

## **Appendix C**

**Analytical Results  
Groundwater Samples  
NOV Groundwater Investigation  
Canon City Milling Facility  
Cotter Corporation**

Appendix C - Analytical Results, Groundwater Samples, NOV Groundwater Investigation

Lab#	Sample		FIELD PARAMETERS								TRACE METALS					
			FpH	FCond	DTW	DTW_RL	Temp	FIRate	PmRate	U_dis	U_sus	Modis	Mosus	Fedis	Mndis	Sedis
	Date	Loc.	S.U.	µ S	feet	feet	°C	CFS	GPM	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
09-45738	01/06/09	009	7.03	5990	42.52	N/A	12.5	N/A	0.37	0.0218		<0.006		<0.07	0.03	0.022
09-46676	04/02/09	009	7.44	5160	40.13	N/A	13.7	N/A	0.44	0.0206		<0.002		<0.07	<0.03	0.021
09-47680	07/01/09	009	7.15	3540	35.32	N/A	14.6	N/A	0.63	0.0125		<0.002		<0.07	<0.03	0.022
09-48722	09/24/09	009	7.33	3080	33	N/A	13.5	N/A	0.52	0.0114		<0.004		<0.07	<0.03	0.014
10-49938	01/04/10	009	7.02	2670	33.18	N/A	12.7	N/A	0.42	0.0082		<0.004		<0.07	<0.03	0.019
10-50358	02/03/10	009	7.29	2440	23.15	N/A	13.3	N/A	0.73							
10-50865	03/12/10	009			33.14											
10-51354	03/31/10	009			32.83											
09-45739	01/06/09	014	7.91	2870	40.6	N/A	13.9	N/A	0.36	0.0008		<0.006		<0.07	<0.03	<0.001
09-46677	04/02/09	014	7.8	2640	40.22	N/A	13.7	N/A	0.555	<0.0002		0.003		<0.07	<0.03	0.004
09-47681	07/01/09	014	8.11	2670	39.3	N/A	14.9	N/A	0.63	<0.0002		<0.002		<0.07	0.07	0.012
09-48723	09/24/09	014	8.38	2900	37.65	N/A	14.3	N/A	0.75	0.0003		<0.004		<0.07	<0.03	0.005
10-49939	01/04/10	014	8.11	3140	35.5	N/A	14	N/A	0.78	<0.0002		0.007		<0.07	0.03	<0.001
10-50359	02/03/10	014	7.96	3050	35.05	N/A	13.5	N/A	0.68							
10-50864	03/12/10	014			34.8											
10-51353	03/31/10	014			34.4											
09-46401	03/11/09	035	NSLW													
09-47384	06/01/09	035	NSLW													
09-48428	09/09/09	035	6.96	3380	27.42	27.4	14.3	N/A	1.5	0.29	0.0002	0.038		0.07	<0.03	
09-49681	12/15/09	035	7.07	3430	28.92	29.9	12.9	N/A	N/A	0.26	0.0103	0.05		<0.07	<0.03	
10-50849	03/12/10	035			30.82											
10-51078	03/31/10	035	NSLW													
10-51334	03/31/10	035			30.83											
09-46390	03/10/09	036	8.59	1290	44.6	38.72	11.4	N/A	1.5	0.0018	<0.0002	0.021		0.13	0.03	
09-47564	06/22/09	036	8.27	1200	43.4	37.91	22.9	N/A	1.5	0.0008	<0.0002	0.018		<0.07	<0.03	
09-48447	09/10/09	036	8.02	1040	44.7	38.98	16.5	N/A	1.5	0.0017	<0.0002	0.02		<0.07	<0.03	
09-49680	12/15/09	036	7.38	1190	43.7	39.21	11.9	N/A	1.2	0.0024	<0.0001	0.008		0.11	<0.03	
10-50848	03/12/10	036			44.53											
10-51018	03/26/10	036	8.47	1450	43.02	38.9	14	N/A	1.5							
10-51333	03/31/10	036			45.13											
09-46380	03/09/09	037	7.7	2850	52.36	40.8	18.5	N/A	1.5	0.0179		<0.006		0.11	0.03	
09-47399	06/04/09	037	8	2930	53.67	42.18	18.4	N/A	1.3	0.0152		<0.002		<0.07	<0.03	
09-48352	09/02/09	037	7.96	2800	53.85	41.9	17.7	N/A	1.5	0.0169		0.008		<0.07	<0.03	
09-49773	12/23/09	037	7.93	2650	52.9	37	12.3	N/A	1.5	0.0173		<0.004		<0.07	<0.03	
10-50858	03/12/10	037			39.37											
10-51016	03/25/10	037	8	3110	52.83	39.35	15.9	N/A	1.5							
10-51344	03/31/10	037			52.54											
09-46391	03/10/09	038	7.78	2050	36.55	35.44	14.2	N/A	1.5	0.21		0.058		0.14	0.05	
09-47389	06/02/09	038	7.83	2180	47.3	35.47	17.2	N/A	1.5	0.093		0.025		<0.07	<0.03	
09-48383	09/01/09	038	7.71	2020	47	33.87	20.1	N/A	1.5	0.19		0.044		<0.07	<0.03	
09-49771	12/23/09	038	7.72	1940	45.19	34	15.3	N/A	1.5	0.11		0.03		<0.07	<0.03	
10-50847	03/12/10	038			35.12											
10-51019	03/26/10	038	7.58	2540	44.44		17.7	N/A	1.5							
10-51332	03/31/10	038			41.56											
09-48689	09/23/09	039	7.8	2120	41.37	41.3	14.2	N/A	1.5	0.0068		<0.004		<0.07	0.04	<0.001



Appendix C - Analytical Results, Groundwater Samples, NOV Groundwater Investigation

Lab#	Sample		FIELD PARAMETERS							TRACE METALS						
			FpH	FCond	DTW	DTW_RL	Temp	FIRate	PmRate	U_dis	U_sus	Modis	Mosus	Fedis	Mndis	Sedis
	Date	Loc.	S.U.	µ S	feet	feet	°C	CFS	GPM	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
10-50489	02/15/10	044	7.56	3650	35.34	N/A	13.1	N/A	1	1.8		0.9		<0.07	0.1	0.196
10-50854	03/12/10	044			35.65											
10-50939	03/17/10	044	7.28	3970	35.5	N/A	15.1	N/A	1.5							
10-51340	03/31/10	044			35.23											
10-50500	02/16/10	045	8.45	1930	41.1	N/A	14.6	N/A	1.5	0.0296		0.014		4.2	0.24	0.014
10-50853	03/12/10	045			40.69											
10-50920	03/16/10	045	7.97	1820	40.9	N/A	15.3	N/A	1.5							
10-51339	03/31/10	045			40.64											
10-50491	02/15/10	046	7.42	1460	38.15	N/A	14.7	N/A	1	0.0003		0.014		<0.07	0.06	<0.002
10-50852	03/12/10	046			38.5											
10-50919	03/16/10	046	8.01	1520	38.6	N/A	15.2	N/A	1.5							
10-51338	03/31/10	046			39.57											
10-50490	02/15/10	047	8.48	1460	37.9	N/A	14.7	N/A	1.5	0.0019		0.011		<0.07	0.06	<0.002
10-50851	03/12/10	047			36.81											
10-50918	03/16/10	047	8.31	1580	36.75	N/A	15	N/A	1.5							
10-51337	03/31/10	047			36.87											
09-45989	01/30/09	135	6.97	6040	40.46	40.54	13.3	N/A	0.8	0.0144		<0.006		<0.07	<0.03	0.012
09-47030	05/01/09	135	7.3	5460	39.94	39.97	14.4	N/A	0.8	0.0195		<0.002		<0.07	<0.03	<0.027
09-48012	07/31/09	135	7.05	5810	38.9	39	14.6	N/A	0.8	0.0186		<0.004		<0.07	<0.03	0.02
09-49147	10/28/09	135	7.41	2470	36	36.06	13.6	N/A	1.5	0.0091		<0.004		<0.07	<0.03	0.02
10-50374	02/04/10	135	7.38	2780	34.63	34.9	14.3	N/A	1.5							
10-51351	03/31/10	135			34.15											
09-46407	03/12/09	309	NSLW													
09-46485	03/19/09	309	7.44	11490	16.66	16.12	16.4	N/A	1.2	7.7		31		<0.07	<0.03	
09-47624	06/23/09	309	6.98	11200	18.44	16.14	19	N/A	1.5	7.3		45		0.14	0.06	
09-48353	09/02/09	309	7.19	11100	17.47	14.25	21.9	N/A	1.5	8.1		44		0.18	0.11	
09-49682	12/15/09	309	7.3	10640	18.08	15.25	15.7	N/A	N/A	9		36		0.13	0.11	
10-49996	12/28/09	309			15.04											
10-50754	03/04/10	309	7.19	11200	18.75	15.7	11.1	N/A	1.5							
10-51314	03/31/10	309			15.62											
09-45740	01/06/09	336	7.49	2820	41.67	N/A	14.3	N/A	1.7	0.13		0.027		0.34	0.03	0.027
09-46037	02/02/09	336	7.79	2680	41.88	N/A	14.6	N/A	1.4	0.11		0.028		0.1	0.03	0.018
09-46464	03/17/09	336	7.57	2710	42.6	N/A	14.9	N/A	1.8	0.11	<0.0002	0.031		0.09	<0.03	0.033
09-46678	04/02/09	336	7.61	2600	42.82	N/A	14.9	N/A	1.5	0.1		0.031		0.08	<0.03	0.022
09-47688	07/02/09	336	7.49	3060	42.9	N/A	15.6	N/A	1.5	0.15		0.016		0.3	0.06	0.026
09-48005	07/30/09	336	7.53	2830	42.8	N/A	14.6	N/A	1.5	0.14		0.016		<0.07	<0.03	0.022
09-48542	09/14/09	336	7.73	2710	42	N/A	15.1	N/A	1.5	0.14	<0.0002	0.024		<0.07	<0.03	0.018
09-48729	09/25/09	336	7.61	2590	41.82	N/A	14.4	N/A	1.5	0.11		0.019		0.13	<0.03	0.014
09-49128	10/26/09	336	8.01	2800	41.37	N/A	14.2	N/A	1.5	0.12		0.009		0.28	0.04	0.022
10-49949	01/05/10	336	7.77	2800	40.58	N/A	14.3	N/A	1.5	0.13						
10-50373	02/04/10	336	7.65	2650	41.13	N/A	14.4	N/A	1.5							
10-50805	03/08/10	336	7.48	2830	41.63	N/A	13.9	N/A	1.5							
10-50863	03/12/10	336			41.79											
10-51350	03/31/10	336			41.86											
09-46170	02/16/09	337	6.9	3300	37.2	N/A	16.2	N/A	1.5	<0.0002		<0.006		0.52	<0.03	0.108

Appendix C - Analytical Results, Groundwater Samples, NOV Groundwater Investigation

Lab#	Sample		FIELD PARAMETERS							TRACE METALS						
			FpH	FCond	DTW	DTW_RL	Temp	FIRate	PmRate	U_dis	U_sus	Modis	Mosus	Fedis	Mndis	Sedis
	Date	Loc.	S.U.	µ S	feet	feet	°C	CFS	GPM	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
09-47363	06/01/09	337	6.51	3570	38.25	N/A	15.6	N/A	1.5	<0.0002		<0.002		<0.07	<0.03	0.104
09-48301	08/27/09	337	6.77	3590	38.55	N/A	16	N/A	1.5	<0.0002		<0.004		<0.07	<0.03	0.066
09-49506	12/01/09	337	7.29	3477	38	N/A	14.2	N/A	1.5	<0.0002		<0.004		<0.07	<0.03	0.093
10-50727	03/02/10	337	6.35	3600	37.8	N/A	14.9	N/A	1.5							
10-50868	03/12/10	337			37.85											
10-51357	03/31/10	337			37.4											
09-46169	02/16/09	338	7.06	5360	32.4	N/A	15.8	N/A	1.5	0.12		0.007		<0.07	<0.03	0.114
09-47362	06/01/09	338	7.18	5690	33.1	N/A	14.5	N/A	1.5	0.11		<0.002		<0.07	0.03	0.11
09-48300	08/27/09	338	7.15	5710	32.62	N/A	14.7	N/A	1.5	0.11		<0.004		<0.07	<0.03	0.089
09-49505	11/30/09	338	7.24	5257	31.35	N/A	13.8	N/A	1.5	0.11		<0.004		0.1	<0.03	0.12
10-50726	03/02/10	338	6.31	5280	31.1	N/A	13.8	N/A	1.5							
10-50869	03/12/10	338			31.05											
10-51358	03/31/10	338			30.85											
09-46055	02/04/09	342	6.98	2680	42.38	N/A	16.1	N/A	1.5	0.0111		<0.006		2.2	0.37	<0.001
09-47562	06/22/09	342	6.85	2620	43.29	N/A	16.3	N/A	1.5	0.0099		<0.002		1.4	0.29	<0.001
09-48299	08/27/09	342	7.05	2860	43.15	N/A	16.3	N/A	1.5	0.0082		<0.004		2.4	0.3	<0.001
09-49504	11/30/09	342	15.7	1715	34	N/A	15.7	N/A	1.5	0.0219		<0.004		<0.07	0.06	0.026
10-50725	03/02/10	342	6.94	1680	34.06	N/A	15.1	N/A	1.8							
10-50870	03/12/10	342			34.56											
10-51359	03/31/10	342			34.9											
09-46405	03/12/09	344	7.16	5640	40.83	33.65	12.9	N/A	1	1.8		3		0.14	0.23	
09-47608	06/24/09	344	7.03	5470	41	31.87	15.9	N/A	0.8	1.7		3.9		<0.07	0.1	
09-48354	09/02/09	344	7.09	5200	40.2	23.18	17	N/A	0.8	1.6		2.9		<0.07	0.15	
09-49706	12/16/09	344	7.31	5110	36.58	32.75	13.7	N/A	1.2	1.5		2.8		0.12	0.16	
10-50755	03/04/10	344	7.22	5610	55.35	33	13.9	N/A	0.8							
10-50846	03/12/10	344			33.96											
10-51304	03/31/10	344			33.22											
09-45810	01/15/09	346	7.37	3280	36.83	N/A	14.9	N/A	1.5	0.89		0.406		<0.07	<0.03	
09-46829	04/13/09	346	7.6	3300	37.07	N/A	15.4	N/A	1.5	0.87		0.466		0.09	<0.03	
09-47689	07/02/09	346	7.47	3370	37.1	N/A	16.3	N/A	1.5	0.85		0.412		0.08	0.04	
09-48810	10/02/09	346	7.15	2900	36.49	N/A	14.6	N/A	1.5	0.99		0.278		<0.07	<0.03	
10-50074	01/11/10	346	7.54	3380	36.38	N/A	14.3	N/A	1.5	0.94						
10-50850	03/12/10	346			36.82											
10-51335	03/31/10	346			36.75											
09-46596	03/20/09	347	NSD													
09-47563	06/22/09	347	NSD													
09-47785	06/22/09	347	NSD													
09-48517	09/11/09	347	NSD													
09-49770	12/21/09	347	NSD													
10-50017	12/28/09	347	NSD													
10-50922	03/16/10	347	NSD													
10-51336	03/31/10	347	NSD													
09-46484	03/19/09	348	7.27	5140	25.4	23.7	14.6	N/A	0.08	5.8		6.3		<0.07	<0.03	
09-47610	06/24/09	348	6.55	5140	25.29	23.83	15.5	N/A	1	6.1		7		<0.07	<0.03	
09-48371	09/03/09	348	7.2	4960	24.83	22.84	14.2	N/A	1	6.2		5.7		0.09	<0.03	

Appendix C - Analytical Results, Groundwater Samples, NOV Groundwater Investigation

Lab#	Sample		FIELD PARAMETERS							TRACE METALS						
			FpH	FCond	DTW	DTW_RL	Temp	FIRate	PmRate	U_dis	U_sus	Modis	Mosus	Fedis	Mndis	Sedis
	Date	Loc.	S.U.	µ S	feet	feet	°C	CFS	GPM	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
09-49724	12/17/09	348	7.49	4780	24.85	22.05	13.7	N/A	1.2	4		5.3		<0.07	<0.03	
10-50757	03/04/10	348	7.33	5510	23.25	25.4	15.2	N/A	1.2							
10-50844	03/12/10	348			23.44											
09-46406	03/12/09	368	7.24	9660	34.6	30.39	14.4	N/A	1.2	10		2.3		0.17	0.04	
09-47609	06/24/09	368	7.57	8750	38.03	30.74	16.1	N/A	1	9.277		2.6		<0.07	<0.03	
09-48372	09/03/09	368	7.28	8680	37.7	30.2	14.6	N/A	1	9.8		2		0.11	<0.03	
09-49707	12/16/09	368	7.38	8090	30.5	30	13.9	N/A	1.2	11		1.9		0.11	<0.03	
10-50756	03/04/10	368	7.4	9810	31.45	30.1	14.8	N/A	1.2							
10-50845	03/12/10	368			30.25											
09-46119	02/11/09	802	7.51	2880	41.37	N/A	13.8	N/A	1.5	0.29		1.3		<0.07	0.03	
09-47111	05/04/09	802	7.34	2850	41.88	N/A	15.2	N/A	1.5	0.28	N/A	1.3		<0.07	<0.03	
09-47446	06/08/09	802	7.19	2750	41.9	N/A	15.4	N/A	1.4	0.26	<0.0002	1.1		<0.07	<0.03	0.144
09-48006	07/30/09	802	7.36	2860	41.5	N/A	14.5	N/A	1.5	0.29		1.1		<0.07	<0.03	
09-49224	11/04/09	802	7.53	2840	40.65	N/A	14.2	N/A	1.4	0.27		1.4		<0.07	<0.03	
10-50338	02/01/10	802	7.22	2890	40.75	N/A	14.3	N/A	1.5							
10-50860	03/12/10	802			41.14											
09-45756	01/09/09	803	7.21	3410	41.92	41.9	14.1	N/A	0.8	0.15		0.008		<0.07	<0.03	0.037
09-46770	04/08/09	803	7.3	3270	43.62	N/A	16.6	N/A	0.5	0.13		0.004		0.09	<0.03	0.03
09-47842	07/14/09	803	7.29	3220	43.29	43.23	19.1	N/A	0.8	0.11		<0.002		<0.07	0.03	0.024
09-48014	07/31/09	803	7.22	3390	43.1	43.12	17	N/A	0.8	0.15		<0.004		<0.07	<0.03	
09-48796	10/01/09	803	7.36	3030	40.18	40.2	13.8	N/A	1.2	0.16		<0.004		<0.07	<0.03	0.034
09-49146	10/28/09	803	7.31	3340	39.03	39.2	12.9	N/A	1	0.15		<0.004		<0.07	<0.03	0.038
10-49952	01/05/10	803	7.56	4080	38.9	38.81	13.5	N/A	1.2	0.13						
10-50861	03/12/10	803			42.5											
09-45755	01/09/09	804	7.35	4910	29.02	25.03	15.5	N/A	1.2	2.3		1.3		<0.07	<0.03	0.093
09-46769	04/08/09	804	7.58	4820	28.77	N/A	15.6	N/A	1.2	2.2		0.9		0.08	<0.03	0.07
09-47807	07/10/09	804	7.36	4990	30.35	25.19	16.7	N/A	1.2	2.3		0.8		<0.07	0.05	0.062
09-48795	10/01/09	804	7.29	4110	27.45	24.1	14.2	N/A	1.2	2.3		1		<0.07	<0.03	0.105
10-49950	01/05/10	804	7.57	5080	30	24.43	14.1	N/A	1.2	2.2						
10-50862	03/12/10	804			24.78											
09-46378	03/09/09	805	7.59	2530	27	N/A	12.9	N/A	1.5	0.0454		<0.006		<0.07	<0.03	0.076
09-47171	05/11/09	805	7.4	2190	26.52	N/A	13.1	N/A	1.5	0.0375		0.003		<0.07	<0.03	0.024
09-48340	09/01/09	805	7.65	1610	25.38	N/A	12.9	N/A	1.5	0.0442		<0.004		<0.07	<0.03	0.012
09-49765	12/21/09	805	7.59	1610	22.37	N/A	11.6	N/A	1.5	0.0249		<0.004		<0.07	<0.03	0.016
10-50867	03/12/10	805			24.43											
10-50938	03/17/10	805	7.55	1900	21.4	N/A	12.5	N/A	1.5							
09-45754	01/09/09	806	6.89	3930	41.59	40.3	14.5	N/A	1.2	0.0263		<0.006		<0.07	<0.03	0.153
09-46768	04/08/09	806	7.07	3990	41.25	N/A	14.8	N/A	1.5	0.0245		0.004		<0.07	<0.03	0.119
09-47806	07/10/09	806	6.9	3960	42	40.72	15.9	N/A	1.5	0.0236		<0.002		<0.07	0.04	0.081
09-48794	10/01/09	806	6.99	3570	42.06	40.75	13.6	N/A	1.2	0.0193		<0.004		<0.07	<0.03	0.134
10-49951	01/05/10	806	7.12	4290	42.25	41	13.9	N/A	1.5	0.019						
10-50866	03/12/10	806			40.92											
09-46054	02/04/09	015A	6.6	2970	45.25	N/A	18.1	N/A	1.3	0.0428		<0.006		0.15	0.05	0.353
09-46998	04/29/09	015A	6.72	3210	44.9	N/A	18.4	N/A	1.5	0.0442		<0.002		0.31	0.04	0.418
09-47996	07/28/09	015A	6.9	3290	44.65	N/A	19.7	N/A	1.5	0.0444		<0.004		0.08	<0.03	0.306

Appendix C - Analytical Results, Groundwater Samples, NOV Groundwater Investigation

Lab#	Sample		FIELD PARAMETERS							TRACE METALS						
			FpH	FCond	DTW	DTW_RL	Temp	FIRate	PmRate	U_dis	U_sus	Modis	Mosus	Fedis	Mndis	Sedis
	Date	Loc.	S.U.	µ S	feet	feet	°C	CFS	GPM	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
09-49148	10/28/09	015A	7.04	2960	41.03	N/A	13	N/A	1.4	0.0326		<0.004		0.07	<0.03	0.219
10-50450	02/11/10	015A	6.85	2850	N/A	34.35	15.7	N/A	1.5							
10-50871	03/12/10	015A			34.8											
10-50452	02/11/10	015B	NSD													
09-45990	01/30/09	050B	7.14	3490	39.44	34.35	12.9	N/A	0.8	<0.0002		<0.006		0.09	0.44	<0.001
09-47031	05/01/09	050B	7.05	3480	47.3	34.65	13.6	N/A	1.2	<0.0002		<0.002		<0.07	0.26	<0.001
09-48013	07/31/09	050B	7.24	3450	42.12	34.92	14.5	N/A	1	<0.0002		<0.004		<0.07	0.18	0.003
09-49138	10/27/09	050B	7.25	3380	35.74	34.4	13.6	N/A	1.4	<0.0002		<0.004		1.4	0.44	<0.001
10-50375	02/04/10	050B	7.53	3520	39.77	33.5	13.5	N/A	1.5							
09-47244	05/19/09	345 (C-1)	7.42	3250	36.99	N/A	17.7	N/A	1.5	0.11		0.026		0.17	0.11	

**KEY**

- N/A = No applicable
- NSFP = No sample - frozen pond
- NSW = No sample winterized
- NSNF = No sample; no flow
- NSPB = No sample; pump broke
- NSLW = No sample low water
- NSCU = No sample conditions unsafe
- NSD = No sample dry
- New wells











Appendix C - Analytical Results, Groundwater Samples, NOV Groundwater Investigation

Lab#	Sample		RADIONUCLIDES															
			Ra226D		Ra226S		Th230D		Th230S		Pb210D		Pb210S		Po210D		Po210S	
	Date	Loc.	pCi/L	D.L.	pCi/L	D.L.	pCi/L	D.L.	pCi/L	D.L.	pCi/L	D.L.	pCi/L	D.L.	pCi/L	D.L.	pCi/L	D.L.
09-49148	10/28/09	015A																
10-50450	02/11/10	015A																
10-50871	03/12/10	015A																
10-50452	02/11/10	015B																
09-45990	01/30/09	050B																
09-47031	05/01/09	050B																
09-48013	07/31/09	050B																
09-49138	10/27/09	050B																
10-50375	02/04/10	050B																
09-47244	05/19/09	345 (C-1)																

**KEY**

- N/A = No applicable
- NSFP = No sample - frozen pond
- NSW = No sample winterized
- NSNF = No sample; no flow
- NSPB = No sample; pump broke
- NSLW = No sample low water
- NCSU = No sample conditions unsafe
- NSD = No sample dry
- New wells

Appendix C - Analytical Results, Groundwater Samples, NOV Groundwater Investigation

Lab#	Sample		MAJOR IONS									LAB MEASUREMENTS				
			Nadis	Kdis	Cadis	Mgdis	Cl	HCO3	CO3	SO4	NO3	LpH	LCond	Alk2	TDS	TSS
	Date	Loc.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	S.U.	µ S	mg/L	mg/L	mg/L
09-45738	01/06/09	009	1000	6.3	250	100	92	400	<5	2400	12	7.1	5470	400	4310	0.9
09-46676	04/02/09	009	920	7	240	90	91	400	<5	2200	11	7.6	4840	400	3960	<3
09-47680	07/01/09	009	630	4.7	140	55	91	370	<5	2300	14	7.2	3380	370	3680	<3
09-48722	09/24/09	009	560	2.7	110	47	94	440	<10	2500	12	7.4	2970	440	4200	4.2
10-49938	01/04/10	009	460	4.7	81	32	40	380	<5	950	8.4	7.1	2600	380	1740	<2.8
10-50358	02/03/10	009					85	340	<10	960		7.3	2300	340	1690	<3
10-50865	03/12/10	009														
10-51354	03/31/10	009														
09-45739	01/06/09	014	590	3.7	17	3.6	72	280	<10	1000	<0.5	7.9	2910	280	1870	0.6
09-46677	04/02/09	014	580	3	22	3.1	76	280	<10	1100	<0.6	7.8	2800	280	1910	<2
09-47681	07/01/09	014	560	2.8	28	3.3	72	280	<10	1100	<0.6	8	2740	280	1870	<3
09-48723	09/24/09	014	600	3.7	26	3.9	81	290	<10	1100	<0.6	8.4	2980	290	2060	<2.7
10-49939	01/04/10	014	630	4	28	3.8	76	340	<10	1100	<0.56	8.09	2950	340	2110	<2.6
10-50359	02/03/10	014					83	280	<10	1100		7.9	2300	280	2010	<3
10-50864	03/12/10	014														
10-51353	03/31/10	014														
09-46401	03/11/09	035														
09-47384	06/01/09	035														
09-48428	09/09/09	035	440	4	240	68	220	280	<10	1200	26	7.1	3350	280	2530	3.9
09-49681	12/15/09	035	480	4.9	240	77	220	280	<10	1300	27	7	3480	280	2620	526
10-50849	03/12/10	035														
10-51078	03/31/10	035														
10-51334	03/31/10	035														
09-46390	03/10/09	036	340	1.1	10	0.5	22	130	<10	440	3.1	8.2	1136	130	797	80.3
09-47564	06/22/09	036	240	1.1	9.7	0.46	38	140	<10	420	2.4	8.1	1330	140	774	15.3
09-48447	09/10/09	036	240	1	8.6	0.42	25	120	<10	420	3.1	8	1050	120	661	88.8
09-49680	12/15/09	036	230	1.4	1.2	0.6	30	130	<10	420	3	7.4	1250	130	746	31.7
10-50848	03/12/10	036														
10-51018	03/26/10	036					28	100	<5	430				100	843	10.3
10-51333	03/31/10	036														
09-46380	03/09/09	037	570	6.3	120	27	130	100	<5	1200	9.2	7.6	2872	100	2020	22.7
09-47399	06/04/09	037	460	5.9	110	24	110	110	<5	1200	8.6	7.9	2750	110	1990	229
09-48352	09/02/09	037	440	6.6	100	26	120	86	<5	1200	9.7	8	2750	86	3540	30.6
09-49773	12/23/09	037	460	7.2	97	18	140	95	<5	1200	19	8	2740	95	3520	142
10-50858	03/12/10	037														
10-51016	03/25/10	037					110	150	<5	1100				150	1970	81.9
10-51344	03/31/10	037														
09-46391	03/10/09	038	410	4.6	140	48	86	220	<10	730	<0.5	7.8	2370	220	1450	18.1
09-47389	06/02/09	038	280	4.1	110	38	95	240	<10	710	<0.6	7.9	1970	240	1430	19.6
09-48383	09/01/09	038	310	4.6	120	47	88	240	<10	700	<0.6	7.4	2330	240	1470	25.7
09-49771	12/23/09	038	280	4.4	100	28	89	450	<10	790	<0.56	7.8	2060	450	1420	13.8
10-50847	03/12/10	038														
10-51019	03/26/10	038					100	280	<10	780				280	1500	15.1
10-51332	03/31/10	038														
09-48689	09/23/09	039	400	2.3	60	9.6	170	230	<10	640	<0.6	7.8	2140	230	1430	<3



Appendix C - Analytical Results, Groundwater Samples, NOV Groundwater Investigation

Lab#	Sample		MAJOR IONS									LAB MEASUREMENTS				
			Nadis	Kdis	Cadis	Mgdis	Cl	HCO3	CO3	SO4	NO3	LpH	LCond	Alk2	TDS	TSS
	Date	Loc.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	S.U.	µ S	mg/L	mg/L	mg/L
10-50489	02/15/10	044	440	6.4	280	120	120	410	<5	1500	19			410	3020	134
10-50854	03/12/10	044														
10-50939	03/17/10	044					110	410	<10	1300			410	3100	36.7	
10-51340	03/31/10	044														
10-50500	02/16/10	045	310	4.5	99	21	97	160	<5	670	2.6			160	1300	10200
10-50853	03/12/10	045														
10-50920	03/16/10	045					100	160	<5	670			160	1240	1120	
10-51339	03/31/10	045														
10-50491	02/15/10	046	270	2.6	43	5.8	55	150	<5	520	<0.6			160	985	107
10-50852	03/12/10	046														
10-50919	03/16/10	046					54	160	<5	570			160	1040	2320	
10-51338	03/31/10	046														
10-50490	02/15/10	047	270	2.9	40	5.1	55	160	<5	520	<0.6			160	954	95.1
10-50851	03/12/10	047														
10-50918	03/16/10	047					56	160	<5	490			160	969	37.2	
10-51337	03/31/10	047														
09-45989	01/30/09	135	1100	9.6	260	93	140	490	<25	2800	2	7.1	5830	490	4750	4
09-47030	05/01/09	135	1100	8.1	200	75	140	430	<25	2500	4.2	7.4	5410	430	4170	3
09-48012	07/31/09	135	980	8.3	210	100	160	500	<26	2800	9.2	7.13	5470	500	4580	<3
09-49147	10/28/09	135	434	5.1	180	49	140	480	<26	2800	8	7.4	2660	480	5880	<3
10-50374	02/04/10	135					150	480	<26	2800		7.4	2710	480	4590	<3
10-51351	03/31/10	135														
09-46407	03/12/09	309														
09-46485	03/19/09	309	2400	6.6	470	220	430	580	<10	5600	120	7.52	10730	580	9690	20.1
09-47624	06/23/09	309	2200	6.5	490	190	480	600	<26	5600	120	7	11300	600	10600	49.4
09-48353	09/02/09	309	2100	6.5	410	220	380	600	<10	5500	120	7.2	10900	600	10300	27.1
09-49682	12/15/09	309	2200	7.8	380	210	400	630	<10	5300	120	7.1	10700	630	9120	273
10-49996	12/28/09	309														
10-50754	03/04/10	309					410	630	<10	5300				630	9050	48.5
10-51314	03/31/10	309														
09-45740	01/06/09	336	410	4.8	160	71	85	220	<5	1200	3.6	7.4	2850	220	2050	2.6
09-46037	02/02/09	336	360	3.9	140	63	82	220	<5	1200	1	7.5	2530	220	1940	4
09-46464	03/17/09	336	400	4.3	170	63	81	220	<5	1200	4.9	7.6	2666	220	2030	2
09-46678	04/02/09	336	400	4.4	130	56	85	220	<5	1100	2.8	7.9	2620	220	1930	<3
09-47688	07/02/09	336	420	4	170	72	76	250	<5	1200	5.8	7.4	2790	250	2310	3
09-48005	07/30/09	336	390	4.8	140	69	80	230	<5	1200	4.2	7.48	2780	230	2130	3
09-48542	09/14/09	336	390	4.4	150	64	79	230	<5	1200	5.5	7.6	2720	230	2040	3.1
09-48729	09/25/09	336	420	4.4	170	55	79	260	<10	1000	3.6	7.6	2450	260	2000	<2.6
09-49128	10/26/09	336	390	4.8	150	66	83	230	<5	1100	4.9	8	2650	230	1940	3
10-49949	01/05/10	336					85	220	<5	1200	4.9	7.7	3730	220	2110	11.6
10-50373	02/04/10	336					90	230	<10	1100		7.7	2470	230	1890	<3
10-50805	03/08/10	336					88	220	<5	1200				220	2100	7.5
10-50863	03/12/10	336														
10-51350	03/31/10	336														
09-46170	02/16/09	337	120	7.7	520	160	140	96	<5	2000	2.4	7.1	3380	96	3210	35.2

Appendix C - Analytical Results, Groundwater Samples, NOV Groundwater Investigation

Lab#	Sample		MAJOR IONS									LAB MEASUREMENTS				
			Nadis	Kdis	Cadis	Mgdis	Cl	HCO3	CO3	SO4	NO3	LpH	LCond	Alk2	TDS	TSS
	Date	Loc.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	S.U.	µ S	mg/L	mg/L	mg/L
09-47363	06/01/09	337	140	8.8	510	140	180	100	<5	2100	3.3	7	3320	100	3380	29.9
09-48301	08/27/09	337	150	8.5	520	140	130	100	<5	2100	3.3	6.8	3510	100	3240	31.8
09-49506	12/01/09	337	140	11	520	160	170	100	<5.1	2000	2.2	7.8	3590	100	3260	24.8
10-50727	03/02/10	337					180	98	<5	2100				98	3410	35.4
10-50868	03/12/10	337														
10-51357	03/31/10	337														
09-46169	02/16/09	338	620	2.8	460	210	360	340	<10	2600	6.6	7.2	5450	340	4630	7
09-47362	06/01/09	338	680	3.2	460	180	420	310	<10	2900	7.3	7.3	5240	310	4610	10
09-48300	08/27/09	338	710	3	430	180	360	330	<10	2800	6.3	7.3	5370	330	4740	26.1
09-49505	11/30/09	338	590	3.6	430	190	340	320	<10	2500	<0.6	7.3	5170	320	4600	<2.6
10-50726	03/02/10	338					400	350	<10	2500				350	4670	2.7
10-50869	03/12/10	338														
10-51358	03/31/10	338														
09-46055	02/04/09	342	250	4.1	280	74	72	780	<25	870	<0.5	7.1	2570	780	2130	22.4
09-47562	06/22/09	342	290	7.6	280	70	43	380	<26	990	<0.6	6.8	2560	380	2240	92.6
09-48299	08/27/09	342	300	7.8	230	67	35	830	<26	900	<0.6	7.1	2570	830	2140	95.6
09-49504	11/30/09	342	167	5.6	150	51	60	830	<26	980	<0.6	7.2	1720	830	2410	164
10-50725	03/02/10	342					80	330	<5	1000				330	2490	479
10-50870	03/12/10	342														
10-51359	03/31/10	342														
09-46405	03/12/09	344	1100	6.1	300	57	240	340	<10	2500	6.2	7.17	4970	340	4560	88.9
09-47608	06/24/09	344	980	7.1	310	59	220	380	<10	2400	7.8	7.1	5260	380	4340	14.5
09-48354	09/02/09	344	900	6.8	250	56	350	380	<5	2500	7.1	7.1	5480	380	4270	26.4
09-49706	12/16/09	344	790	7.4	230	59	360	380	<5	2400	6.8	7.3	5170	380	4200	18.2
10-50755	03/04/10	344					220	330	<5	2400				330	3870	18.6
10-50846	03/12/10	344														
10-51304	03/31/10	344														
09-45810	01/15/09	346	420	6.2	240	120	120	360	<10	1400	30	7.5	3400	360	2660	37.3
09-46829	04/13/09	346	380	5	230	110	120	340	<10	1300	25	7.6	3280	340	2540	<3
09-47689	07/02/09	346	410	4.2	240	120	120	360	<10	1300	28	7.3	3240	360	2650	14.4
09-48810	10/02/09	346	400	5.9	200	110	120	400	<10	1300	33	7.5	3130	400	2610	11.5
10-50074	01/11/10	346					110	400	<10	1300	32	7.5	3240	400	2640	6
10-50850	03/12/10	346														
10-51335	03/31/10	346														
09-46596	03/20/09	347														
09-47563	06/22/09	347														
09-47785	06/22/09	347														
09-48517	09/11/09	347														
09-49770	12/21/09	347														
10-50017	12/28/09	347														
10-50922	03/16/10	347														
10-51336	03/31/10	347														
09-46484	03/19/09	348	780	6.3	360	130	160	390	<10	2300	54	7.14	5177	390	4180	10.3
09-47610	06/24/09	348	800	7.4	370	130	130	360	<10	2400	74	6.8	5270	360	4500	16.7
09-48371	09/03/09	348	740	5.9	330	130	140	350	<10	2300	54	7.2	4810	350	4150	3.8

Appendix C - Analytical Results, Groundwater Samples, NOV Groundwater Investigation

Lab#	Sample		MAJOR IONS									LAB MEASUREMENTS				
			Nadis	Kdis	Cadis	Mgdis	Cl	HCO3	CO3	SO4	NO3	LpH	LCond	Alk2	TDS	TSS
	Date	Loc.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	S.U.	µ S	mg/L	mg/L	mg/L
09-49724	12/17/09	348	680	7.6	290	140	140	350	<10	2400	52	7.2	4940	350	4330	6.9
10-50757	03/04/10	348					150	360	<10	2400				360	4340	104
10-50844	03/12/10	348														
09-46406	03/12/09	368	1500	4.1	580	210	860	390	<10	3500	45	7.4	8750	390	7000	27.7
09-47609	06/24/09	368	1400	4.6	620	210	910	390	<10	3600	60	7.7	8520	390	7390	82.7
09-48372	09/03/09	368	1300	4.1	540	200	880	400	<10	2600	45	7.4	8650	400	7320	22.3
09-49707	12/16/09	368	1200	4.9	480	210	890	390	<10	3500	43	7.4	8680	390	6960	72.8
10-50756	03/04/10	368					900	320	<10	3500				320	6930	18.2
10-50845	03/12/10	368														
09-46119	02/11/09	802	360	3	180	72	100	310	<5	1100	16	7.2	3180	310	2250	0
09-47111	05/04/09	802	380	4.6	200	70	100	310	<5	1100	20	7.3	2760	310	2150	<3
09-47446	06/08/09	802	400	4.6	190	65	100	300	<5	1100	21	7.2	2770	300	2080	<3
09-48006	07/30/09	802	360	4.8	170	71	120	320	<5	1300	17	7.18	2730	320	2100	<3
09-49224	11/04/09	802	480	4.9	180	72	100	230	<5	1100	18	7.6	2720	230	2230	3
10-50338	02/01/10	802					100	300	<5	1100		7.3	2780	300	2000	<3
10-50860	03/12/10	802														
09-45756	01/09/09	803	430	6.1	290	90	120	280	<5	1500	4	7.1	3410	280	2800	6
09-46770	04/08/09	803	380	4.7	250	79	96	230	<5	1500	4.3	7.2	3340	230	2620	384
09-47842	07/14/09	803	410	5.7	260	81	110	240	<5	1600	4.1	7.3	3180	240	2740	11.6
09-48014	07/31/09	803	390	5.4	250	81	110	300	<5	1500	4.1	7.28	3260	300	2590	5
09-48796	10/01/09	803	420	5.9	260	84	86	280	<5	1700	3.5	7.4	3490	280	2740	<2.6
09-49146	10/28/09	803	450	6.2	280	97	98	260	<10	1500	4.3	7.3	3460	260	2630	<3
10-49952	01/05/10	803					91	260	<5	1700	3	7.4	3920	260	3240	5.8
10-50861	03/12/10	803														
09-45755	01/09/09	804	640	6	330	160	170	360	<5	2200	30	7.1	4790	360	4100	12.6
09-46769	04/08/09	804	630	5.1	300	140	170	340	<5	2200	33	7.5	4740	340	3870	14
09-47807	07/10/09	804	680	4.6	320	150	180	250	<5	2400	26	7.4	4660	250	4090	10
09-48795	10/01/09	804	670	6.3	290	140	220	370	<5	2200	35	7.1	4710	370	4020	13.2
10-49950	01/05/10	804					160	370	<5	2200	29	7.4	4680	370	3880	7.6
10-50862	03/12/10	804														
09-46378	03/09/09	805	410	4.3	150	95	160	280	<10	1800	5	7.4	2480	280	3240	2
09-47171	05/11/09	805	580	3.8	100	72	100	300	<10	1800	5	7.5	2060	300	3430	<3
09-48340	09/01/09	805	230	3.3	160	45	140	280	<10	1800	4.2	7.7	1560	280	3020	<2.6
09-49765	12/21/09	805	210	3.1	140	36	130	570	<10	1800	4.8	7.6	1680	570	3020	<2.8
10-50867	03/12/10	805														
10-50938	03/17/10	805					140	280	<5	1900				280	3240	4.3
09-45754	01/09/09	806	270	3.9	530	140	110	220	<5	2000	2.1	7	3960	220	3610	39.5
09-46768	04/08/09	806	300	3.3	520	140	120	200	<5	2200	2.4	7.1	3980	200	3440	6
09-47806	07/10/09	806	320	3	590	140	120	230	<5	2100	2.7	7.1	3870	230	3290	69.7
09-48794	10/01/09	806	310	4	500	140	120	210	<5	2100	2.7	7.1	4080	210	3690	26.9
10-49951	01/05/10	806					110	210	<5	2000	3	7.2	4170	210	3750	38.4
10-50866	03/12/10	806														
09-46054	02/04/09	015A	230	19	530	110	100	280	<10	1600	2.7	6.8	3130	280	2660	145
09-46998	04/29/09	015A	240	7.5	390	110	240	310	<5	1600	9.5	7	3070	310	2710	326
09-47996	07/28/09	015A	240	8.6	380	120	130	310	<5	1600	1	7.11	3180	310	2770	97

Appendix C - Analytical Results, Groundwater Samples, NOV Groundwater Investigation

Lab#	Sample		MAJOR IONS									LAB MEASUREMENTS				
			Nadis	Kdis	Cadis	Mgdis	Cl	HCO3	CO3	SO4	NO3	LpH	LCond	Alk2	TDS	TSS
	Date	Loc.	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	S.U.	µ S	mg/L	mg/L	mg/L
09-49148	10/28/09	015A	290	8.7	340	110	100	280	<10	1600	12	7	2990	280	2670	178
10-50450	02/11/10	015A					130	280	<5	1600		7	2240	280	2800	141
10-50871	03/12/10	015A														
10-50452	02/11/10	015B														
09-45990	01/30/09	050B	560	9.1	250	61	200	280	<10	1700	<0.5	7.2	3580	280	2700	44.5
09-47031	05/01/09	050B	540	7.9	210	58	250	280	<10	1600	<0.6	7.1	3460	280	2750	11.5
09-48013	07/31/09	050B	680	11	280	61	130	300	<10	1300	<0.6	7.34	3580	300	2830	112
09-49138	10/27/09	050B	510	7.9	210	55	220	280	<10	1800	<0.6	7.2	3390	280	2700	35.9
10-50375	02/04/10	050B					120	300	<10	1500		7.6	3440	300	2640	28.5
09-47244	05/19/09	345 (C-1)	590	5.6	160	31	320	250	<10	1200	4.1	7.5	3190	250	2200	149

**KEY**

N/A = No applicable

NSFP = No sample - frozen pond

NSW = No sample winterized

NSNF = No sample; no flow

NSPB = No sample; pump broke

NSLW = No sample low water

NSCU = No sample conditions unsafe

NSD = No sample dry

     New wells