.9	44.4	48.5	11.5	49.4	20	10.8			

Notes:

*Water Type
GW=Ground water
SW=Surface water

**Negative number indicates value of less than detection
(e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Water-Quality Data													
Sample Results													
Sample Type*	SW Reservoir	P17592S (R-6)	SW Reservoir	P17592S (R-6)	SW Reservoir	TSRES01 (R-7)	SW Reservoir	TSRES01 (R-7)	SW Reservoir	TSRES01 (R-1)	SW Reservoir	TSRES01 (R-1)	SW Reservoir
Sample Station Name	P17592S (R-6)	P17592S (R-6)	P17592S (R-6)	P17592S (R-6)	P17592S (R-6)	TSRES01 (R-7)	P17592S (R-6)	TSRES01 (R-7)	P17592S (R-6)	TSRES01 (R-1)	P17592S (R-6)	TSRES01 (R-1)	P17592S (R-6)
Sample Date	10/5/10	5/5/11	8/17/11	10/22/09	9/1/09	10/22/09	6/23/10	7/22/10	10/5/10	5/5/11	10/5/10	5/5/11	10/5/10
Parameter**	Units												
Alkalinity (as CaCO ₃)	mg/L	1090	553	555	1090	64	95	55	59	116	42	42	116
Ammonia	mg/L	0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Ammonia	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Chloride	mg/L	2270	1360	1252	2003	146	213	129	133	231	82	82	231
Laboreatory conductivity	µS/cm	9	8.9	8.9	9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
Laboreatory pH	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Nitrate/Nitrite	mg/L	17.0	860	860	1360	110	120	100	100	170	80	80	170
Total Dissolved Solids	mg/L	18	55	55	12	41	13	19	11	21	8	8	21
Calcium	mg/L	33	28	28	69	3	3	3	3	3	3	3	3
Magnesium	mg/L	18	9	9	24	10	12	9	10	14	5	5	14
Potassium	mg/L	515	250	245	440	71	9	7	8	15	4	4	15
Sodium	mg/L	1090	628	458	1150	71	116	49	68	137	53	53	137
Bicarbonate	mg/L	123	23	109	89	-5	-5	9	-5	-5	-5	-5	-5
Carbonate	mg/L	20	10	10	10	1	4	-1	-1	-1	-1	-1	-1
Chloride	mg/L	224	160	90	136	4	8	5	5	4	5	4	5
Sulfate	mg/L	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Aluminum dissolved	mg/L	0.013	4.065	0.011	0.005	0.06	-0.005	-0.005	0.06	-0.005	-0.005	-0.005	-0.005
Arsenic dissolved	mg/L	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Barium dissolved	mg/L	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Boron dissolved	mg/L	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
Cadmium dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Chromium dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Copper dissolved	mg/L	0.18	0.37	-0.06	0.07	0.34	0.18	0.2	0.35	-0.05	0.03	0.03	0.35
Iron dissolved	mg/L	0.77	0.21	0.18	1.85	0.78	2.62	0.43	0.64	1.33	0.13	0.13	1.33
Lead dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Manganese total	mg/L	0.08	-0.02	0.14	0.25	0.03	0.12	0.02	0.03	0.07	0.02	0.02	0.07
Mercury	mg/L	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Molybdenum dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Nickel dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Selenium dissolved	mg/L	-0.005	-0.005	-0.005	0.005	0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005
Silver dissolved	mg/L	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003	-0.003
Uranium dissolved	mg/L	0.02	0.0161	0.0223	0.028	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
Vanadium dissolved	mg/L	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Zinc dissolved	mg/L	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Lead 210 dissolved	pCi/L												
Lead 210 suspended	pCi/L												
Potassium 210 dissolved	pCi/L												
Potassium 210 suspended	pCi/L												
Ra-226 dissolved	pCi/L	-0.2	-0.2	-0.2	0.29	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Ra-226 suspended	pCi/L	-1	-1	-1	-1	1.25	1.34	-1	-1	-1	-1	-1	-1
Ra-228 dissolved	pCi/L												
Th-230 dissolved	pCi/L												
Th-230 suspended	pCi/L												
Gross Alpha	pCi/L	15.3	7	3.2	23	-2	2.25	-2	3.55	2.5	-2	-2	3.55
Gross Beta	pCi/L	20	8.8	5.2	31.4	8.7	13.1	8.3	9.26	14.3	5.2	5.2	9.26

Notes:

*Water Type

GW=Ground water

SW=Surface water

**Negative number indicates value of less than detection (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

Appendix C: Water-Quality Data

Water-Quality Data									
Parameter**	Sample Type*	Sample Results							
		SW		Reservoir		SW		Reservoir	
		Reservoir TWRES01 (R-1)	Sample Date	Reservoir TWRES01 (R-1)	Sample Date	Reservoir TWRES01 (R-1)	Sample Date	Reservoir TWRES01 (R-1)	Sample Date
Alkalinity (as CaCO ₃)	mg/L	69	8/11/11	183	7/22/10	197	10/5/10	235	8/11/11
Ammonia	mg/L	-0.1		-0.1		-0.1		-0.1	
Fluoride	mg/L	-0.1		0.1		-0.1		0.2	
Labratory conductivity	umhos/cm	155		397		273		477	
Labratory pH	u	8		8.6		8.8		8.5	
Nitrate/Nitrite	mg/L	-0.1		-0.1		-0.1		-0.1	
Total Dissolved Solids	mg/L	93		250		210		360	
Calcium	mg/L	14		38		14		37	
Magnesium	mg/L	4		18		10		15	
Potassium	mg/L	7		5		5		4	
Sodium	mg/L	7		24		26		60	
Bicarbonate	mg/L	73		208		51		272	
Carbonate	mg/L	5		7		38		8	
Chloride	mg/L	-1		2		2		3	
Sulfate	mg/L	4		28		27		54	
Aluminum, dissolved	mg/L	-0.1		-0.1		-0.1		-0.1	
Arsenic, dissolved	mg/L	-0.005		-0.005		0.007		-0.005	
Barium, dissolved	mg/L	-0.5		-0.5		-0.5		-0.5	
Boron, dissolved	mg/L	0.2		0.1		-0.1		0.6	
Cadmium, dissolved	mg/L	-0.002		-0.002		-0.002		-0.002	
Chromium, dissolved	mg/L	-0.01		-0.01		-0.01		-0.01	
Copper, dissolved	mg/L	-0.01		-0.01		-0.01		-0.01	
Iron, dissolved	mg/L	0.9		0.05		-0.05		0.8	
Iron, total	mg/L	0.61		0.37		0.06		1.29	
Lead, dissolved	mg/L	-0.02		-0.02		-0.02		-0.02	
Manganese, total	mg/L	0.04		0.03		0.03		-0.02	
Mercury	mg/L	-0.001		-0.001		-0.001		-0.001	
Molybdenum, dissolved	mg/L	-0.02		-0.02		-0.02		-0.02	
Nickel, dissolved	mg/L	-0.01		0.01		-0.01		-0.01	
Selenium, dissolved	mg/L	-0.005		-0.005		-0.005		-0.005	
Silver, dissolved	mg/L	-0.003		-0.003		-0.003		-0.003	
Uranium, dissolved	mg/L	-0.0003		0.008		0.003		0.003	
Vanadium, dissolved	mg/L	-0.001		-0.001		-0.001		-0.001	
Zinc, dissolved	mg/L	-0.02		-0.02		-0.02		-0.02	
Lead 210, dissolved	pCi/L	-0.01		-0.01		-0.01		-0.01	
Lead 210, suspended	pCi/L	-1		-1		-1		-1	
Potassium 210, dissolved	pCi/L	-1		-1		-1		-1	
Potassium 210, suspended	pCi/L	-1		-1		-1		-1	
Ra-226, dissolved	pCi/L	-0.2		-0.2		-0.2		-0.2	
Ra-226, suspended	pCi/L	-0.2		-0.2		-0.2		-0.2	
Ra-228, dissolved	pCi/L	-1		-1		-1		-1	
Ra-228, suspended	pCi/L	-1		-1		-1		-1	
Th-230, dissolved	pCi/L	-0.2		-0.2		-0.2		-0.2	
Th-230, suspended	pCi/L	-0.2		-0.2		-0.2		-0.2	
Gross Alpha	pCi/L	-2		5.6		3.61		3.3	
Gross Beta	pCi/L	6		115		5.99		5.2	

Notes:

*Water Type
GW=Ground water
SW=Surface water

**Negative number indicates value of less than detect (e.g., -0.01 is <0.01)

***Blank cells indicate that no data were reported.

APPENDIX D
VISUAL-IMPACTS ANALYSIS

APPENDIX D: VISUAL IMPACTS ANALYSIS

Scenic Quality Inventory Point B-1

Photograph from Scenic Quality Inventory Point C-1 to North



Table D.1 Scenic Quality Inventory and Evaluation		
Key Factor	Rating Criteria	Score
Landform	Low rolling hills, foothills, or flat valley bottoms or few or no interesting landscape features.	1
Vegetation	Some variety of vegetation, but only one or two major types.	3
Water	Present/Little Missouri River and the Oshoto Reservoir are occasionally visible.	1
Color	Some intensity or variety in colors and contrast of the soil, rock, and vegetation, but not a dominant scenic element.	3
Influence of Adjacent Scenery	Adjacent scenery has little or no influence on overall visual quality.	0
Scarcity	Interesting within its setting, but fairly common within the region.	1
Cultural Modifications	Modifications add variety, but are very discordant and promote strong disharmony.	-2
TOTAL SCORE =		7

Scenic Quality Inventory Point B-2

Photograph from Scenic Quality Inventory Point B-2 to East



Table D.2 Scenic Quality Inventory and Evaluation		
Key Factor	Rating Criteria	Score
Landform	High vertical relief as expressed in prominent cliffs, spires, or massive rock outcrops; or severe surface variation or highly eroded formations including major badlands or dune systems; or detail features dominant and exceptionally striking and intriguing such as glaciers.	5
Vegetation	A variety of vegetative types as expressed in interesting forms, textures, and patterns.	5
Water	Present, but not noticeable.	0
Color	Some intensity or variety in colors and contrast of the soil, rock, and vegetation, but not a dominant scenic element.	3
Influence of Adjacent Scenery	Adjacent scenery greatly enhances visual quality (Devils Tower).	5
Scarcity	One of a kind, or unusually memorable, or very rare within region. Consistent chance for exceptional wildlife or wildflower viewing.	5
Cultural Modifications	Modifications add little or no visual variety to the area, and introduce no discordant elements.	0
TOTAL SCORE =		23

Scenic Quality Inventory Point B-3

Photograph from Scenic Quality Inventory Point B-3 to South



Table D.3 Scenic Quality Inventory and Evaluation		
Key Factor	Rating Criteria	Score
Landform	Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features.	1
Vegetation	Little or no variety or contrast in vegetation.	1
Water	Present, but not noticeable.	0
Color	Subtle color variations, contrast, or interest; generally mute tones.	1
Influence of Adjacent Scenery	Adjacent scenery has little or no influence on overall visual quality.	0
Scarcity	Interesting within its setting, but fairly common within the region.	1
Cultural Modifications	Modifications add little or no visual variety to the area and introduce no discordant elements.	0
TOTAL SCORE =		4

Appendix D: Visual Impacts Analysis

Scenic Quality Inventory Point B-4

Photograph from Scenic Quality Inventory Point B-4 to South



Table D.4 Scenic Quality Inventory and Evaluation		
Key Factor	Rating Criteria	Score
Landform	Low rolling hills, foothills, or flat valley bottoms; or few or no interesting landscape features.	1
Vegetation	Some variety of vegetation, but only one or two major types.	3
Water	Present, but not noticeable.	1
Color	Some intensity or variety in colors and contrast of the soil, rock and vegetation, but not a dominant scenic element.	3
Influence of Adjacent Scenery	Adjacent scenery has little or no influence on overall visual quality.	0
Scarcity	Interesting within its setting, but fairly common within the region.	1
Cultural Modifications	Modifications add variety but are discordant and promote disharmony.	-1
TOTAL SCORE =		8

Table D.5 Scenic Quality Inventory and Evaluation Average of Four Views	
Key Factor	Score
Landform	2.00
Vegetation	3.00
Water	0.50
Color	2.50
Influence of Adjacent Scenery	1.25
Scarcity	2.00
Cultural Modifications	-0.75
AVERAGE =	10.50

**APPENDIX E
DRAFT ROSS PROJECT
PROGRAMMATIC AGREEMENT**

FINAL DRAFT FOR COMMENT

PROGRAMMATIC AGREEMENT

AMONG

THE U.S. NUCLEAR REGULATORY COMMISSION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
THE WYOMING STATE HISTORIC PRESERVATION OFFICE,
THE BUREAU OF LAND MANAGEMENT–NEW CASTLE FIELD OFFICE,
AND

STRATA ENERGY, INC.,

REGARDING

THE ROSS IN SITU URANIUM RECOVERY PROJECT
IN CROOK COUNTY, WYOMING

WHEREAS, this Programmatic Agreement (PA or “Agreement”) addresses the federal undertaking (Undertaking) regarding the issuance of a license for the Ross In Situ Uranium Recovery (ISR) Project (Ross Project) pursuant to the U.S. Nuclear Regulatory Commission's (NRC) authority under the Atomic Energy Act of 1954 (AEA), 42 U.S.C. §§ 2011 *et. seq.* for purposes of NRC's compliance with Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. §§ 470 *et. seq.*; and

WHEREAS, on January 4, 2011, Strata Energy, Inc. (Strata) submitted to the NRC for review and approval a new source and byproduct materials license for an ISR project at the Ross Project site located in Crook County, Wyoming; and

WHEREAS, the U.S. Department of the Interior, Bureau of Land Management (BLM), Newcastle, Wyoming Field Office received from Strata on January 21, 2011, a Plan of Operations for the Ross Project for review and approval which requires compliance with Section 106 of NHPA for the Undertaking as defined at 36 CFR § 800.16(y) and pursuant to BLM's authority under the Mining Law of 1872, 30 U.S.C. §§ 22-54 and the Federal Land Policy and Management Act of 1976, 43 U.S.C. §§ 1701-1784; and

WHEREAS, for the purposes of the Undertaking, the NRC is the lead Federal agency for compliance with Section 106 on behalf of the BLM Newcastle Field Office (36 CFR § 800.2(a)(2)) by letter dated November 21, 2011 and is the primary contact for all parties to this PA and Indian Tribes except as noted elsewhere in this document; and

WHEREAS, upon issuance of a license and approval of a mine plan, the Undertaking would use ISR technology to extract uranium and would process the extracted uranium into yellowcake at the Ross Project site, which consists of 1,721 acres (696 ha) located approximately 38 km (24 mi) north of Moorcroft on County Route 68 in Crook County, Wyoming (in portions of Sections 7, 17, 18, and 19, Township 53 North, Range 67 West and portions of Sections 12, 13, and 24, Township 53 North, Range 68 West), as shown in Appendix A; and

WHEREAS, the NRC, by letter dated August 19, 2011, initiated Section 106 consultation with the Wyoming State Historic Preservation Office (WYSHPO); and

WHEREAS, the NRC, in consultation with WYSHPO as provided in 36 CFR § 800.4(a) and 36 CFR § 800.16(d), established the area of potential effects (APE) for the Undertaking as the area

PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE ADVISORY
COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE,
THE BUREAU OF LAND MANAGEMENT NEWCASTLE FIELD OFFICE, AND STRATA ENERGY, INC.,
REGARDING THE ROSS IN-SITU URANIUM RECOVERY PROJECT
IN CROOK COUNTY, WYOMING

Page 1 of 20

FINAL DRAFT FOR COMMENT

at the Ross Project site and its immediate environs, which may be impacted by activities associated with the construction and operation of the proposed facility. The direct APE is comprised of the areas within the Ross Project boundary that may be directly affected by physical ground disturbance and construction of the Ross Project, and the indirect APE is comprised of the area within three miles of the Ross Project boundary wherein potential visual and audible effects to historic properties may occur, as described in Appendix A; and

WHEREAS, the Phase I area, shown in Figure 3 of Appendix A, encompasses all areas within the direct APE where Strata's physical ground disturbance and construction of the Ross Project is currently proposed to occur; and

WHEREAS, identification of cultural properties has been completed for the Undertaking, including background research of the existing records and Class III and Tribal field surveys within the APE, as described in Appendix B; and

WHEREAS, the NRC has made determinations of eligibility for the National Register of Historic Places (NRHP) for two historic properties within the APE (48CK1603 and 48CK2083) and WYSHPO has concurred with these findings; as described in Appendix B; and

WHEREAS, the NRC has yet to make determinations of eligibility for the NRHP for 32 unevaluated cultural properties within the APE as shown in Table 1-D and Table 3 of Appendix B; and

WHEREAS, effects on all historic properties within the APE cannot be fully determined prior to approval of the Undertaking (36 CFR § 800.14(b)(1)(ii)); and

WHEREAS, the NRC has determined that a phased process for compliance with Section 106 of NHPA is appropriate for the Undertaking, as specifically permitted under 36 CFR § 800.4(b)(2), such that completion of the evaluation of historic properties, determinations of effect on historic properties, and consultation concerning measures to avoid, minimize, or mitigate any adverse effects will be carried out in phases, as set forth in this PA; and

WHEREAS, by letter dated April 17, 2013, Strata has submitted an Additional Testing Plan to the NRC to test the two unevaluated sites (48CK2076 and 48CK2073) that are located within the Phase I area for NRHP eligibility and to test the two eligible sites (48CK1603 and 48CK2083) that are located within the Phase I area for effects; and

WHEREAS, the NRC is coordinating with the BLM to review Strata's Additional Testing Plan and, if accepted by the NRC in consultation with WYSHPO, the Additional Testing Plan will be implemented as necessary; and

WHEREAS, the NRC, by letter dated February 9, 2011, invited the following Indian Tribes to participate in Section 106 consultation for the Ross Project: The Apache Tribe of Oklahoma; The Blackfeet Tribe; The Cheyenne and Arapaho Tribes of Oklahoma; The Cheyenne River Sioux Tribe; The Confederated Salish and Kootenai Tribe; The Crow Tribe; The Crow Creek Sioux Tribe; The Eastern Shoshone Tribe; The Flandreau Santee Sioux Tribe; The Fort Belknap Community; The Fort Peck Assiniboine and Sioux Tribes; The Kiowa Indian Tribe of Oklahoma; The Lower Brule Sioux Tribe; The Northern Arapaho Tribe; The Northern Cheyenne Tribe; The Oglala Sioux Tribe; The Rosebud Sioux Tribe; The Santee Sioux Tribe of Nebraska; The

FINAL DRAFT FOR COMMENT

Sisseton-Wahpeton Sioux Tribe; The Spirit Lake Tribe; The Standing Rock Sioux Tribe, The Three Affiliated Tribes; The Turtle Mountain Band of Chippewa Indians; and the Yankton Sioux Tribe; and

WHEREAS, the following twenty-one tribes are the Ross Project Consulting Tribes: The Blackfeet Tribe; The Cheyenne and Arapaho Tribes of Oklahoma; The Cheyenne River Sioux Tribe; The Confederated Salish and Kootenai Tribe; The Crow Tribe; The Crow Creek Sioux Tribe; The Eastern Shoshone Tribe; The Flandreau Santee Sioux Tribe; The Fort Belknap Community; The Fort Peck Assiniboiné and Sioux Tribes; The Lower Brule Sioux Tribe; The Northern Arapaho Tribe; The Northern Cheyenne Tribe; The Oglala Sioux Tribe; The Rosebud Sioux Tribe; The Santee Sioux Tribe of Nebraska; The Sisseton-Wahpeton Sioux Tribe; The Standing Rock Sioux Tribe, The Three Affiliated Tribes; The Turtle Mountain Band of Chippewa Indians; and the Yankton Sioux Tribe; and

WHEREAS, the applicable requirements of NHPA, the American Indian Religious Freedom Act, 42 U.S.C. 1996 *et. seq.*, the Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001 *et. seq.* and 43 CFR § 10 (NAGPRA), and the Archaeological Resources Protection Act, 16 U.S.C 1979 *et. seq.* (ARPA) have been considered in this Agreement and this Agreement does not waive the responsibilities of the Signatories and Invited Signatory under these Acts and regulations; and

WHEREAS, in accordance with 36 CFR § 800.6(a)(1)(i)(C), the NRC, by letter dated September 19, 2013, has invited the Advisory Council on Historic Preservation (ACHP or "Council") to participate in Section 106 consultation and development of this PA and the Council, by letter dated October 28, 2013, accepted the invitation and is a Signatory; and

WHEREAS, the NRC, by letters dated September 19, 2013, invited each of the Ross Project Consulting Tribes to participate in the development of this PA and representatives from The Cheyenne and Arapaho Tribes of Oklahoma, The Cheyenne River Sioux Tribe, The Chippewa Cree Tribe, The Fort Peck Assiniboiné and Sioux Tribes, and The Northern Cheyenne Tribe, participated; and

WHEREAS, each of the Ross Project Consulting Tribes will be invited to sign the PA as a Concurring Party; and

WHEREAS, the NRC, by letter dated September 19, 2013, invited the Crook County Museum District and the Alliance for Historic Wyoming, to participate in the development of this PA, and no response was received; and

WHEREAS, by email dated November 8, 2013, the National Park Service—Devils Tower National Monument informed the NRC that it would like to be involved with the development of the PA and subsequently participated in the development of this PA; and

WHEREAS, Strata has participated in the development of this PA, shall implement the Undertaking in accordance with this PA, and will be invited to sign the PA as an Invited Signatory; and

FINAL DRAFT FOR COMMENT

WHEREAS, the NRC, WYSHPO, ACHP, BLM, and Strata are collectively hereafter called “Signatories,” and

WHEREAS, the Signatories, Invited Signatory, and Concurring Parties are collectively referred to as the “Parties”; and

WHEREAS, the refusal of any Invited Signatory or Invited Concurring Party to sign this PA does not invalidate the PA;

NOW, THEREFORE, the NRC, WYSHPO, ACHP, and BLM agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effects of the Undertaking on historic properties.

STIPULATIONS

A. GENERAL STIPULATIONS

1. The NRC will require as a condition of any license issued to Strata, and the BLM will require as a condition of approval of Strata’s Plan of Operations, that Strata complies with all stipulations and other provisions in this PA.
2. Strata shall fund all required fieldwork, analysis, reporting, curation, and mitigation necessary to comply with this PA.
3. The NRC will ensure that all work undertaken to satisfy the terms of this PA, including all cultural resource inventory reports and documentation, meets the Secretary of the Interior’s Standards for Archaeology and Historic Preservation (48 FR 44716-42), WYSHPO standards, and ACHP guidance on archaeology found at www.achp.gov/archguide.
4. Strata shall have a qualified archaeologist, as defined in the Secretary of Interior’s Professional Qualifications and Standards (48 FR 22716), conduct recordation and testing, prepare testing reports, conduct data recovery, and prepare data recovery reports whenever these activities are required.
5. Strata shall direct all of its employees, contractors, subcontractors, inspectors, monitors, and any authorized additional parties involved in the Ross Project not to search for, retrieve, deface, or impact historic and prehistoric materials (e.g., archaeological materials such as, arrowheads, pottery sherds, petroglyphs) and ensure that they receive training regarding the sensitivity of all historic and cultural resources, both Native American and non-Native American. Strata shall cooperate with the NRC, BLM and the WYSHPO to ensure compliance with ARPA of 1979 as amended (16 U.S.C 470) and NAGPRA (25 U.S.C. 3001) on public lands, and with Wyoming Statute § 36-1-115 on state lands.
6. The NRC will continue to consult with the representatives of the Ross Project Consulting Tribes throughout the implementation of the PA. The Ross Project Consulting Tribes will be invited to participate in the determinations of eligibility for the unevaluated properties, the determination of effect to historic properties, and the development of any plans to avoid, minimize, or mitigate adverse effects to historic properties. Any information

PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE, THE BUREAU OF LAND MANAGEMENT NEWCASTLE FIELD OFFICE, AND STRATA ENERGY, INC., REGARDING THE ROSS IN-SITU URANIUM RECOVERY PROJECT
IN CROOK COUNTY, WYOMING

Page 4 of 20

FINAL DRAFT FOR COMMENT

provided by the Ross Project Consulting Tribes on sites of traditional religious and cultural importance will remain confidential to the greatest extent permitted by law.

7. For each Ross Project Phase, all cultural resources that may be affected by that stage of the Undertaking will be evaluated by the NRC in consultation with the Parties and Ross Project Consulting Tribes pursuant to 36 CFR § 800.4(c)(1) if not previously evaluated.
8. Strata shall provide to the BLM Newcastle Field Office point of contact copies of all reports required to be provided to the NRC pursuant to the PA. The BLM shall review all reports concurrently with the NRC. The NRC will develop schedules and coordinate with the BLM when fulfilling the NRC's PA responsibilities. The NRC may designate the BLM staff as the local point of contact to address unanticipated discoveries or other tasks as needed.

B. CONTINUING DETERMINATIONS OF ELIGIBILITY

1. Testing Phase I Area Properties for NRHP Eligibility
 - a. Strata shall complete recordation and evaluation of 48CK2087, 48CK2229, 48CK2230, and 48CK2231 (see Table 1-A of Appendix B) and prepare a report on this inventory. If any of these sites are located within the Phase I area of the Ross Project, then Strata shall submit a Supplement to the Additional Testing Plan to the NRC to include those sites.
 - b. Upon receipt of Strata's Supplement to the Additional Testing Plan, the NRC and BLM will review the plan and request any corrections or modifications from Strata within 30 days of receipt. If no Supplement to the Additional Testing Plan is necessary, the NRC in coordination with BLM will review the existing plan and request any corrections or modifications from Strata within 30 days following notification that a Supplement is not required. During review of the testing plan, the NRC will consult with Strata concerning whether any sites or portions of sites may be avoided. If avoidance is possible, the testing plan shall be revised to include a map and documentation to support this avoidance.
 - c. The NRC will then distribute the Additional Testing Plan to the Parties (excluding WYSHPO) and Ross Project Consulting Tribes for a 30 day review and comment period. The NRC will consider any comments received in writing from the Parties or the Ross Project Consulting Tribes within the specified review period.
 - d. The NRC will then submit the final Additional Testing Plan to the WYSHPO for a 30 day review and concurrence. Copies of this correspondence will be sent to the other Parties and Ross Project Consulting Tribes.
 - e. If the WYSHPO concurs with the NRC's final Additional Testing Plan or fails to respond within 30 days, the NRC will notify Strata in writing that it may proceed with the final Additional Testing Plan.
 - f. The NRC will consult to resolve any comments or objections regarding the final Additional Testing Plan received in writing from the WYSHPO within the 30 day review period. If a dispute arises, it will be resolved in accordance with Stipulation I (Dispute Resolution).

FINAL DRAFT FOR COMMENT

2. Testing New Phase Area Unevaluated Properties for NRHP Eligibility
- a. Strata shall not conduct ground disturbance activities beyond the boundaries of the Phase I area (see Appendix A, Figure 3) without first notifying the NRC and fulfilling the relevant requirements set forth in this Agreement.
 - b. If ground disturbance activities will occur beyond the boundaries of the Phase I area, then, consistent with the phased process for Section 106 compliance under this PA, Strata shall submit a Notice of Intent (NOI) to the NRC. The NOI shall state Strata's intent to prepare a plan for testing the eligibility of any unevaluated properties within the New Phase area or the NOI shall demonstrate that all the previously identified properties within the New Phase area will be avoided by Strata. The NOI shall be submitted at least three months prior to the testing plan's proposed submission date so that the NRC and BLM can appropriately allocate staff resources to the extent possible, acknowledging that additional time may be necessary in the event that NRC and BLM staff resources are limited due to conditions beyond the staff's control. If the NOI demonstrates that all the previously identified properties within the New Phase area will be avoided by Strata and the NRC staff, in coordination with BLM, agree, the NRC will notify Strata within 120 days of receipt of the NOI that it may proceed with its proposed activities.
 - c. Strata's NOI shall include a description of the area of ground disturbance activities for the New Phase. Strata shall delineate the New Phase area with township/section/range, GPS data points, GIS map, or other land survey techniques such that the New Phase area can be reproducibly defined and illustrated with appropriate graphic materials and sufficient documentation to enable any reviewer to readily understand its scope and basis.
 - d. Upon receipt of Strata's testing plan, the NRC in coordination with the BLM will review the plan and request any corrections or modifications from Strata within 30 days of receipt.
 - e. Prior to accepting Strata's testing plan, the NRC will consult with Strata to determine if the unevaluated properties can be avoided in the proposed project phase. If any properties in the original testing plan can be avoided, Strata shall submit a revised testing plan, including a map and sufficient documentation to support this avoidance determination.
 - f. The NRC will distribute the revised testing plan to the Parties (excluding WYSHPO) and Ross Project Consulting Tribes for a 30 day review and comment period. The NRC will consider any comments received in writing within the specified review period.
 - g. The NRC will then submit the final testing plan to the WYSHPO for a 30 day review and concurrence, copying the other Parties and Ross Project Consulting Tribes on this correspondence.
 - h. If the WYSHPO concurs with the NRC's final testing plan or fails to respond within 30 days, the NRC will notify Strata in writing that it may proceed with the testing plan.
 - i. The NRC will consult to resolve any comments or objections received in writing from WYSHPO within the 30 day review period regarding the final testing plan. If a

PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE, THE BUREAU OF LAND MANAGEMENT NEWCASTLE FIELD OFFICE, AND STRATA ENERGY, INC., REGARDING THE ROSS IN-SITU URANIUM RECOVERY PROJECT IN CROOK COUNTY, WYOMING

Page 6 of 20

FINAL DRAFT FOR COMMENT

dispute arises, it will be resolved in accordance with Stipulation I (Dispute Resolution).

3. Determination of Eligibility

- a. In accordance with an approved final testing plan from Sections B.1 or B.2, Strata shall evaluate and make NRHP eligibility recommendations for unevaluated properties.
- b. Upon receipt of Strata's eligibility recommendations, the NRC in coordination with BLM will review the recommendations and request any corrections or modifications from Strata within 30 days of receipt.
- c. The NRC will then distribute revised eligibility determinations to the Parties (excluding WYSHPO) and Ross Project Consulting Tribes for a 30 day review period. The NRC will consider any comments received in writing from the Parties and the Ross Project Consulting Tribes within the specified review period.
- d. The NRC will then provide its eligibility determinations to the WYSHPO for a 30 day review and concurrence, copying the other Parties and Ross Project Consulting Tribes on this correspondence. The NRC will consult to resolve any objections regarding eligibility determinations received from the WYSHPO or the Council in writing within the specified review period.
- e. If the WYSHPO concurs with the NRC's eligibility determinations, or if no written objections are received within the 30 day review period, the NRC's eligibility determinations are final.
- f. If the WYSHPO and NRC agree that a cultural resource is not eligible for the NRHP, no further review or consideration under this PA will be required for the cultural resource. If, after appropriate consultation, the WYSHPO and NRC agree that the property is eligible, then a determination of effect will be made in accordance with Stipulation C.
- g. In accordance with 36 CFR § 800.4(c)(2), if there is disagreement regarding eligibility between the NRC and the WYSHPO, and that disagreement cannot be resolved after further consultation, or if the ACHP so requests, the NRC will refer the property(ies) in question to the Keeper of the National Register and request a formal determination of eligibility. The Keeper's decision is final.

4. Sites of Traditional and Cultural Importance

- a. The NRC, in consultation with the WYSHPO, will make NRHP eligibility determinations and effects determinations for the 18 properties identified during the Tribal field survey (see Table 3 of Appendix B).
- b. The NRC will prepare a report documenting its eligibility determinations for the 18 properties and submit it to the WYSHPO for a 30 day review and concurrence, copying other Parties and the Ross Project Consulting Tribes on this correspondence.
- c. If the WYSHPO concurs with the NRC's eligibility determinations, or if the WYSHPO or Council do not object to the NRC's eligibility determinations within the 30 day review period, the NRC's eligibility determinations are final.

PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE, THE BUREAU OF LAND MANAGEMENT NEWCASTLE FIELD OFFICE, AND STRATA ENERGY, INC., REGARDING THE ROSS IN-SITU URANIUM RECOVERY PROJECT
IN CROOK COUNTY, WYOMING

Page 7 of 20

FINAL DRAFT FOR COMMENT

- d.** The NRC will consult to resolve any written objections from the WYSHPO or the Council received during the 30 day review period regarding eligibility determinations.
- e.** For any unevaluated cultural resources that are of concern to the Ross Project Consulting Tribes, the NRC will conduct further consultation with Ross Project Consulting Tribes, and, if needed, schedule additional site visits in order to complete eligibility assessments.
- f.** If the WYSHPO and NRC agree that a cultural resource is not eligible for the NRHP, no further review or consideration under this PA will be required for the cultural resource. If the WYSHPO and NRC agree that the property is eligible, then a determination of effect will be made in accordance with Stipulation C.
- g.** In accordance with 36 CFR § 800.4(c)(2), if there is disagreement regarding eligibility between the NRC and the WYSHPO, and that disagreement cannot be resolved after further consultation, or if the ACHP so requests, the NRC will refer the property(ies) in question to the Keeper of the National Register and request a formal determination of eligibility. The Keeper's decision is final.

C. CONTINUING ASSESSMENT OF EFFECTS

- 1.** The NRC, in consultation with the Parties and Ross Project Consulting Tribes will make determinations of the effects of the proposed Undertaking on the viewshed of historic properties within the three-mile indirect APE.
- 2.** The NRC, in consultation with the Parties and Ross Project Consulting Tribes will make determinations of the visual and audible adverse effects of the proposed Undertaking of historic properties within the three-mile indirect APE of the Undertaking.
- 3.** Testing Historic Properties for Direct Adverse Effects
 - a.** Following eligibility determinations, if additional testing is needed to assess the effects of the proposed Project Phase on a historic property, Strata shall submit to the NRC a testing plan to determine the direct (i.e., physical disturbance) adverse effects to historic properties that cannot be avoided.
 - b.** Upon receipt of Strata's testing plan, the NRC in coordination with the BLM will review the plan and request any corrections or modifications from Strata within 30 days of receipt.
 - c.** Prior to accepting Strata's testing plan, the NRC will consult with Strata to determine if the historic properties can be avoided. If any historic properties in the testing plan can be avoided, Strata shall submit a revised testing plan, including a map and sufficient documentation to support this avoidance determination.
 - d.** The NRC will distribute the revised testing plan to the Parties (excluding WYSHPO) and the Ross Project Consulting Tribes for a 30 day review period. The NRC will consider any comments received in writing within the specified review period.
 - e.** The NRC will then distribute the final testing plan to the WYSHPO for a 30 day review and comment period, copying the other Parties and the Ross Project Consulting Tribes on this correspondence.

FINAL DRAFT FOR COMMENT

- f. If the WYSHPO concurs with the NRC's final testing plan or fails to respond within 30 days, the NRC will notify Strata that it may proceed with the testing plan, and Strata shall submit the results of the testing to the NRC.
 - g. The NRC will consult to resolve any comments or objections received in writing from the WYSHPO within the 30 day review period regarding the testing plan. If a dispute arises, it will be resolved in accordance with Stipulation I (Dispute Resolution).
4. Assessment of Effects
- a. Strata shall have a qualified archaeologist conduct the testing in accordance with the approved adverse effects testing plan from Stipulation C.3 and shall submit a report to the NRC that documents Strata's evaluation and recommendations, which the NRC may use in making determinations of effect on identified historic properties within the area of ground disturbance activities for each Ross Project phase.
 - b. Upon receipt of Strata's recommended determinations of effect, the NRC in coordination with the BLM will review those determinations and request any corrections or modifications from Strata within 30 days of receipt.
 - c. The NRC will then distribute its determinations of effect and the associated documentation [pursuant to 36 CFR §§ 800.5 and 800.6(a)(3)] to the Parties (excluding WYSHPO) and the Ross Project Consulting Tribes for a 30 day review period. The NRC will consider any comments received in writing within the specified review period.
 - d. The NRC will then distribute the determinations of effect to the WYSHPO for a 30 day review period, copying the other Parties and the Ross Project Consulting Tribes on this correspondence.
 - e. If the WYSHPO concurs with NRC's determinations of effect, or if no written objections are received from the Parties or the Ross Project Consulting Tribes within the 30 day review period, the effects determinations are final.
 - f. The NRC will consult to resolve any written objections received from the Parties or the Ross Project Consulting Tribes regarding determinations of effect. If a dispute arises, it will be resolved in accordance with 36 CFR § 800.5(c)(2) or Stipulation I (Dispute Resolution).
 - g. If any eligible properties will be adversely affected, plans to avoid, minimize, or mitigate the adverse effects will be developed in accordance with the Stipulation D of this PA.

D. AVOIDANCE, MINIMIZATION and MITIGATION of ADVERSE EFFECTS

1. Avoidance of Adverse Effects:

Once the assessment of adverse effects to a historic property has been finalized per Stipulation C, Strata shall notify the NRC within 30 days if it can avoid the historic property that would be adversely affected within the area of ground disturbance activities for each Ross Project Phase, including properties of traditional religious and cultural significance to the Tribes. Potential avoidance measures include, but are not limited to, relocating pipelines, roads, facilities, monitoring wells, and other disturbances.

PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE, THE BUREAU OF LAND MANAGEMENT NEWCASTLE FIELD OFFICE, AND STRATA ENERGY, INC., REGARDING THE ROSS IN-SITU URANIUM RECOVERY PROJECT
IN CROOK COUNTY, WYOMING

Page 9 of 20

FINAL DRAFT FOR COMMENT

2. Development of Plan for the Minimization and Mitigation of Adverse Effects
 - a. If the NRC determines adverse effects to historic properties within the area of ground disturbance activities for any Ross Project Phase cannot be avoided, for each Phase of the Undertaking, the NRC will consult with the Parties and Ross Project Consulting Tribes to identify those measures to be implemented by Strata to minimize and/or mitigate adverse effects to affected historic properties. A wide range of options to minimize and/or mitigate adverse effects shall be considered, including but not limited to the following:
 - i. For historic properties that are archaeological in nature and significant for their research data potential (Eligibility Criterion D, National Register of Historic Places), the treatment measures may follow standard mitigation through data recovery. Mitigation plan(s) for data recovery shall include, at a minimum, a research design with provisions for data recovery and recordation, analysis, reporting, and curation of resulting collection and records, and shall be consistent with the *Secretary of Interior's Standards and Guidelines* (48 FR 44734-44737). Mitigation plan(s) must be consistent with easement and permit requirements of other agencies, when applicable. To the extent possible, mitigation plan(s) should group related sites or areas, so that treatment of related resources can be considered in context, and to minimize the burden of review and approval by agencies.
 - ii. Mitigation plan(s) for those resources relating to properties eligible under Criteria A, B and C, or that are significant for values other than their potential research value, if warranted, shall specify approaches for treatment or mitigation of the property in accordance with the principles, standards, and guidelines appropriate to the resource. This may include, but not be limited to, use of such approaches as relocating the historic property, re-landscaping to reduce effects, public interpretation, ethnographic recordation, oral history, archival research, or prescribing use of a component or activity of this Undertaking in such a way as to minimize effects to historic properties or to those concerned about the effects of that component or activity. Methods of recordation and documentation described in the mitigation plan(s) shall conform with the *Secretary of the Interior's Standards for Architectural and Engineering Documentation* (48 FR 44730-44734) or other standards specified by NRC.
 - iii. In lieu of standard mitigation approaches described above, mitigation plan(s) may adopt other alternative approaches to avoid, minimize or mitigate effects to historic properties, including, but not limited to, assisting in the development of Tribal historic preservation plans, developing detailed historic contexts for the region, developing educational materials, purchasing properties containing historic resources, or developing historic property management plans.
 - b. The NRC shall consult with the Ross Project Consulting Tribes regarding minimization and/or mitigation of indirect effects to historic properties of traditional religious and cultural importance.

FINAL DRAFT FOR COMMENT

- c. Meetings and conference calls shall be scheduled as needed to develop mitigation measures for the Undertaking. Meetings and telephone conferences shall involve all or part of the Parties and Ross Project Consulting Tribes, as appropriate.
 - d. Following the development of measures to minimize and/or mitigate adverse effects, Strata shall prepare a Mitigation Plan. The Mitigation Plan shall identify minimization and/or mitigation measures to address the adverse effects of the Undertaking on each individual historic property.
 - i. The Mitigation Plan shall contain a map of all proposed effects for that Project Phase, a description of the effects on each historic property, and a description of the proposed treatment for each historic property.
 - ii. If monitoring by a qualified archaeologist and/or by Tribal monitors is part of the strategy for identifying and resolving adverse effects, the Mitigation Plan shall include a Monitoring Plan. The objective of monitoring is to protect extant sites from construction impacts, identify at the time of discovery any archaeological materials exposed during ground disturbance, and protect such resources from damage until the procedures for Discoveries per Stipulation E are implemented.
 - iii. If data recovery is part of the strategy for resolving adverse effects, the Mitigation Plan shall specify all details of the research design, field and laboratory work methodology (including mapping, geomorphological studies, controlled scientific excavation methods, analyses of data recovered, and photographic documentation), and report preparation.
 - e. The NRC in coordination with the BLM will review the Mitigation Plan developed by Strata and request any corrections or modifications within 30 days of receipt.
 - f. The NRC will distribute the Mitigation Plan to the Parties (excluding WYSHPO) and the Ross Project Consulting Tribes. The NRC will consider any comments received in writing from the Parties (excluding WYSHPO) and the Ross Project Consulting Tribes within the specified review period.
 - g. The NRC will then distribute the final Mitigation Plan to the WYSHPO for a 30 day review period, copying the other Parties, the Ross Project Consulting Tribes on this correspondence.
 - h. Upon final concurrence by the WYSHPO, or if WYSHPO fails to respond in writing within 30 days, and no other objections from the Parties or the Ross Project Consulting Tribes are received, the final Mitigation Plan will be appended to this PA.
 - i. The NRC will consult to resolve any written comments or objections received from the Parties and the Ross Project Consulting Tribes regarding the final Mitigation Plan within the WYSHPO's 30 day review period. If a dispute arises, it will be resolved in accordance with 36 CFR § 800.7 or Stipulation I (Dispute Resolution).
 - j. The NRC will notify the Parties and the Ross Project Consulting Tribes of the approval of any Mitigation Plan.
3. Implementation of Mitigation Plan
- a. For any data recovery on BLM-administered lands, the archaeologist shall have a BLM Cultural Resource Use permit for Excavation and/or Removal.

FINAL DRAFT FOR COMMENT

- b. For data recovery on State lands, the archaeologist shall have an Authorization for Archaeological Investigations on State Lands.
- c. Upon completion of data recovery fieldwork, Strata shall submit a data recovery report documenting implementation and results.
- d. The NRC in coordination with the BLM will review the data recovery report developed by Strata and request any corrections or modifications within 30 days of receipt, allowing additional time if NRC/BLM fieldwork inspection is needed and is not feasible within the 30 day review period.
- e. The NRC will then distribute the data recovery report or revised report to the Parties (excluding WYSHPO) and Ross Project Consulting Tribes for a 30 day review and comment period. The NRC will consider any written comments received from the Parties and the Ross Project Consulting Tribes.
- f. The NRC will submit the final data recovery report to WYSHPO for a 30 day review and concurrence, copying the other Parties and Ross Project Consulting Tribes on this correspondence.
- g. If the WYSHPO concurs with NRC's data recovery report or fails to respond within 30 days, the NRC shall notify Strata that the data recovery report is final. After such notification, Strata may proceed with implementation of that Phase of the Undertaking.
- h. The NRC will consult to resolve any comments received in writing from the WYSHPO during the WYSHPO's 30 day review period. If a dispute arises, it will be resolved in accordance with Stipulation I (Dispute Resolution).
- i. For other mitigation measures specified in the Mitigation Plan that result in a product or process that requires review and acceptance, the process of review and acceptance shall be specified in the Mitigation Plan. Strata shall not proceed with implementation of ground disturbance activities outside of the Project Phase area prior to completion of such review and acceptance.

E. Curation

- a. BLM will ensure that curation of all records and other archaeological items resulting from identification and data recovery efforts on public (BLM) and State land is completed in accordance with 36 CFR § 79 and the provisions of 43 CFR § 10 (NAGPRA). All archaeological materials recovered from Federal and State land shall be curated at the University of Wyoming Archaeological Repository. Strata shall provide documentation of the curation of the materials to the NRC, BLM, and WYSHPO within 60 days of acceptance of the final cultural resource inventory report and/or data recovery report.
- b. BLM will encourage private landowners to curate archaeological materials recovered from their lands in accordance with Federal curation policies. If private landowners agree to curate archaeological materials recovered from their lands, the curation shall be done in accordance with Federal curation policies. Materials from private lands to be returned to private landowners shall be maintained in accordance with 36 CFR § 79 until all necessary analysis has been completed. Strata shall provide

PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE, THE BUREAU OF LAND MANAGEMENT NEWCASTLE FIELD OFFICE, AND STRATA ENERGY, INC., REGARDING THE ROSS IN-SITU URANIUM RECOVERY PROJECT
IN CROOK COUNTY, WYOMING

Page 12 of 20

FINAL DRAFT FOR COMMENT

documentation of the disposition of private collections to the NRC, BLM, and WYSHPO.

F. DISCOVERIES

1. Inadvertent Discoveries of Historic and Cultural Resources

- a. If previously unknown cultural resources, including archaeological, are discovered during implementation of the Ross Project, or previously known properties will be affected in an unanticipated manner, all construction activities will cease within 150 feet of the area of discovery to avoid or minimize harm to the resource, and Strata shall immediately notify the NRC and the WYSHPO. Activity in the area will cease until NRC, in consultation with the Parties and Ross Project Consulting Tribes, can evaluate and, if necessary, authorize steps to mitigate impacts to the new discovery. Strata shall have any discovered materials evaluated for NRHP eligibility by a professional cultural resource specialist meeting the Secretary of Interior's Standards for Archaeology and History. Documentation of the discovery and evaluation will be promptly provided to the NRC in order for the NRC, in consultation with the WYSHPO, ACHP, BLM, and the Ross Project Consulting Tribes, to make a determination of eligibility and effect. Inadvertent discoveries may include artifacts, bone, features, or concentrations of these materials outside previously identified sites or in and adjacent to previously identified eligible and not eligible sites. Discoveries may also include stones and groups of stones that are out of place in their sedimentary contexts and may be parts of stone features. Discoveries may also include changes in soil color, texture, or content suspected to be of anthropic origin, such as burned soil, ash, or charcoal fragments.
- b. If a cultural resource monitor or Tribal monitor is present, the monitor shall have the authority to temporarily halt construction operations within 150 feet of the find or exposed resource and shall flag or otherwise mark the area of avoidance. If a monitor is not present, Strata shall halt work and mark the location for avoidance.
- c. Strata shall have a qualified archaeologist and, if needed, a Tribal monitor, inspect the area for additional resources, document the discovery, make recommendations concerning eligibility, and submit the findings to the NRC. The Parties and Ross Project Consulting Tribes shall consult to determine what data recovery or other mitigation may be needed.
- d. Work may continue in other areas of the site; however, construction shall not resume in the area of discovery unless the NRC has issued a written Notice to Proceed.
- e. Evaluation and mitigation will be carried out by NRC in consultation with the WYSHPO, Ross Project Consulting Tribes, BLM, ACHP, and Strata as expeditiously as possible in accordance with 36 CFR § 800.13(b).

2. Inadvertent Discoveries of Human Remains

- a. In the event human remains are discovered on private land during implementation of the Ross Project, all work within 300 feet of the discovery will cease, the area will be secured, and Strata shall immediately contact NRC, who will notify the Crook County Sheriff's Office and Coroner's Office of the discovery per W.S. 7-4-104.

FINAL DRAFT FOR COMMENT

- b. Native American human remains, funerary objects, sacred objects, or items of cultural patrimony found on Federal land will be handled according to Section 3 of NAGPRA and its implementing regulations (43 CFR § 10). In the event that human remains are discovered on Federal land during implementation of the Ross Project, all work within 300 feet of the discovery will cease, the area will be secured, and BLM shall be contacted immediately. BLM will be responsible for compliance with the provisions of NAGPRA on Federal land. Native American human remains, funerary objects, sacred objects, or items of cultural patrimony found on state or private land will be handled in accordance with procedures agreed upon by the NRC and WYSHPO for State and private land. If non-Native American human remains are found on Federal land, Strata shall immediately notify the NRC and BLM and BLM will treat such remains in accordance with applicable law. The NRC, BLM, and Strata recognize that any human remains, funerary objects, sacred objects, or items of cultural patrimony encountered during construction should be treated with dignity and respect.

G. CONFIDENTIALITY OF CULTURAL RESOURCE DATA

Cultural resource data, including data concerning the location and nature of historic properties and properties of religious and cultural significance, will be treated as confidential by all Parties and any additional parties involved in the Ross Project, including but not limited to employees, contractors, and subcontractors of Strata. These data shall be protected from public disclosure to the greatest extent permitted by law, including conformance with Section 304 of the NHPA, as amended, Section 9 of the ARPA, and Executive Order No. 13007 on Indian Sacred Sites (Federal Register, Vol. 61 No. 104, May 24, 1996). Confidentiality concerns for properties that have traditional religious and cultural importance to the Ross Project Consulting Tribes will be respected and will remain confidential to the greatest extent permitted by law. Duplication or distribution of cultural resource data from BLM-managed lands by any Party requires written authorization from the BLM Newcastle Field Manager.

H. ANNUAL REPORT AND EVALUATION

1. On or before January 1 of each year, beginning in 2015, unless the Parties agree in writing that the terms of this PA have been fulfilled, Strata shall prepare and provide a letter report to the NRC detailing how the applicable terms of the PA are being implemented. Upon acceptance, Strata shall provide this annual report to the Parties and Ross Project Consulting Tribes. The Parties may provide comments on the report to Strata within 30 days of receipt, and Strata shall distribute all comments to the Parties.
2. Strata shall coordinate a meeting or conference call of the Parties and Ross Project Consulting Tribes, in coordination with the NRC, within 60 days after providing the annual report for the first five (5) years, and (if the PA is still in effect) every third year after that, unless the Parties agree to another timeframe. As appropriate, Parties may request a separate meeting to discuss the annual report. The purpose is to review implementation and achieved outcomes of the terms of this PA and to discuss the annual report, as needed.

FINAL DRAFT FOR COMMENT

I. DISPUTE RESOLUTION

1. Any Signatory to this PA who objects to an action under this PA, or the implementation of the measures stipulated to in this PA, shall provide written notice to the NRC within 30 days of becoming aware of an action. The NRC will consult with the objecting Signatory to this PA to resolve the objection, unless otherwise specified in this document. If the NRC determines that the objection cannot be resolved, the NRC will forward all documentation relevant to the dispute to the ACHP as well as the other Parties and Ross Project Consulting Tribes, including NRC's proposed response to the objection. The objecting Signatory must provide reasons for, and a justification of, its objection at the time it initially submits its objection to the NRC. Within 30 days after receipt of all pertinent documentation, the ACHP shall either:
 - a. Advise the NRC that the ACHP concurs with the NRC's proposed final decision, whereupon the NRC will respond accordingly;
 - b. Provide the NRC with recommendations, which the NRC will take into account in reaching a final decision regarding the dispute; or
 - c. Notify the NRC that it will comment within an additional 30 days, in accordance with 36 CFR § 800.7(c)(4). Any ACHP comment provided in the response to such a request will be taken into account, and responded to, by the NRC in accordance with 36 CFR § 800.7(c)(4) with reference to the subject of the dispute.
 - d. Should the ACHP not exercise one of the above options within forty-five (45) days after receipt of all pertinent documentation, the NRC may proceed with its proposed response to the objection.
2. Any recommendation or comment provided by the ACHP will be understood to pertain only to the subject of the dispute. The responsibility to carry out all actions under this PA that are not the subject of the dispute shall remain unchanged.

J. AMENDMENT

Any Signatory to this PA may request that it be amended, whereupon the Signatories will consult to reach agreement. Such amendment shall be effective upon the signature of all Signatories to this PA, and the amendment shall be appended to the PA as an Appendix.

K. TERMINATION

1. Any Signatory to this PA may initiate termination by providing written notice to the other Signatories of their intent. After notification by the initiating Signatory, the remaining Signatories shall have 60 business days to consult to seek agreement on amendments or any other actions that would address the issues and avoid termination. If such consultation fails, the termination will go into effect at the end of the 60-day period, unless all the Signatories agree to a longer period.
2. In the event of termination, the Signatories will comply with any applicable requirements of 36 CFR §§ 800.4 through 800.6 with regard to the original Undertaking covered by this PA.

FINAL DRAFT FOR COMMENT

L. DURATION OF AGREEMENT

This PA shall remain in effect for 20 years from its date of execution by the Signatories (last date of signature), or until completion of the work stipulated, whichever comes first, unless extended by agreement among the Signatories.

M. ANTI DEFICIENCY ACT

The stipulations of this Agreement are subject to the provisions of the Anti-Deficiency Act (31 U.S.C. §1341). If compliance with the Anti-Deficiency Act alters or impairs the NRC's ability to implement the stipulations of this Agreement, the NRC will consult in accordance with the amendment and termination procedures found in this Agreement.

N. GENERAL PROVISIONS

1. **Entirety of Agreement.** This PA, consisting of twenty (20) pages, represents the entire and integrated agreement between the parties and supersedes all prior negotiations, representations and agreements, whether written or oral, regarding compliance with Section 106 of NHPA.
2. **Prior Approval.** This PA shall not be binding upon any party unless this PA has been reduced to writing before performance begins as described under the terms of this PA, and unless the PA is approved as to form by the Wyoming Attorney General or his representative.
3. **Severability.** Should any portion of this PA be judicially determined to be illegal or unenforceable, the remainder of the PA shall continue in full force and effect, and any party may renegotiate the terms affected by the severance.
4. **Sovereign Immunity.** The State of Wyoming, the WYSHPO, the NRC, the BLM, the ACHP, and Ross Project Consulting Tribes do not waive their sovereign or governmental immunity by entering into this PA and each fully retains all immunities and defenses provided by law with respect to any action based on or occurring as a result of the PA.
5. **Indemnification.** Each Signatory to this PA shall assume the risk of any liability arising from its own conduct. Each Signatory agrees they are not obligated to insure, defend or indemnify the other Signatories to this PA.

Execution of this PA by the NRC, BLM, ACHP, WYSHPO, Strata, Ross Project Consulting Tribes, the submission of documentation and filing of this PA with the ACHP pursuant to 36 CFR § 800.6(b)(1)(iv) prior to the Signatories' approval of the Undertaking, and implementation of its terms, are evidence that the NRC has taken into account the effects of this Undertaking on historic properties and afforded the ACHP an opportunity to comment.

THE REMAINDER OF THIS PAGE IS INTENTIONALLY BLANK

FINAL DRAFT FOR COMMENT

SIGNATURES: In witness thereof, the Signatories to this PA through their duly authorized representatives have executed this PA on the days and dates set out below, and certify that they have read, understood, and agreed to the terms and conditions of this PA as set forth herein.

The effective date of this PA is the date of the last signature affixed to this page.

Federal Agencies

The U.S. Nuclear Regulatory Commission

NRC Official Date

The U.S. Department of the Interior, Bureau of Land Management, Newcastle Field Office

BLM Official Date

Wyoming State Historic Preservation Officer

Mary Hopkins, SHPO Date

Advisory Council on Historic Preservation

John M. Fowler, Executive Director Date

Strata Energy, Inc.

Name and title Date

Appendix E: Draft Programmatic Agreement

FINAL DRAFT FOR COMMENT

Approval as to Form:
Wyoming Attorney General's Office

S. Jane Caton, Date
Senior Assistant Attorney General

Concurring Parties:

Blackfeet Tribe

Name and title Date

Cheyenne and Arapaho Tribes

Name and title Date

Cheyenne River Sioux Tribe

Name and title Date

Confederated Salish and Kootenai Tribe

Name and title Date

Apsaalooke (Crow) Nation

Name and title Date

Crow Creek Sioux Tribe

Name and title Date

Eastern Shoshone Tribe

Name and title Date

FINAL DRAFT FOR COMMENT

Flandreau-Santee Sioux Tribe

Name and title Date

Fort Belknap Community

Name and title Date

Fort Peck Assiniboine/Sioux

Name and title Date

Lower Brule Sioux Tribe

Name and title Date

Northern Arapaho Tribe

Name and title Date

Northern Cheyenne Tribe

Name and title Date

Oglala Sioux Tribe

Name and title Date

Rosebud Sioux Tribe

Name and title Date

Santee Sioux Tribe of Nebraska

Name and title Date

Appendix E: Draft Programmatic Agreement

FINAL DRAFT FOR COMMENT

Sisseton-Wahpeton Oyate Tribes

Name and title

Date

Standing Rock Sioux Tribe

Name and title

Date

Mandan, Hidatsa & Arikara Nation Three Affiliated Tribes

Name and title

Date

Turtle Mountain Band of Chippewa

Name and title

Date

Yankton Sioux Tribe

Name and title

Date

FINAL DRAFT FOR COMMENT

Appendix A

Description of Undertaking and Area of Potential Effects

Undertaking

On January 4, 2011, Strata Energy, Inc. (Strata or the Applicant) submitted to the U.S. Nuclear Regulatory Commission (NRC) a license application to construct and operate the Ross Project, which is a proposed uranium in situ recovery (ISR) facility located in Oshoto, Crook County, Wyoming.

The Atomic Energy Act of 1954, as amended, authorizes the NRC to issue licenses, either as a general or specific license, to qualified applicants for the receipt, possession and use of byproduct and source materials resulting from the removal of uranium ore from its place of deposit in nature. An NRC specific license is issued to a commercial uranium or thorium ISR facility pursuant to NRC implementing regulations listed in Title 10 of the Code of Federal Regulations (10 CFR) Part 40.

On January 21, 2011, Strata submitted to the U.S. Department of the Interior, Bureau of Land Management (BLM), Newcastle, Wyoming Field Office a Plan of Operations for the Ross Project for review and approval.

The Mining Law of 1872, 30 U.S.C. §§ 22-54 authorizes the BLM to review and approve mining plans for use of Federal minerals and the Federal Land Policy and Management Act of 1976, 43 U.S.C. §§ 1701-1784 requires the BLM to manage all BLM-administered lands and minerals for multiple uses.

Ross Project Location and Proposed Activities

The proposed activities consist of constructing and operating an ISR facility at the Ross Project site located in Oshoto, Crook County, Wyoming. Strata is a U.S.-based corporation registered in Wyoming and a wholly owned subsidiary of Peninsula Energy Limited, an Australian registered company. Peninsula Energy is a publicly traded corporation on the Australian Securities Exchange. For this Undertaking, Strata is the Applicant.

As shown in Figure 1, Crook County is located in the northeastern corner of Wyoming, abutted by Montana to the north, South Dakota to the east, Weston County, Wyoming, to the south, and Campbell County, Wyoming to the west. The total area encompassed by Crook County is 2871 square miles. The nearest town to the project is Moorcroft, which is located approximately 22 miles south of the Ross Project. The closest community is Oshoto, which includes 11 residences located within 2 miles (mi) [3.2 kilometers (km)] of the project area. In addition to Moorcroft, the other nearest major urban centers include Sundance, Hulett, and Pine Haven, all of which are located in Wyoming. The largest population in those nearby urban centers is in Sundance with a 2010 population of 2602 persons (Strata, 2011).

As shown in Figure 2, the Ross Project comprises approximately 696 hectares (ha) [1,721 acres (ac)]. Surface ownership of land located within the Ross Project is as follows: private entities,

APPENDIX A TO THE PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE
ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE,
THE BUREAU OF LAND MANAGEMENT-NEWCASTLE FIELD OFFICE AND
STRATA ENERGY, INC. REGARDING
THE ROSS IN-SITU URANIUM RECOVERY PROJECT IN CROOK COUNTY, WYOMING

FINAL DRAFT FOR COMMENT

553 ha [1367.2 ac]; State of Wyoming, 127 ha [314.1 ac]; and the Federal Government as administered by the BLM, 16 ha [40.0 ac]. Mineral rights are owned by the same entities as the surface rights; however, the distribution differs slightly from that of the surface ownership in that federal mineral rights ownership occurs in several quarter/quarter sections for which surface land is owned by private entities. The Ross Project includes parts of the following sections of the Public Land Survey System:

<u>Section</u>	<u>Township</u>	<u>Range</u>
7, 17, 18 & 19	53 North	67 West
12, 13 & 24	53 North	68 West

The proposed activities for the Ross Project include the construction of wellfields and a central processing plant (CPP) with ancillary equipment. The ancillary equipment includes underground piping from the wellfield to the CPP and from the CPP to the deep disposal wells, two to three dozen header houses, an administrative and warehouse/maintenance building, a chemical and equipment storage area, lined retention ponds, and deep disposal wells. Except for the wellfields, header houses, deep disposal wells and piping, most of the development is limited to a 50-acre area referred to as the "CPP area" within the project.

The Applicant proposes in situ recovery processes for this project. The ISR process involves extracting uranium from underground ore bodies without bringing the ore bodies to the surface by injecting a leaching solution through wells into underground ore bodies to dissolve the uranium. The leaching solution is recovered from the subsurface through the extraction wells and piped to the CPP through a system of underground piping. At the CPP, two generic processes produce the final product, which is referred to as yellowcake.

From the initial construction to final decommissioning, the Applicant-proposed timeline for the Ross Project is approximately 10 years; however, the Applicant also requests processing of uranium-rich resins derived from other ISR operations (either a future Strata facility or a facility operated by another licensee) or other entity (e.g., water treatment resins). The Applicant states that processing of resins outside sources could extend the life of the CPP to 20 years.

The Applicant proposes restoration of the production aquifer and stability monitoring. Restoration of portions of wellfields may occur simultaneously with operations (recovery of uranium) at other wellfields. After restoration is completed and approved by NRC staff, the wellfields will undergo decommissioning and reclamation by removing the piping and other ancillary equipment. Upon completion of operations, all surface facilities that were installed for the Ross Project will be decommissioned to allow unrestricted future use of the property. All equipment not fully decontaminated for unrestricted use will be disposed of at an NRC-licensed facility.

Ross Project Area of Potential Effects

As indicated in the NRC's letters to the Wyoming State Historic Preservation Office and the Advisory Council on Historic Preservation, dated August 19, 2011, the Area of Potential Effects (APE) is the area at the Ross Project site and its immediate environs, which may be impacted by activities associated with the construction and operation of the proposed facility. The direct APE is comprised of the areas within the Ross Project boundary that may be directly affected by physical ground disturbance and construction of the Ross Project, including the Phase I area

APPENDIX A TO THE PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE
ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE,
THE BUREAU OF LAND MANAGEMENT-NEWCASTLE FIELD OFFICE AND
STRATA ENERGY, INC. REGARDING
THE ROSS IN-SITU URANIUM RECOVERY PROJECT IN CROOK COUNTY, WYOMING

FINAL DRAFT FOR COMMENT

shown in Figure 3, and the indirect APE is comprised of the area within three (3) miles of the Ross Project boundary wherein potential visual and audible effects to historic properties may occur.

By letter dated August 27, 2012, Strata provided to the NRC the results of its analysis to identify and assess the potential visual effects to properties located within 3 miles of the Ross Project boundary. The NRC staff's initial review of this analysis will be incorporated into the NRC's *Tribal Field Survey and NRC's Eligibility Determination Report for the Ross In Situ Uranium Recovery Project*.

Reference:

Strata, 2011. Ross ISR Project USNRC License Application, Crook County, Wyoming, prepared by Strata Energy, Inc., Docket No. 040-09091. ADAMS Accession No. ML110120063, January 2011.

FINAL DRAFT FOR COMMENT

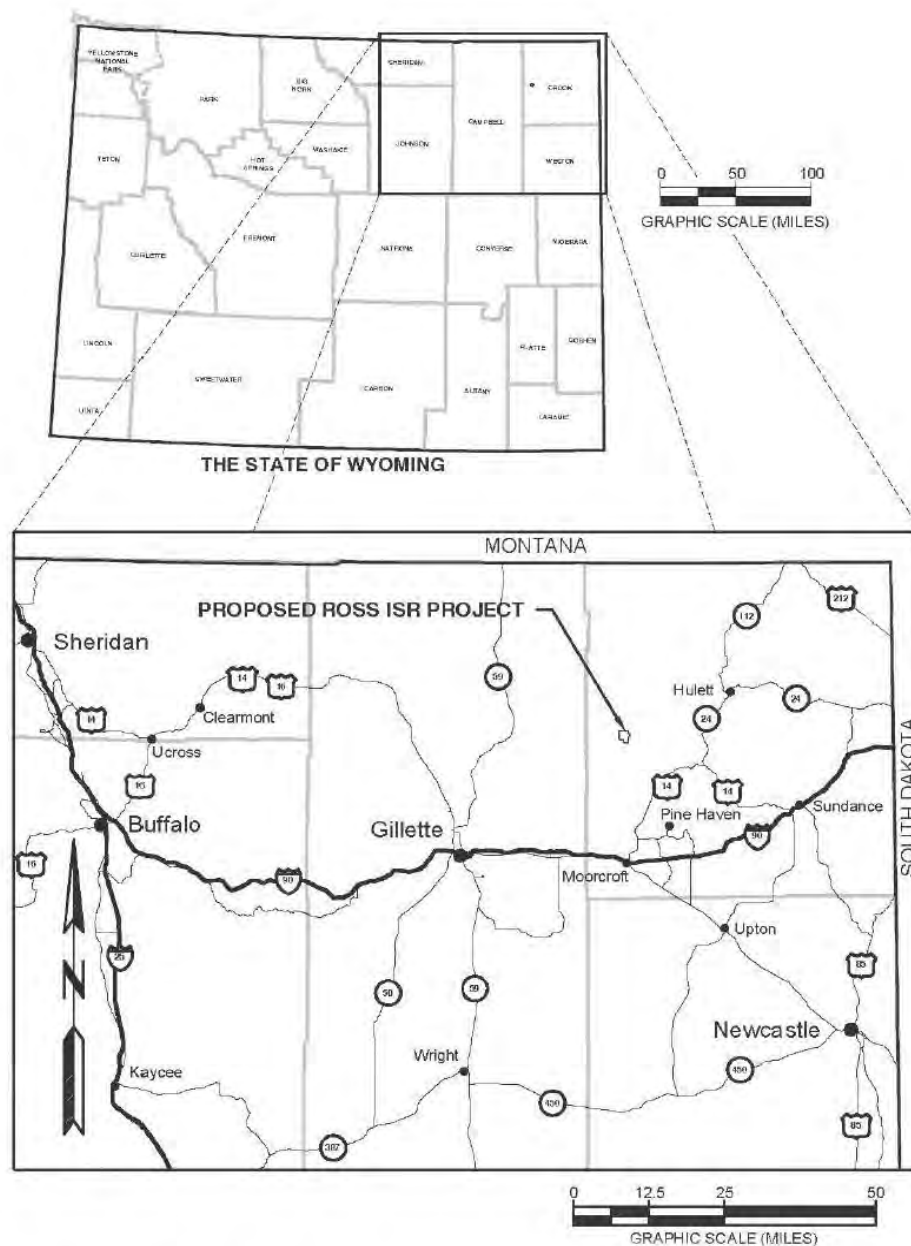


Figure 1 Ross Project Location Map

Source: Figure 1.4-1 of the Ross ISR Project USNRC License Application, Technical Report, Crook County, Wyoming, prepared by Strata Energy, Inc., Docket No. 040-09091. ADAMS Accession No. ML110120063, January 2011.

APPENDIX A TO THE PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE, THE BUREAU OF LAND MANAGEMENT-NEWCASTLE FIELD OFFICE AND STRATA ENERGY, INC. REGARDING THE ROSS IN-SITU URANIUM RECOVERY PROJECT IN CROOK COUNTY, WYOMING

FINAL DRAFT FOR COMMENT

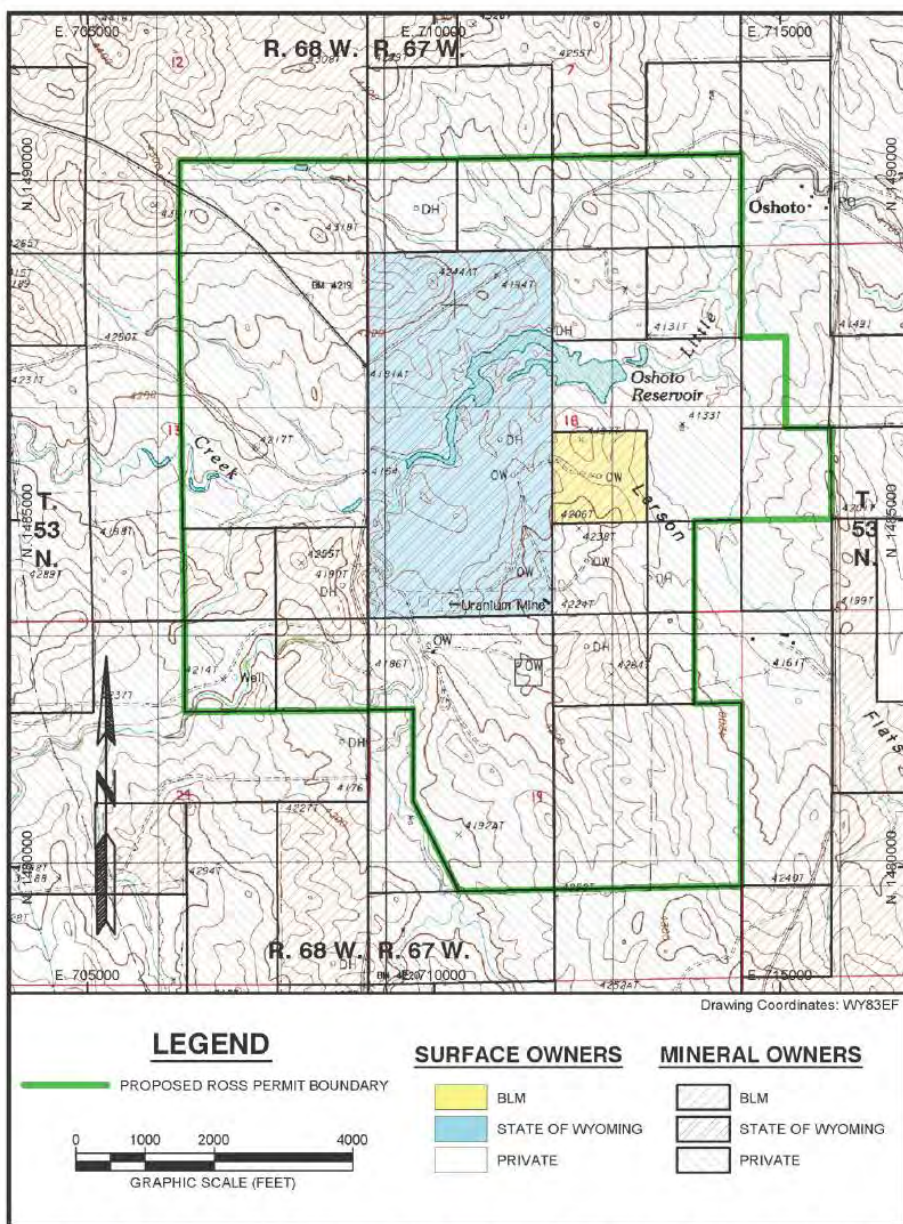


Figure 2 Ross Project License Boundary and Distribution of Land Ownership

Source: Figure 2.1-1 of the Ross ISR Project USNRC License Application, Technical Report, Crook County, Wyoming, prepared by Strata Energy, Inc., Docket No. 040-09091. ADAMS Accession No. ML110120063, January 2011.

APPENDIX A TO THE PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE, THE BUREAU OF LAND MANAGEMENT-NEWCASTLE FIELD OFFICE AND STRATA ENERGY, INC. REGARDING THE ROSS IN-SITU URANIUM RECOVERY PROJECT IN CROOK COUNTY, WYOMING

FINAL DRAFT FOR COMMENT

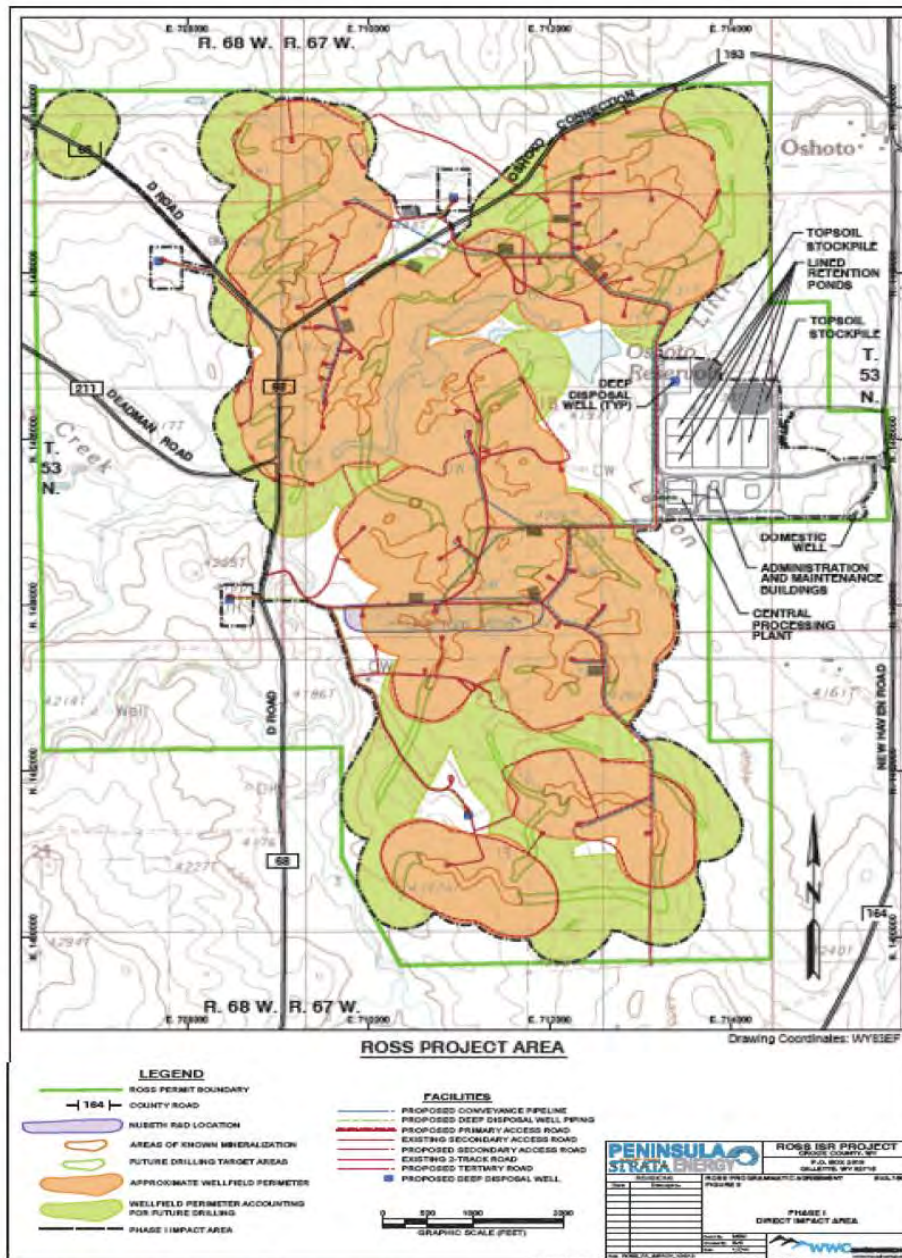


Figure 3 Ross Project Phase I Area

Source: Email to Johari Moore (NRC) from Ben Schiffer [WWC (Strata)]. Re: Request for Additional Information to Develop Draft Programmatic Agreement. Docket No. 040-09091. January 7, 2014.

APPENDIX A TO THE PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE, THE BUREAU OF LAND MANAGEMENT-NEWCASTLE FIELD OFFICE AND STRATA ENERGY, INC. REGARDING THE ROSS IN-SITU URANIUM RECOVERY PROJECT IN CROOK COUNTY, WYOMING

FINAL DRAFT FOR COMMENT

Appendix B

Ross Project Cultural Resource Inventories

Cultural Resource Inventory

A Class III Cultural Resource Inventory (Class III Inventory) was conducted in support of the Ross Project in April 2010 and July 2010. The Inventory included a pedestrian survey in transects of 30-m [102-ft] intervals throughout the Ross Project area. Subsurface exposures such as cut banks, anthills, rodent burrows, roads ruts, and cow tracks were examined. Shovel probes were placed at the discretion of the surveyors, primarily in locations where artifacts or features were located or where soil had accumulated. The Inventory focused on landforms where intact sites might be expected, such as intact, stable terraces and their margins, as well as areas of exposure. Site evaluations were not completed for all sites during this Inventory and sites were not assessed for project effect.

In November 2011, additional site evaluation field work was accomplished: A geophysical magnetometer survey was conducted at several sites, but it was found to be ineffective because of the nature of the soils. During the fieldwork 6 back-hoe trenches, approximately 27 test pits measuring 0.5 m x 0.5 m [1.6 ft x 1.6 ft], and approximately 44 test pits measuring 1.0 m x 1.0 m [3.3 ft x 3.3 ft] were excavated to further evaluate sites near areas where road construction and other impacts would be expected. The testing report for this fieldwork was submitted in 2012.

In preparation for the Class III Inventory, a records search was conducted for the Ross Project area in 2010; this search included the records of the Wyoming Cultural Records Office (WYCRO), the WYCRO online data base, and the BLM's Newcastle Field Office. The records search showed that, prior to the 2010 Class III Inventory, no substantial block inventory had been conducted in the Project area. Small-scale investigations, including two associated with power lines and buried telephone cables as well as a drilling-pad and access-road survey, had been conducted in the Ross Project area. One survey, an inventory for a linear buried telephone cable in Section 13, identified one prehistoric campsite, 48CK1603. This site was re-recorded during the 2011 fieldwork and determined to be eligible for the National Register of Historic Places despite damage from a county road that bisects the site.

Buildings and Structures

No buildings or structures eligible for the National Register of Historic Places (NRHP) or Wyoming State Register were identified within the Ross Project area. An earthen structure in the Ross Project area, the Oshoto Dam, did not meet the criteria for eligibility for listing in the NRHP (48 CFR Part 2157). The original dam has been rebuilt numerous times because of flood damage, most recently in 2005, and is considered to be essentially a reconstruction rather than the original dam.

Archaeological Sites

During the Applicant's initial Class III Inventory for the Ross Project, 24 new sites and 21 isolated finds were recorded. Twenty-three of the recorded sites are prehistoric camps, and one

FINAL DRAFT FOR COMMENT

is a historic-period homestead. A number of sites produced projectile points that represent Middle Archaic, Late Archaic, and Late Prehistoric occupations. Twenty-one isolates were also recorded during the Inventory. All but two of these are prehistoric artifacts; the two historic isolates are trash scatters. In addition to the sites identified during the Class III Inventory, the potential exists for deeply buried sites to be found within the Ross Project area because of its propitious location near the headwaters of the Little Missouri River and the percentage of the Ross Project area that consists of deep alluvium.

As described in the Tribal Consultation section below, a Class III Inventory in the Ross Project area designed to identify and evaluate the NRHP significance of properties of religious and cultural significance to Tribes was performed by representatives of ten Tribes during May and June 2013. During the June Tribal field survey, additional archaeological content including bone and lithic artifacts was found at 48CK2087, a site identified in the cultural resource inventory as consisting only of a hill-top cairn. The new cultural finds at 48CK2087 extend the boundary of 48CK2087. Additionally, three new archaeological sites were found within the Ross Project Area: 48CK2229, 48CK2230, and 48CK2231.

The 27 sites along with previously identified 48CK1603 are listed in Table 1-A, Table 1-B, Table 1-C, and Table 1-D. Consultations on the eligibility determinations for these sites are documented in the following letters between the NRC and the Wyoming State Historic Preservation Office (WYSHPO): NRC letter to WYSHPO, dated March 8, 2013; WYSHPO letter to NRC, dated March 28, 2013; NRC letter to WYSHPO, dated September 20, 2013; WYSHPO letter to NRC, dated October 22, 2013.

Table 1-A. Summary of Ross Project Cultural Properties

Site Number	NRHP Eligibility
48CK1603	Eligible
48CK2070	Unevaluated
48CK2071	Not Eligible
48CK2072	Not Eligible
48CK2073	Unevaluated
48CK2074	Not Eligible
48CK2075	Unevaluated
48CK2076	Unevaluated
48CK2077	Not Eligible
48CK2078	Unevaluated
48CK2079	Unevaluated
48CK2080	Unevaluated
48CK2081	Unevaluated
48CK2082	Unevaluated
48CK2083	Eligible
48CK2084	Not Eligible
48CK2085	Unevaluated
48CK2086	Not Eligible
48CK2087	Unevaluated
48CK2088	Not Eligible
48CK2089	Unevaluated

APPENDIX B TO THE PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE, THE BUREAU OF LAND MANAGEMENT-NEWCASTLE FIELD OFFICE, AND STRATA ENERGY, INC. REGARDING THE ROSS IN-SITU URANIUM RECOVERY PROJECT IN CROOK COUNTY, WYOMING

Page 2 of 7

FINAL DRAFT FOR COMMENT

Site Number	NRHP Eligibility
48CK2090	Unevaluated
48CK2091	Unevaluated
48CK2092	Unevaluated
48CK2093	Not Eligible
48CK2229	Unevaluated
48CK2230	Unevaluated
48CK2231	Unevaluated

Table 1-B. Summary of NRHP Eligible Ross Project Cultural Properties

Site Number	NRHP Eligibility
48CK1603	Eligible
48CK2083	Eligible

Table 1-C. Summary of NRHP Not Eligible Ross Project Cultural Properties

Site Number	NRHP Eligibility
48CK2071	Not Eligible
48CK2072	Not Eligible
48CK2074	Not Eligible
48CK2077	Not Eligible
48CK2084	Not Eligible
48CK2086	Not Eligible
48CK2088	Not Eligible
48CK2093	Not Eligible

Table 1-D. Summary of Unevaluated Ross Project Cultural Properties

Site Number	NRHP Eligibility
48CK2070	Unevaluated
48CK2073	Unevaluated
48CK2075	Unevaluated
48CK2076	Unevaluated
48CK2078	Unevaluated
48CK2079	Unevaluated
48CK2080	Unevaluated
48CK2081	Unevaluated
48CK2082	Unevaluated
48CK2085	Unevaluated
48CK2087	Unevaluated
48CK2089	Unevaluated
48CK2090	Unevaluated

FINAL DRAFT FOR COMMENT

Site Number	NRHP Eligibility
48CK2091	Unevaluated
48CK2092	Unevaluated
48CK2229	Unevaluated
48CK2230	Unevaluated
48CK2231	Unevaluated

Tribal Consultation

According to Executive Order (EO) No. 13175, *Consultation and Coordination with Indian Tribal Governments*, the NRC is encouraged to “promote government-to-government consultation and coordination with Federally-recognized Tribes that have a known or potential interest in existing licensed uranium-recovery facilities or applications for new facilities.” The BLM is required to comply with this Order. Although the NRC, as an independent regulatory agency, is explicitly exempt from the Order, NRC remains committed to its spirit. The agency has demonstrated a commitment to achieving the Order’s objectives by implementing a case-by-case approach to interactions with Native American Tribes. The NRC’s case-by-case approach allows both the NRC and the Tribes to initiate outreach and communication with one another.

As part of its obligations under Section 106 of the NHPA and the regulations at 36 CFR 800.2(c)(2)(ii)(A), the NRC must provide Native American Tribes “a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties and evaluation of historic properties, including those of religious and cultural importance, articulate its views on the undertaking’s effects on such properties, and participate in the resolution of adverse effects.” Tribes that have been identified as potentially having concerns about actions near Devils Tower were formally invited by the NRC staff, by letter dated February 9, 2011, to participate in the Section 106 consultation process for the proposed Ross Project (see Table 2). The NRC staff invited the Tribes to participate as consulting parties in the NHPA Section 106 process and sought their assistance in identifying Tribal historic sites and cultural resources that may be affected by the Undertaking.

Table 2. Tribes Invited to Participate in Section 106 Consultation for the Ross Project

1	Apache Tribe of Oklahoma ^a
2	Blackfeet
3	Cheyenne and Arapaho Tribes of Oklahoma
4	Cheyenne River Sioux
5	Chippewa Cree
6	Confederated Salish & Kootenai Tribes
7	Crow Tribe
8	Crow Creek Sioux Tribe
9	Eastern Shoshone Tribe
10	Flandreau Santee Sioux Tribe
11	Fort Belknap Community
12	Fort Peck Assiniboine and Sioux Tribes
13	Kiowa Tribe of Oklahoma ^b
14	Lower Brule Sioux Tribe

APPENDIX B TO THE PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE, THE BUREAU OF LAND MANAGEMENT-NEWCASTLE FIELD OFFICE, AND STRATA ENERGY, INC. REGARDING THE ROSS IN-SITU URANIUM RECOVERY PROJECT
IN CROOK COUNTY, WYOMING
Page 4 of 7

FINAL DRAFT FOR COMMENT

15	Northern Arapaho Tribe
16	Northern Cheyenne Tribe
17	Oglala Sioux Tribe
18	Rosebud Sioux Tribe
19	Santee Sioux Tribe of Nebraska
20	Sisseton-Wahpeton Sioux Tribe
21	Spirit Lake Tribe ^b
22	Standing Rock Sioux Tribe
23	Three Affiliated Tribes
24	Turtle Mountain Band of Chippewa Indians
25	Yankton Sioux Tribe

^aThe Apache Tribe of Oklahoma notified the NRC by email dated August 19, 2011 that it did not wish to participate in consultation on the Ross Project.

^bNo response was received from the Kiowa Tribe of Oklahoma or the Spirit Lake Tribe.

Culturally Significant Locations

No Native American heritage, special interest, or sacred sites were previously formally identified or recorded to date that are in the Ross Project APE. The geographic position of the Project area between mountains considered sacred by various Native American cultures (the Big Horn Mountains to the west and the Black Hills including nearby Devils Tower to the east), however, creates the possibility that the Project area could have sites and locations of special religious or sacred significance to Native American groups.

Properties of Religious and Cultural Significance to Tribes

As required by Section 106 of the NHPA, the NRC requested information about places of cultural, religious, and traditional significance that could be affected by the Ross Project from various interested Tribes in order to complete government-to-government consultation efforts. Places of cultural, religious, and traditional significance that meet the NRHP criteria are included in the definition of Historic Property under 36 CFR Part 800.16(l)(1).

The NRC invited the Tribes listed in Table 2 (excluding The Apache Tribe of Oklahoma) to participate in a field survey of the Ross Project area under an "Open-Site approach" and a "Tribal Working Group" approach. A detailed description of the NRC's efforts to provide an opportunity for Consulting Tribes to conduct a field survey of the Ross Project site is provided in the NRC's letter to the Advisory Council on Historic Preservation (ACHP), dated August 14, 2013. A Class III Inventory in the Ross Project area designed to identify and evaluate the NRHP significance of properties of religious and cultural significance to Tribes was performed by representatives of six Tribes on May 13 – 16, 2013. The six Tribes participating in the May Tribal field survey included:

- Santee Sioux Tribe of Nebraska (Niobrara, Nebraska)
- Crow Creek Sioux Tribe (Fort Thompson, South Dakota)
- Rosebud Sioux Tribe (Rosebud, South Dakota)
- Yankton Sioux Tribe (Wagner, South Dakota)
- Northern Cheyenne Tribe (Lame Deer, Montana)

APPENDIX B TO THE PROGRAMMATIC AGREEMENT AMONG THE U.S. NUCLEAR REGULATORY COMMISSION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE WYOMING STATE HISTORIC PRESERVATION OFFICE, THE BUREAU OF LAND MANAGEMENT-NEWCASTLE FIELD OFFICE, AND STRATA ENERGY, INC. REGARDING THE ROSS IN-SITU URANIUM RECOVERY PROJECT IN CROOK COUNTY, WYOMING

Page 5 of 7

FINAL DRAFT FOR COMMENT

- Turtle Mountain Band of Chippewa Indians (Belcourt, North Dakota)

A second Tribal field survey was performed by representatives of four Tribes on June 3 – 6, 2013. The four Tribes participating in the May Tribal field survey included:

- Cheyenne and Arapaho Tribes of Oklahoma (Concho, Oklahoma)
- Northern Arapaho Tribe (Fort Washakie, Wyoming)
- Fort Belknap Indian Community (Harlem, Montana)
- Eastern Shoshone Tribe (Fort Washakie, Wyoming)

The entire 696.46 [1,721-ac] Ross Project area was inventoried using current Class III-inventory methods during both Tribal field surveys. Crew members performed the surveys using transects spaced no greater than 30 meters (m) [100 ft]. Skirmish-line transects were walked across the Ross Project area, guided by GPS bearings in addition to natural and cultural features, and the transects were adjusted in direction when major obstacles, such as Oshoto Reservoir, were met. Because of the large numbers of personnel involved in the two surveys, radio communications were provided by Strata to Tribal leaders to facilitate survey communications and coordination. In most instances, a limited time was spent at previously recorded archaeological sites. To facilitate relocation and recording, newly discovered archaeological sites were located by a single GPS datum and briefly noted as to the site's general content and setting. Newly discovered prehistoric individual finds were also mapped and recorded during both surveys.

When properties of religious and cultural significance to Tribes were noted during the May Tribal field survey, the pedestrian survey was brought to a halt, and the find was recorded by the NRC archaeological consultant supporting the survey in consultation with leaders of the May Tribal crew. Properties of religious and cultural significance to Tribes noted during the June Tribal field survey were briefly identified as properties of religious and cultural significance to Tribes by the Tribal crew and plotted by GPS location. The survey then resumed. Once the walkover was completed, the June crew returned to the mapped properties and recorded them.

As a result of the May and June Tribal field surveys, 18 properties of religious and cultural significance to Tribes were located, recorded, and evaluated for NRHP eligibility in the Ross Project area (see Table 3). A *Tribal Field Survey Report* documenting these findings, based on the recommendations provided by the Northern Arapaho Tribe, the Cheyenne and Arapaho Tribes of Oklahoma, and the NRC archaeological consultants that supported the survey will be submitted to the Wyoming SHPO for review and comment. By letter dated August 27, 2012, Strata provided to the NRC the results of its analysis to identify and assess the potential visual effects to properties located within 3 miles of the Ross Project boundary. The NRC in coordination with the BLM will utilize this analysis and additional records search information to analyze indirect effects and will incorporate this analysis into the *Tribal Field Survey Report*.

FINAL DRAFT FOR COMMENT**Table 3. Summary of Ross Project Properties of Religious and Cultural Significance to Tribes**

Site Number	NRHP Eligibility
48CK2070	Unevaluated
48CK2080	Unevaluated
48CK2087	Unevaluated
48CK2089	Unevaluated
48CK2214	Unevaluated
48CK2215	Unevaluated
48CK2216	Unevaluated
48CK2217	Unevaluated
48CK2218	Unevaluated
48CK2219	Unevaluated
48CK2220	Unevaluated
48CK2221	Unevaluated
48CK2222	Unevaluated
48CK2223	Unevaluated
48CK2224	Unevaluated
48CK2225	Unevaluated
48CK2226	Unevaluated
48CK2227	Unevaluated

BIBLIOGRAPHIC DATA SHEET

(See instructions on the reverse)

1. REPORT NUMBER
(Assigned by NRC, Add Vol., Supp., Rev.,
and Addendum Numbers, if any.)
NUREG-1910, Supplement 5
Final Report

2. TITLE AND SUBTITLE

Environmental Impact Statement for the Ross ISR Project in Crook County, Wyoming

Supplement to the Generic Environmental Impact Statement for In-Situ Leach Uranium Milling
Facilities

3. DATE REPORT PUBLISHED

MONTH

YEAR

February

2014

4. FIN OR GRANT NUMBER

5. AUTHOR(S)

6. TYPE OF REPORT

Technical

7. PERIOD COVERED (Inclusive Dates)

8. PERFORMING ORGANIZATION - NAME AND ADDRESS (If NRC, provide Division, Office or Region, U. S. Nuclear Regulatory Commission, and mailing address; if contractor, provide name and mailing address.)

Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

9. SPONSORING ORGANIZATION - NAME AND ADDRESS (If NRC, type "Same as above", if contractor, provide NRC Division, Office or Region, U. S. Nuclear Regulatory Commission, and mailing address.)

Same as above

10. SUPPLEMENTARY NOTES

11. ABSTRACT (200 words or less)

By a letter dated January 4, 2011, Strata Energy, Inc. (Strata or the "Applicant") submitted a license application to the Nuclear Regulatory Commission (NRC) for a new source and byproduct materials license for the proposed Ross Project. The Ross Project would be located in Crook County, Wyoming, which is in the Nebraska-South Dakota-Wyoming Uranium Milling Region identified in the NUREG-1910, Generic Environmental Impact Statement (GEIS) for In-Situ Leach Uranium Milling Facilities. The NRC staff prepared this Supplemental Environmental Impact Statement (SEIS) to evaluate the potential environmental impacts of the Applicant's proposal to construct, operate, conduct aquifer restoration, and decommission an in situ uranium-recovery facility at the Ross Project. This SEIS describes the environment that could be affected by the proposed Ross Project activities, estimates the potential environmental impacts resulting from the Proposed Action and two Alternatives, discusses the corresponding proposed mitigation measures, and describes the Applicant's environmental-monitoring program. The NRC staff evaluated site-specific data and information to determine whether the site characteristics and the Applicant's proposed activities were consistent with those evaluated in the GEIS. The NRC staff has incorporated public comments received on the Draft SEIS into this Final SEIS.

12. KEY WORDS/DESCRIPTORS (List words or phrases that will assist researchers in locating the report.)

Uranium Recovery
In-Situ Recovery Process
Uranium
Environmental Impact Statement
Supplemental Environmental Impact Statement

13. AVAILABILITY STATEMENT

unlimited

14. SECURITY CLASSIFICATION

(This Page)

unclassified

(This Report)

unclassified

15. NUMBER OF PAGES

16. PRICE



Federal Recycling Program



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, DC 20555-0001

OFFICIAL BUSINESS



