

**CAMECO RESOURCES
CROW BUTTE OPERATION**



**86 Crow Butte Road
P.O. Box 169
Crawford, Nebraska 69339-0169**

**(308) 665-2215
(308) 665-2341 – FAX**

April 7, 2025

Electronic Submittal

DOCUMENT CONTROL DESK, DIRECTOR
U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

The enclosed report was provided to NDEE.

Class III UIC Permit NE0122611
March 2025 Monthly Restoration Report

Please find enclosed the Crow Butte Monthly Restoration Reports for Mine Units 2, 3, 4, 5, 6, 7 and 8. The reverse osmosis (RO) units continue to inject permeate and reductant into Mine Unit 8. Mine Unit 7 is resting this month to test stability. Mine Units 2, 3, 4, 5 and 6 remained in stability monitoring.

If you have any questions regarding this submittal, please feel free to contact me at (308) 665-2215, ext. 121.

Sincerely,
Cameco Resources
Crow Butte Operation

A handwritten signature in blue ink that reads "Tate Hagman". The signature is written in a cursive, flowing style.

Tate Hagman
Restoration Manager

Enclosures: As Stated

cc: Tom Lancaster; Document Control Desk; Deputy Director, Division of Decommissioning – NRC
CBO - File
ec: CR – Electronic File
Kory Winters – NDEE Field Office
Daniel Kroll, UIC/ME Coordinator, NDEE

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
March 2025
Mine Unit 2

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		X	(if yes, complete part 2)
b. Groundwater Sweep		X	(if yes, complete part 3)
c. Groundwater Treatment		X	
d. Wellfield Recirculatoin		X	
e. Other (explain):	X		The Mine Unit is in Stability Monitoring

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

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3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

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4. LIST WELLS SAMPLED DURING THE MONTH: (Assay results attached)

No in-house samples were collected during the month.

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
March 2025
Mine Unit 3

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		X	(if yes, complete part 2)
b. Groundwater Sweep		X	(if yes, complete part 3)
c. Groundwater Treatment		X	
d. Wellfield Recirculatoin		X	
e. Other (explain):	X		The Mine Unit is in Stability Monitoring

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

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3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

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4. LIST WELLS SAMPLED DURING THE MONTH: (Assay results attached)

No in-house samples were collected during the month.

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
March 2025
Mine Unit 4

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		X	(if yes, complete part 2)
b. Groundwater Sweep		X	(if yes, complete part 3)
c. Groundwater Treatment		X	
d. Wellfield Recirculatoin		X	
e. Other (explain):	X		The Mine Unit is in Stability Monitoring

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

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3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

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4. LIST WELLS SAMPLED DURING THE MONTH: (Assay results attached)

No in-house samples were collected during the month.

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
March 2025
Mine Unit 5

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		X	(if yes, complete part 2)
b. Groundwater Sweep		X	(if yes, complete part 3)
c. Groundwater Treatment		X	
d. Wellfield Recirculatoin		X	
e. Other (explain):	X		The Mine Unit is in Stability Monitoring

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING THE MONTH: (Assay results attached)

No in-house samples were collected during the month.

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
March 2025
Mine Unit 6

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		X	(if yes, complete part 2)
b. Groundwater Sweep		X	(if yes, complete part 3)
c. Groundwater Treatment		X	
d. Wellfield Recirculatoin		X	
e. Other (explain):	X		The Mine Unit is in Stability Monitoring

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING THE MONTH: (Assay results attached)

No in-house samples were collected during the month.

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
March 2025
Mine Unit 7

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		X	(if yes, complete part 2)
b. Groundwater Sweep		X	(if yes, complete part 3)
c. Groundwater Treatment			
d. Wellfield Recirculatoin		X	
e. Other (explain):	X		Testing Stability

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

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3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

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4. LIST WELLS SAMPLED DURING THE MONTH: (Assay results attached)

CM3-7	I2183P	P2219	P2540
CM4-12	I2185P	P2226	P2541
CM4-13	I2244P	P2264	P2601
CM4-14	I2429P	P2303	P2610
CM4-15	I2502P	P2316	P2612
CM4-16	P1957	P2331	P2614
CM4-17	P1972	P2340	P2615
CM4-18	P1986	P2359	P2624
I1971P	P2014	P2384	P2660
I1973P	P2038	P2401	P5230
I1975P	P2040	P2468	P5250
I1977P	P2108	P2470	P5258
I1978P	P2125	P2481	P5271
I1982P	P2188	P2510	P5278
I1985P	P2216	P2538	P5283

Mine Unit 7		Restoration Data											
Well ID	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	Fe	U	V
CM3-7													
	3/25/2025	328	20.20	144	4.80	342	285	1727	7.99	1071	0.01	0.21	0.33
CM4-12													
	3/25/2025	470	32.73	112	9.63	386	314	1893	7.21	1174	0.11	0.69	0.07
CM4-13													
	3/25/2025	524	27.77	96	7.06	386	263	1813	7.57	1124	0.00	1.90	0.34
CM4-14													
	3/25/2025	570	37.00	125	9.95	423	310	2082	7.82	1291	0.00	0.62	0.17
CM4-15													
	3/25/2025	396	16.54	80	3.84	290	176	1374	8.1	852	0.00	0.71	0.65
CM4-16													
	3/25/2025	454	23.49	59	4.68	289	162	1375	7.81	853	0.01	0.39	0.37
CM4-17													
	3/25/2025	579	31.10	132	9.72	458	347	2221	7.81	1377	0.11	0.27	-0.03
CM4-18													
	3/25/2025	257	12.86	62	2.94	196	121	977	7.65	606	0.01	0.16	0.60
I1971P													
	3/25/2025	746	52.72	177	13.02	624	508	2892	7.43	1793	0.00	0.79	0.22
I1973P													
	3/25/2025	480	12.72	51	2.93	299	134	1333	7.85	826	0.03	2.12	0.20
I1975P													
	3/25/2025	644	30.65	135	8.96	502	362	2345	7.68	1454	0.01	1.46	0.11
I1977P													
	3/25/2025	359	27.57	83	4.82	269	195	1373	7.52	851	0.01	0.50	0.23
I1978P													
	3/25/2025	256	15.81	40	2.38	162	85	804	8	498	0.11	0.31	0.04
I1982P													
	3/25/2025	355	28.98	105	5.06	288	212	1493	7.79	926	0.01	0.80	0.57
I1985P													
	3/25/2025	335	35.01	50	3.36	197	118	1035	7.91	642	0.03	0.17	0.12
I2183P													
	3/25/2025	313	34.03	54	4.15	197	130	1027	7.87	637	0.07	0.64	0.26
I2185P													
	3/25/2025	388	8.64	74	2.52	291	165	1329	8.27	824	0.04	1.10	1.98
I2244P													
	3/25/2025	272	21.60	172	6.08	359	328	1814	7.7	1125	0.01	1.82	0.15
I2429P													
	3/25/2025	490	27.45	185	7.38	484	392	2333	7.99	1446	0.02	2.32	0.15

Mine Unit 7		Restoration Data											
Well ID	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	Fe	U	V
I2502P													
	3/25/2025	307	19.34	177	4.98	395	343	1925	8.12	1194	0.01	0.14	-0.04
P1957													
	3/25/2025	611	65.47	124	12.38	449	374	2248	7.35	1394	0.11	1.17	0.08
P1972													
	3/25/2025	334	8.26	43	1.46	214	95	974	7.87	604	0.05	0.76	0.12
P1986													
	3/25/2025	322	21.12	164	3.97	380	319	1882	8.18	1167	0.01	0.66	0.10
P2014													
	3/25/2025	173	11.65	41	1.75	144	105	705	7.12	437	0.13	0.01	-0.02
P2038													
	3/25/2025	355	24.43	90	5.10	287	214	1430	7.63	887	0.07	0.53	0.01
P2040													
	3/25/2025	0	95.70	314	28.64	910	845	4451	7.33	2760	0.02	2.60	0.11
P2108													
	3/25/2025	307	10.34	52	1.55	222	126	1028	7.48	637	0.08	0.29	0.09
P2125													
	3/25/2025	465	18.16	103	5.09	379	274	1779	7.42	1103	0.34	0.86	0.04
P2188													
	3/25/2025	204	6.36	26	1.26	138	71	645	7.58	400	0.00	0.12	2.02
P2216													
	3/25/2025	350	16.56	169	3.99	405	335	1968	8.01	1220	0.01	1.94	0.26
P2219													
	3/25/2025	666	72.65	213	17.41	578	554	3043	7.15	1887	0.43	3.21	0.06
P2226													
	3/25/2025	349	8.23	54	1.81	244	131	1130	7.83	701	0.03	0.88	0.15
P2264													
	3/25/2025	248	41.51	165	7.66	320	320	1713	7.35	1062	0.04	0.09	0.09
P2303													
	3/25/2025	389	27.53	91	6.73	301	226	1517	7.3	941	0.10	0.41	0.03
P2316													
	3/25/2025	583	40.10	116	9.05	426	310	2061	7.8	1278	0.00	1.22	0.33
P2331													
	3/25/2025	353	27.40	88	5.99	282	220	1427	7.47	885	0.07	0.25	-0.03
P2340													
	3/25/2025	211	17.91	45	2.76	160	116	811	7.31	503	0.16	0.05	-0.02
P2359													
	3/25/2025	497	23.31	104	6.39	392	290	1880	7.36	1166	0.04	2.40	0.10

Mine Unit 7		Restoration Data											
Well ID	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	Fe	U	V
P2384	3/25/2025	932	83.75	254	22.98	790	748	3905	7.55	2421	0.01	2.75	0.35
P2401	3/25/2025	214	21.25	40	2.89	135	78	708	7.65	439	0.01	0.08	-0.01
P2468	3/25/2025	340	15.19	162	3.62	385	318	1885	8.11	1169	0.01	0.69	0.43
P2470	3/25/2025	301	22.20	102	3.66	263	194	1341	7.57	831	0.03	0.54	0.69
P2481	3/25/2025	430	7.51	52	1.78	277	123	1238	8.26	768	0.01	0.70	1.42
P2510	3/25/2025	308	26.00	167	4.87	365	322	1859	7.59	1153	0.02	0.51	0.34
P2538	3/25/2025	230	18.23	40	1.65	157	96	787	7.6	488	0.02	0.11	0.34
P2540	3/25/2025	398	27.80	69	4.47	269	163	1326	7.8	822	0.01	0.74	0.24
P2541	3/25/2025	453	58.63	78	9.83	276	204	1490	7.91	924	0.03	1.49	0.09
P2601	3/25/2025	493	27.24	141	7.22	414	308	2020	7.95	1252	0.02	0.93	0.26
P2610	3/25/2025	456	8.17	50	2.19	280	112	1249	8.2	774	0.00	1.25	0.83
P2612	3/25/2025	352	9.99	59	3.00	252	143	1171	7.58	726	0.01	0.45	0.44
P2614	3/25/2025	376	22.84	183	5.85	418	355	2091	8.09	1296	0.02	0.52	-0.02
P2615	3/25/2025	269	8.22	59	1.28	199	106	953	8.1	591	0.01	0.23	1.70
P2624	3/25/2025	149	6.20	27	0.99	113	66	523	7.4	324	0.01	0.03	0.18
P2660	3/25/2025	357	15.85	60	3.28	246	142	1172	8.02	727	0.04	0.88	0.11
P5230	3/25/2025	282	15.21	66	3.16	226	155	1099	7.51	681	0.10	0.29	0.28
P5250	3/25/2025	558	26.02	90	6.73	406	281	1905	7.97	1181	0.01	1.43	0.76
P5258	3/25/2025	221	24.50	73	3.60	187	140	971	7.24	602	0.07	0.04	-0.01

Mine Unit 7

Restoration Data

Well ID	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	Fe	U	V
P5271													
	3/25/2025	148	6.46	31	0.82	121	81	561	7.34	348	0.04	0.02	0.06
P5278													
	3/25/2025	444	17.01	82	4.05	325	207	1524	7.84	945	0.00	0.81	0.73
P5283													
	3/25/2025	273	15.56	63	2.42	210	132	1014	7.75	629	0.03	0.36	0.27

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
March 2025
Mine Unit 8

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		X	(if yes, complete part 2)
b. Groundwater Sweep		X	(if yes, complete part 3)
c. Groundwater Treatment	X		IX and RO CPW9 P2952 P3278 P3653 P4190 I2688P P2984 P3308 P3689 P4320 I2791 P2996 P3309 P3834 P4327 I3699P P3064 P3424 P3840 P2678 P3114 P3439 P3903 P2682 P3189 P3440 P3905 P2698 P3208 P3442 P3910 P2699 P3249 P3444 P3912 P2805 P3253 P3643 P3927 P2916 P3256 P3644 P3928
d. Wellfield Recirculatoin		X	
e. Other (explain):		X	

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING THE MONTH: (Assay results attached)

COW96-1	P2996	P3910
CPW96-1	P3114	P3912
I2674P	P3208	P3927
I2677P	P3308	P3928
I2679P	P3309	P4190
I2684P	P3424	P4320
I2688P	P3439	P4327
I2791P	P3440	
I3699P	P3444	
P2678	P3643	
P2682	P3653	
P2699	P3689	
P2916	P3834	
P2952	P3840	
P2984	P3905	

Mine Unit 8

Restoration Data

Well ID	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	Fe	U	V
COW96-													
	3/3/2025	618	24.46	219	8.76	618	453	2852	7.7	1768	0.01	4.41	1.00
CPW96-													
	3/3/2025	574	25.37	233	7.38	611	466	2876	7.75	1783	0.01	1.34	1.29
I2674P													
	3/3/2025	395	8.84	103	2.81	356	232	1642	8.08	1018	0.00	2.21	0.58
I2677P													
	3/3/2025	460	12.27	120	4.08	424	287	1930	7.93	1197	0.00	3.57	0.44
I2679P													
	3/3/2025	717	26.76	245	9.16	697	516	3184	7.85	1974	0.01	5.47	0.55
I2684P													
	3/3/2025	581	10.94	139	3.89	492	310	2218	8.18	1375	0.00	4.79	1.00
I2688P													
	3/3/2025	484	24.49	146	6.72	436	302	2076	7.93	1287	0.04	2.79	0.57
I2791P													
	3/3/2025	336	15.86	150	4.35	339	304	1845	7.64	1144	0.05	0.39	0.09
I3699P													
	3/3/2025	586	27.88	209	7.84	592	445	2757	7.94	1709	0.00	2.40	0.26
P2678													
	3/3/2025	413	14.89	107	4.53	362	252	1695	7.93	1051	0.00	2.80	0.50
P2682													
	3/3/2025	410	11.96	121	3.75	382	264	1794	7.91	1112	0.00	4.91	0.58
P2699													
	3/3/2025	790	28.91	292	10.47	791	587	3682	7.83	2283	0.00	9.60	0.81
P2916													
	3/3/2025	364	13.96	102	3.75	330	231	1546	7.98	959	0.00	1.25	0.48
P2952													
	3/3/2025	510	23.10	170	6.46	490	356	2313	7.96	1434	0.01	3.13	0.28
P2984													
	3/3/2025	571	20.15	165	5.74	522	369	2381	8.03	1476	0.00	6.10	0.48
P2996													
	3/3/2025	731	24.96	237	8.24	699	495	3170	7.79	1965	0.00	12.45	2.17
P3114													
	3/3/2025	593	15.71	184	5.84	569	396	2581	7.88	1600	0.00	10.40	0.97
P3208													
	3/3/2025	597	32.32	228	8.96	612	465	2860	7.84	1773	0.01	2.58	0.27
P3308													
	3/3/2025	469	8.93	131	3.55	445	296	2015	8.06	1249	0.00	3.01	0.55

Mine Unit 8

Restoration Data

Well ID	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	Fe	U	V
P3309	3/3/2025	336	5.07	77	2.19	305	210	1405	8.32	871	0.00	0.72	0.42
P3424	3/3/2025	318	4.01	65	1.62	268	161	1214	8.35	753	0.00	0.45	0.52
P3439	3/3/2025	534	14.85	158	4.70	505	344	2299	8.07	1425	0.00	2.47	0.56
P3440	3/3/2025	522	13.68	136	4.46	471	326	2173	8.12	1347	0.00	3.67	0.40
P3444	3/3/2025	498	9.82	125	3.43	444	287	2011	8.17	1247	0.00	3.49	0.65
P3643	3/3/2025	507	15.41	145	5.01	480	332	2186	8.07	1355	0.00	2.02	0.47
P3653	3/3/2025	576	18.32	173	6.32	529	372	2450	7.82	1519	0.00	3.09	0.49
P3689	3/3/2025	558	17.23	168	5.43	516	362	2393	7.95	1484	0.01	1.35	0.26
P3834	3/3/2025	563	25.20	204	8.28	571	428	2673	7.9	1657	0.00	2.23	0.39
P3840	3/3/2025	591	21.02	203	6.98	585	420	2720	8.03	1686	0.00	1.79	0.39
P3905	3/3/2025	612	23.14	196	7.00	582	412	2702	8.08	1675	0.00	3.45	0.44
P3910	3/3/2025	414	10.32	108	3.60	366	245	1685	7.99	1045	0.00	2.02	0.47
P3912	3/3/2025	428	7.51	108	2.63	378	251	1736	8.17	1076	0.00	2.18	0.53
P3927	3/3/2025	394	5.30	77	1.74	318	188	1420	8.48	880	0.01	2.60	0.84
P3928	3/3/2025	485	8.17	116	2.90	420	268	1870	8.28	1159	0.01	4.98	0.69
P4190	3/3/2025	492	16.28	160	4.99	465	328	2216	7.97	1374	0.00	1.34	1.35
P4320	3/3/2025	434	13.75	122	4.05	396	265	1837	8.06	1139	0.01	1.59	1.72
P4327	3/3/2025	485	15.87	147	4.96	469	324	2107	7.84	1306	0.00	4.47	0.78