

3.6.3 Groundwater Use

The majority of the groundwater-use permits filed in the vicinity of the Permit Area is for monitoring or miscellaneous mining-related purposes. Many of those permits are associated with the Kennecott Sweetwater Mine (formerly owned by Minerals Exploration Co.), which has been reclaimed (**Section 3.1.1.4**).

Groundwater permits with legal descriptions inside and within three miles of the Permit Area were queried using the WSEO Water Rights Database (WSEO, 2010). **Table 3.6-6** list permits within one-half mile and three miles of the Permit Area, respectively, and the locations are shown on **Figure 3.6-15**. The lists include potentially active permits as well as abandoned and cancelled permits, which were issued by WSEO to parties other than LCI or its affiliates. The permit information includes, but is not limited to, location, uses, priority dates, status, yield, total depth, and static water depth.

3.6.3.1 BLM Wells

The groundwater permits within one mile unrelated to mining are those of the BLM. In 1968 and 1980, the BLM Rawlins District was granted three permits by the WSEO. Each of these permits is associated with a well that supplies a stock pond or tank (**Figure 3.6-15**). These wells and associated stock ponds are located outside of the Permit Area. The permit numbers and names of these BLM wells are:

- WSEO Permit 13834, Battle Spring Draw Well No. 4451;
- WSEO Permit 55112, Boundary Well No. 4775; and
- WSEO Permit 55113, Battle Spring Well No. 4777.

In addition, there is a fourth BLM well (East Eagle Nest Draw Well), also supplying a stock pond, for which no water-use permit was found.

Battle Spring Draw Well No. 4451 pumps water into a stock tank east of the Permit Area. The well depth is 900 feet deep, with a static water level of 104 feet. A yield of 19 gpm is permitted. The screened interval is unknown, but given the well depth, it may be significantly deeper than the sands targeted by LCI. **Figure 3.6-10** shows photographs of this well and associated stock tank. Although Well No. 4451 is outside of the Permit Area, two groundwater samples, one pond water sample, one algae sample, and one soil sample were collected and analyzed (**Table 3.6-7**). The results indicate that the water, algae, and soil all have high levels of radionuclides. In addition, the algae sample had a high selenium concentration.

Table 3.6-6 Groundwater-Use Permits within a 3-Mile Radius, WSEO Records, December 2008 (Page 1 of 6)

ID ¹	Well or Use Point	Permit Number	Applicant ²	Township	Range	Section	¼ of the ¼ ³	Uses	Priority	Status	Permit Facility Name	Yield ⁴ (gpm)	Well Depth (ft)	Static Well Depth (ft)
1	Well	P9742W	Kennecott Uranium Company	24 N	94 W	34	NENE	Stock, Industrial	7/15/1971	Adjudicated	J E S No. 1	25	170	104
2	Well	P13834P	USDI BLM, Rawlins District	25 N	92 W	21	NENW	Stock	9/21/1968	Good Standing	Battle Spring Draw Well No. 4451	19	900	104
3	Well	P34708W	USDI, BLM -- Minerals Exploration Co.	24 N	93 W	10	SESW	Monitoring	8/16/1976	Cancelled	RDW-5	INP	INP	INP
4	Well	P35721W	USDI, BLM -- Texasgulf Inc.	25 N	93 W	14	SWSE	Stock, Miscellaneous	12/8/1976	Abandoned	TE 24	INP	INP	INP
5	Well	P35772W	USDI BLM, Rawlins District -- Minerals Exploration Co.	24 N	93 W	9	NESE	Miscellaneous	11/24/1976	Cancelled	RDW - 8	INP	INP	INP
6	Well	P35773W	USDI BLM, Rawlins District -- Minerals Exploration Co.	24 N	93 W	9	NESE	Monitoring	11/24/1976	Abandoned	RDW - 6	0	452	60
7	Well	P35774W	USDI BLM, Rawlins District -- Minerals Exploration Co.	24 N	93 W	10	SWSW	Industrial	11/24/1976	Abandoned	RDW - 7	Unkno wn	450	60
8	Well	P37637W	USDI, BLM -- Texasgulf Inc.	25 N	93 W	24	NENW	Miscellaneous	5/5/1977	Cancelled	TE 38	25	380	220
9	Well	P39744W	USDI, BLM -- Apexco Inc.	25 N	93 W	22	SWNE	Miscellaneous	8/26/1977	Cancelled	Battle Springs No. 1	25	640	60
10	Well	P41699W	Kennecott Uranium Company	24 N	93 W	10	NESW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W10CA-DW1	400	600	106.83
11	Well	P41700W	Kennecott Uranium Company	24 N	93 W	10	NESW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W10CA-DW2	400	600	118.4
12	Well	P41701W	Kennecott Uranium Company	24 N	93 W	10	NESW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W10CA-DW3	400	620	111.7
13	Well	P41702W	Kennecott Uranium Company	24 N	93 W	10	NESW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W10CA-DW4	400	620	113.8
14	Well	P41703W	Kennecott Uranium Company	24 N	93 W	10	NWSW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W10CB-DW5	400	600	119

Table 3.6-6 Groundwater-Use Permits within a 3-Mile Radius, WSEO Records, December 2008 (Page 2 of 6)

ID ¹	Well or Use Point	Permit Number	Applicant ²	Township	Range	Section	¼ of the ¼ ³	Uses	Priority	Status	Permit Facility Name	Yield ⁴ (gpm)	Well Depth (ft)	Static Well Depth (ft)
15	Well	P41704W	Kennecott Uranium Company	24 N	93 W	10	NWSW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W10CB-DW6	400	600	117.5
16	Well	P41705W	Kennecott Uranium Company	24 N	93 W	10	NWSW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W10CB-DW7	400	600	116.8
17	Well	P41706W	Kennecott Uranium Company	24 N	93 W	10	SWSW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W10CC-DW18	100	201	100
18	Well	P41707W	Kennecott Uranium Company	24 N	93 W	9	SESE	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W9DD-DW9	400	600	113.1
19	Well	P41708W	Kennecott Uranium Company	24 N	93 W	10	SWSW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-9310CC-DW19	100	250	100
20	Well	P41709W	Kennecott Uranium Company	24 N	93 W	9	SESE	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-939DD-DW28	300	600	152
21	Well	P41710W	Kennecott Uranium Company	24 N	93 W	9	SESE	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93DD-DW29	179	465	179
22	Well	P41711W	Kennecott Uranium Company	24 N	93 W	10	SWSW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W15BB-DW13	400	600	103.5
23	Well	P41712W	Kennecott Uranium Company	24 N	93 W	10	SWSW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W15BB-DW14	400	600	105.8
24	Well	P41713W	Kennecott Uranium Company	24 N	93 W	10	SESW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W10CD-DW15	400	600	101.1
25	Well	P41714W	Kennecott Uranium Company	24 N	93 W	10	SESW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W10CD-DW16	400	600	101
26	Well	P41715W	Kennecott Uranium Company	24 N	93 W	10	SESW	Reservoir Supply, Industrial, Miscellaneous	7/28/1977	Unadjudicated	24-93W10CD-DW17	400	600	103.3

Table 3.6-6 Groundwater-Use Permits within a 3-Mile Radius, WSEO Records, December 2008 (Page 3 of 6)

ID ¹	Well or Use Point	Permit Number	Applicant ²	Township	Range	Section	¼ of the ¼ ³	Uses	Priority	Status	Permit Facility Name	Yield ⁴ (gpm)	Well Depth (ft)	Static Well Depth (ft)
27	Well	P41716W	Kennecott Uranium Company	24 N	93 W	10	SWSW	Dewatering, Reservoir Supply, Miscellaneous	7/28/1977	Unadjudicated	24-93W10CC-S1	300	16	2
28	Well	P47137W	Kennecott Uranium Company	24 N	93 W	10	NWNW	Reservoir Supply, Stock, Miscellaneous	12/7/1977	Unadjudicated	Blue No. 5	INP	INP	INP
29	Well	P48386W	Kennecott Uranium Company	24 N	93 W	3	SWNE	Monitoring, Dewatering, Miscellaneous	5/31/1979	Unadjudicated	24-93W-3AC-M-1	0	450	135.8
30	Well	P53849W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	9	SESE	Dewatering, Industrial, Miscellaneous	9/4/1980	Unadjudicated	24 93 9DD - DW 30	250	460	170
31	Well	P54883W	Kennecott Uranium Company -- WSBLC	24 N	93 W	16	NWNE	Dewatering, Industrial, Miscellaneous	11/24/1980	Good Standing	DW31	190	600	152
32	Well	P54884W	Kennecott Uranium Company -- WSBLC	24 N	93 W	16	NENE	Dewatering, Industrial, Miscellaneous	11/24/1980	Unadjudicated	DW 32	200	600	147
33	Well	P54885W	Kennecott Uranium Company -- WSBLC	24 N	93 W	16	NENE	Dewatering, Industrial, Miscellaneous	11/24/1980	Unadjudicated	DW 33	190	560	141
34	Well	P54886W	Kennecott Uranium Company -- WSBLC	24 N	93 W	16	NENE	Dewatering, Industrial, Miscellaneous	11/24/1980	Good Standing	DW 34	200	450	140
35	Well	P54887W	Minerals Exploration Company -- WSBLC	24 N	93 W	15	SWNW	Dewatering, Industrial, Miscellaneous	11/24/1980	Cancelled	DW 35	INP	INP	INP
36	Well	P54888W	Minerals Exploration Company -- WSBLC	24 N	93 W	15	SWNW	Dewatering, Industrial, Miscellaneous	11/24/1980	Cancelled	DW 36	INP	INP	INP
37	Well	P54889W	Minerals Exploration Company -- WSBLC	24 N	93 W	15	NWNW	Dewatering, Industrial, Miscellaneous	11/24/1980	Cancelled	DW 37	INP	INP	INP
38	Well	P54890W	Minerals Exploration Company -- WSBLC	24 N	93 W	15	NWNW	Dewatering, Industrial, Miscellaneous	11/24/1980	Cancelled	DW 38	INP	INP	INP

Table 3.6-6 Groundwater-Use Permits within a 3-Mile Radius, WSEO Records, December 2008 (Page 4 of 6)

ID ¹	Well or Use Point	Permit Number	Applicant ²	Township	Range	Section	¼ of the ¼ ³	Uses	Priority	Status	Permit Facility Name	Yield ⁴ (gpm)	Well Depth (ft)	Static Well Depth (ft)
39	Well	P54891W	USDI BLM -- Kennecott Uranium Company	24 N	93 W	15	NWNW	Dewatering, Industrial, Miscellaneous	11/24/1980	Good Standing	DW 39	200	600	169
40	Well	P54892W	USDI BLM -- Kennecott Uranium Company	24 N	93 W	15	NWNW	Dewatering, Industrial, Miscellaneous	11/24/1980	Good Standing	DW 40	200	600	155
41	Well	P54893W	Kennecott Uranium Company -- WSBLC	24 N	93 W	16	NENE	Dewatering, Industrial, Miscellaneous	11/24/1980	Good Standing	DW 41	190	600	157
42	Well	P54894W	Kennecott Uranium Company -- WSBLC	24 N	93 W	16	NENE	Dewatering, Industrial, Miscellaneous	11/24/1980	Good Standing	DW 42	200	600	166
43	Well	P54896W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	9	NESE	Dewatering, Industrial, Miscellaneous	6/11/1980	Unadjudicated	24 93 9 DA-DW20	200	575	178
44	Well	P54897W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	9	NESE	Dewatering, Industrial, Miscellaneous	6/11/1980	Unadjudicated	24 93 9 DA-DW21	200	580	170
45	Well	P54898W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	9	SESE	Dewatering, Industrial, Miscellaneous	6/11/1980	Unadjudicated	24 93 9 DA-DW22	150	480	159
46	Well	P54899W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	9	SESE	Dewatering, Industrial, Miscellaneous	6/11/1980	Unadjudicated	24 93 9 DA-DW23	150	525	154
47	Well	P54900W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	9	SWSE	Dewatering, Industrial, Miscellaneous	6/11/1980	Unadjudicated	24 93 9 DC-DW24	150	540	151
48	Well	P54901W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	9	SWSE	Dewatering, Industrial, Miscellaneous	6/11/1980	Unadjudicated	24 93 9 DD-DW25	150	660	145
49	Well	P54902W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	9	SESE	Dewatering, Industrial, Miscellaneous	6/11/1980	Unadjudicated	24 93 9 DD-DW26	150	560	159
50	Well	P54903W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	9	SESE	Dewatering, Industrial, Miscellaneous	6/11/1980	Unadjudicated	24 93 9 DD-DW27	200	600	164

Table 3.6-6 Groundwater-Use Permits within a 3-Mile Radius, WSEO Records, December 2008 (Page 5 of 6)

ID ¹	Well or Use Point	Permit Number	Applicant ²	Township	Range	Section	¼ of the ¼ ³	Uses	Priority	Status	Permit Facility Name	Yield ⁴ (gpm)	Well Depth (ft)	Static Well Depth (ft)
51	Well	P55112W	USDI BLM, Rawlins District	25 N	92 W	10	SESE	Stock	12/24/1980	Good Standing	Boundary	5	280	155
52	Well	P55113W	USDI BLM, Rawlins District	25 N	92 W	30	NWSE	Stock	12/24/1980	Good Standing	Battle Springs	5	220	109
53	Well	P55114W	BLM - Rawlins District	25 N	92 W	35	SENE	Stock	12/24/1980	Good Standing	Sooner	5	320	237
54	Well	P60051W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	10	SESW	Monitoring	2/20/1982	Good Standing	PH1	0	350	100
55	Well	P60052W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	10	NESW	Monitoring	2/20/1982	Good Standing	PH2	0	350	100
56	Well	P60053W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	10	NESW	Monitoring	2/20/1982	Good Standing	PH3	0	350	100
57	Well	P60054W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	10	NWSW	Monitoring	2/20/1982	Good Standing	PH4	0	350	100
58	Well	P60055W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	10	NWSW	Monitoring	2/20/1982	Good Standing	PH5	0	350	100
59	Well	P60056W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	10	NWSW	Monitoring	2/20/1982	Good Standing	PH6	0	350	100
60	Well	P60057W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	9	SWSE	Monitoring	2/20/1982	Good Standing	PH7	0	350	100
61	Well	P60058W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	9	SWSE	Monitoring	2/20/1982	Good Standing	PH8	0	350	100
62	Well	P60059W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	9	SWSE	Monitoring	2/20/1982	Good Standing	PH9	0	350	100
63	Well	P61528W	Texasgulf Inc.	25 N	92 W	20	NWNW	Monitoring	6/11/1982	Abandoned	M25 92 20 1S	0	355	155.8
64	Well	P61529W	Texasgulf Inc.	25 N	92 W	20	NWNW	Monitoring	6/11/1982	Abandoned	M25 92 20 1M	0	440	173.8
65	Well	P61530W	Texasgulf Inc.	25 N	92 W	20	NWNW	Monitoring	6/11/1982	Abandoned	M25 92 20 1D	0	534	181.2
66	Well	P61531W	Texasgulf Inc.	25 N	92 W	19	NENE	Monitoring	6/11/1982	Abandoned	M25 92 19 3M	0	460	176.5
67	Well	P61532W	Texasgulf Inc.	25 N	92 W	19	NENE	Monitoring	6/11/1982	Abandoned	M25 92 19 2M	0	460	175.9
68	Well	P61533W	Texasgulf Inc.	25 N	92 W	19	NENE	Monitoring	6/11/1982	Abandoned	M25 92 19 1M	0	460	174.4
69	Well	P61534W	Texasgulf Inc.	25 N	92 W	18	SESE	Monitoring	6/11/1982	Abandoned	M25 19 18 1M	0	465	166.7
70	Well	P61535W	Texasgulf Inc.	25 N	92 W	18	SESE	Monitoring	6/11/1982	Abandoned	M25 19 18 1S	0	355	159.5
71	Well	P61536W	Texasgulf Inc.	25 N	92 W	18	SESE	Monitoring	6/11/1982	Abandoned	M25 92 18 1D	0	615	195.7
72	Well	P61537W	Texasgulf Inc.	25 N	92 W	17	SESW	Monitoring	6/11/1982	Abandoned	M25 92 17 1S	0	340	170.53
73	Well	P61538W	Texasgulf Inc.	25 N	92 W	17	SESW	Monitoring	6/11/1982	Abandoned	M25 92 17 1M	0	480	182.7
74	Well	P61539W	Texasgulf Inc.	25 N	92 W	17	SESW	Monitoring	6/11/1982	Abandoned	M25 92 17 1D	0	529	204.5

Table 3.6-6 Groundwater-Use Permits within a 3-Mile Radius, WSEO Records, December 2008 (Page 6 of 6)

ID ¹	Well or Use Point	Permit Number	Applicant ²	Township	Range	Section	¼ of the ¼ ³	Uses	Priority	Status	Permit Facility Name	Yield ⁴ (gpm)	Well Depth (ft)	Static Well Depth (ft)
75	Well	P63128W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	11	SWSW	Monitoring	1/28/1983	Good Standing	TMW-14	0	INP	INP
76	Well	P66110W	Kennecott Uranium Company	24 N	93 W	9	NENW	Monitoring	12/8/1983	Good Standing	BRE 944	0	185	109
77	Well	P66111W	USDI, BLM -- Minerals Exploration Company	24 N	93 W	5	NESE	Monitoring	12/8/1983	Cancelled	REB 1390			
78	Well	P66112W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	10	SWSW	Monitoring	12/8/1983	Abandoned & Cancelled	PH 13	0	210	100
79	Well	P66113W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	10	SWSW	Monitoring	12/8/1983	Abandoned & Cancelled	PH 12	0	140	100
80	Well	P66114W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	10	SWSW	Monitoring	12/8/1983	Abandoned & Cancelled	PH 11	0	140	100
81	Well	P66115W	USDI, BLM -- Kennecott Uranium Company	24 N	93 W	10	SWSW	Monitoring	12/8/1983	Abandoned & Cancelled	PH 10	0	210	100
82	Well	P68449W	USDI, BLM -- Texasgulf Inc.	25 N	93 W	24	NENW	Miscellaneous	8/10/1984	Cancelled	TE 38	25	380	220
83	Well	P95601W	Kennecott Uranium Company	24 N	93 W	9	NESE	Monitoring	5/31/1994	Good Standing	RDW-8	0	450	60
84	Well	P97709W	Kennecott Uranium Company	24 N	93 W	10	SWSW	Miscellaneous, Reservoir Supply	2/8/1994	Unadjudicated	SWEETWATER PIT #1	130	225	113.6
85	Well	P147594W	Kennecott Uranium Company	24 N	93 W	1	SWNE	Monitoring	10/22/2002	Good Standing	TMW-90	INP	55	36.13
86	Well	P147595W	Kennecott Uranium Company	24 N	93 W	1	SENE	Monitoring	10/22/2002	Good Standing	TMW-91	INP	110	100.17
87	Well	⁵	USDI BLM, Rawlins District	25 N	93 W	13	NWNW	Stock			East Eagle Nest Draw Well	5	370	269

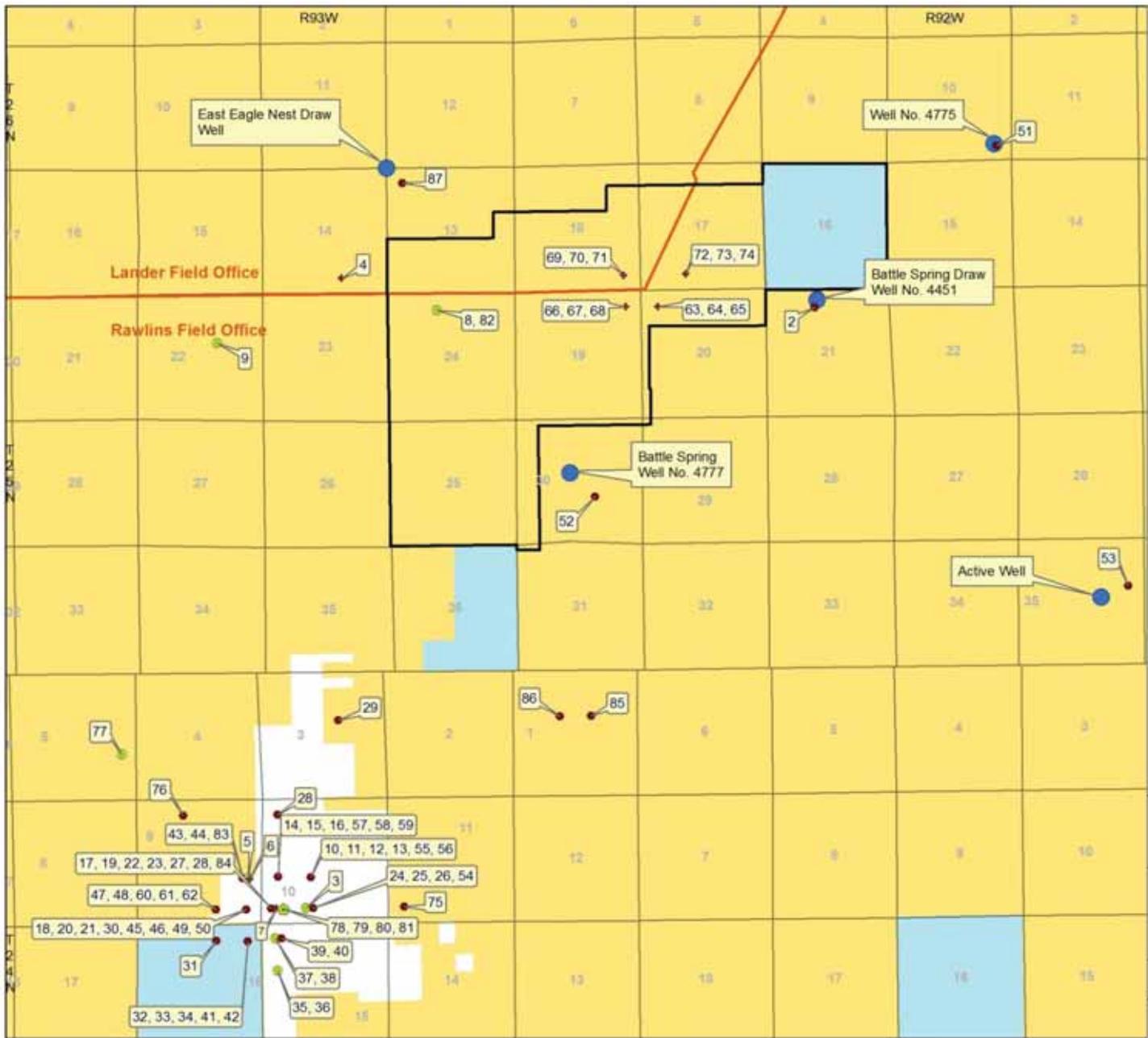
¹ Each number represents a well. Well locations are shown on Plate D6-1b. A number followed by a letter(s) is a point of use related to the well.

² USDI BLM = United States Department of Interior's Bureau of Land Management; WSBLC = Wyoming State Board of Land Commissioners

³ INP = Information not provided by the online WSEO database.

⁴ LCS = Part of the on-going Lost Creek Project study. Information will be provided when it becomes available.

⁵ This well does not currently have an associated WSEO permit number.



Legend

- Potentially Active Permit
 - ✦ Abandoned Permit
 - Cancelled Permit
 - Abandoned and Cancelled Permit
 - BLM Wells
 - ▭ Lost Creek Permit Area
 - ▭ BLM Field Office Boundary
- Surface Land Owner**
- BLM - administered
 - Private
 - State

Lost Creek Uranium *In-Situ* Recovery Project
Sweetwater County, WY

Figure 3.6-15
Groundwater-Use Permits
within 3 Miles of the Permit Area



No warranty is made by the BLM for use of the data for purposes not intended by BLM

Table 3.6-7 BLM Battle Springs Draw Well No. 4451 Laboratory Results (Page 1 of 2)

Parameter (mg/L unless otherwise noted)		Well Water		Pond Water	Algae (mg/kg)	Soil (mg/kg)	
		8/27/2009	6/29/2010	7/13/2010	7/13/2010	7/13/2010	
Major Cations and Anions	Na (mg/L)	30	31	36	-	-	
	K (mg/L)	3	3	8	-	-	
	Ca (mg/L)	167	170	166	-	-	
	Mg (mg/L)	8	8	10	-	-	
	Cl (mg/L)	7	7	9	-	-	
	HCO ₃ (mg/L)	206	200	200	-	-	
	CO ₃ (mg/L)	ND	ND	ND	-	-	
	SO ₄ (mg/L)	340	353	379	-	-	
	SiO ₂ (mg/L)	16.9	16.5	18.7	-	-	
	NO ₃ +NO ₂ (mg/L)	0.01	ND	ND	-	-	
General Water Quality	TDS (mg/L)	698	694	786	-	-	
	Specific Conductivity	929	948	983	-	-	
	Lab pH (SU)	7.94	8	7.61	-	-	
	Alkalinity (mg/L)	169	164	164	-	-	
Trace Parameters (Dissolved unless otherwise noted.)	Al (mg/L)	ND	ND	ND	-	-	
	NH ₃ -N (mg/L)	0.1	ND	0.13	-	-	
	As (mg/L)	ND	ND	0.003	-	-	
	Ba (mg/L)	ND	ND	ND	-	-	
	B (mg/L)	ND	ND	ND	-	-	
	Cd (mg/L)	ND	ND	ND	-	-	
	Cr (mg/L)	ND	ND	ND	-	-	
	Cu (mg/L)	ND	ND	ND	-	-	
	F (mg/L)	0.1	ND	0.1	-	-	
	Fe (mg/L)	Dissolved	ND	ND	ND	-	-
		Total	0.11	0.11	1.45	-	-
	Hg (mg/L)	ND	N	ND	-	-	
	Mn (mg/L)	Dissolved	0.02	0.01	0.27	-	-
		Total	0.02	0.01	0.36	-	-
	Mo (mg/L)	ND	ND	ND	-	-	
	Ni (mg/L)	ND	ND	ND	-	-	
	Pb (mg/L)	ND	ND	ND	-	-	
	Se (mg/L)	0.015	0.025	0.008	2.3	ND	
	V (mg/L)	ND	ND	ND	-	-	
Zn (mg/L)	0.02	0.03	ND	-	-		

3.0 AFFECTED ENVIRONMENT

**Table 3.6-7 BLM Battle Springs Draw Well No. 4451 Laboratory Results
(Page 2 of 2)**

Parameter (mg/L unless otherwise noted)		Well Water		Pond Water	Algae (mg/kg)	Soil (mg/kg)
		8/27/2009	6/29/2010	7/13/2010	7/13/2010	7/13/2010
Radionuclides	Gross Alpha (pCi/L)	1230	1190	932	-	-
	Gross Beta (pCi/L)	313	249	239	-	-
	Ra-226 (pCi/L)	11	7.9	1.9	-	-
	Ra-228 (pCi/L)	8.0	5.4	1.6	-	-
	Ra-226 + Ra-228 (pCi/L)	19.0	13.3	3.5	-	-
	Uranium (mg/L)	0.91	1.10	1.02	112	11.8

ND – Concentration was below the laboratory detection limit.

(-) Not analyzed

Boundary Well No. 4775 and Battle Spring Well No. 4777 were drilled as stock wells to a depth of approximately 280 feet and 220 feet, respectively. These wells are shallower than the sands targeted by LCI. A water use of 25 gpm is permitted at each of these wells. Boundary Well No. 4775 apparently is not being used every year, but water has been pumped in the last few years. The electrical cord for the pump and the pipe to deliver water to the troughs are shown in the photos (Figure 3.6-16).

Figure 3.6-16 BLM Boundary Well No. 4775



November 2007



October 2011

The windmill on Battle Spring Well No. 4777 was not in working order in June 2007, but it was removed and replaced with an electrical submersible pump (Figure 3.6-17).

Figure 3.6-17 BLM Battle Spring Well No. 4777



June 2007



October 2011

The East Eagle Nest Draw Well is located north of the Permit Area, in the NW¼, NW¼, NW¼ of Section 13, Township 25 North and Range 93 West. From mid-May through mid-September, an electric submersible pump in the well is used to pump water into a livestock watering pond at an average rate of five gpm for six to eight hours each day. The total depth of this well is 370 feet, with a static water level of 269 feet. **Figure 3.6-18** shows the East Eagle Nest Draw Well in June 2007 and in October 2011.

Figure 3.6-18 BLM East Eagle Nest Draw Well



June 2007



October 2011