

**CAMECO RESOURCES
CROW BUTTE OPERATION**



**86 Crow Butte Road
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February 4, 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
January 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
 January 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:

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
 January 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:

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
 January 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:

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
 January 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
 January 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
 January 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:

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
January 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 P2984 P3442 P3910 I2688P P3114 P3444 P3912 I2791 P3208 P3643 P3927 I3699P P3253 P3644 P3928 P2678 P3308 P3653 P4190 P2682 P3309 P3689 P4320 P2699 P3424 P3834 P4327 P2805 P3439 P3840 P2916 P3440 P3903 P2952 P3441 P3905
d. Wellfield Recirculation		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	P3114	P3910
CPW96-1	P3208	P3912
I2674P	P3308	P3927
I2677P	P3309	P3928
I2679P	P3424	P4190
I2684P	P3439	P4320
I2688P	P3440	P4327
I2791P	P3441	
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-													
	1/13/2025	684	30.38	225	10.53	696	527	3266	7.66	2025	0.01	4.76	0.75
CPW96-													
	1/13/2025	580	24.58	191	7.20	634	491	2971	7.86	1842	0.00	1.48	1.16
I2674P													
	1/13/2025	413	10.95	97	3.17	382	252	1787	8.04	1108	0.00	2.30	0.49
I2677P													
	1/13/2025	525	14.58	128	4.57	496	345	2326	7.89	1442	0.00	4.25	0.40
I2679P													
	1/13/2025	738	68.35	239	23.08	1519	1174	3617	7.58	2243	0.01	12.51	0.81
I2684P													
	1/13/2025	630	29.87	135	10.30	1136	742	2643	8.03	1639	0.00	12.71	1.66
I2688P													
	1/13/2025	492	27.71	140	7.61	457	331	2190	7.81	1358	0.05	2.81	0.48
I2791P													
	1/13/2025	351	15.15	75	3.95	373	286	1799	7.75	1115	0.12	0.74	0.00
I3699P													
	1/13/2025	563	27.27	168	7.48	566	428	2651	7.87	1644	0.00	2.33	0.18
P2678													
	1/13/2025	443	25.93	93	8.21	860	580	1945	7.96	1206	0.00	6.57	0.91
P2682													
	1/13/2025	438	12.32	101	3.60	421	285	1934	7.96	1199	0.00	5.46	0.60
P2699													
	1/13/2025	807	32.07	227	11.19	811	624	3849	7.81	2386	0.01	10.59	0.72
P2916													
	1/13/2025	369	33.17	97	8.49	706	501	1723	7.85	1068	0.00	2.83	0.66
P2952													
	1/13/2025	486	21.38	140	5.81	466	337	2220	7.97	1376	0.01	2.96	0.20
P2984													
	1/13/2025	536	37.37	105	10.74	978	674	2418	7.96	1499	0.00	11.91	0.84
P3114													
	1/13/2025	631	19.10	164	6.70	617	428	2793	7.85	1732	-0.01	12.07	0.88
P3208													
	1/13/2025	544	29.70	129	8.01	562	431	2669	7.79	1655	0.01	2.32	0.18
P3308													
	1/13/2025	506	11.18	112	4.12	485	335	2251	7.96	1396	0.00	3.39	0.47
P3309													
	1/13/2025	346	4.83	60	1.61	311	196	1460	8.11	905	0.00	0.84	0.39

Mine Unit 8 Restoration Data

Well ID	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	Fe	U	V
P3424	1/13/2025	359	4.62	60	1.63	305	175	1424	8.31	883	0.00	0.52	0.49
P3439	1/13/2025	592	18.08	158	5.58	564	392	2637	7.94	1635	0.00	2.99	0.44
P3440	1/13/2025	583	18.96	135	5.60	526	370	2523	7.82	1564	0.00	4.21	0.32
P3441	1/13/2025	511	17.87	124	5.15	479	330	2277	8.08	1412	0.00	1.19	0.25
P3444	1/13/2025	553	12.37	121	4.03	493	324	2320	8.08	1438	0.00	4.07	0.56
P3643	1/13/2025	577	18.67	137	5.93	542	389	2587	8.01	1604	0.00	2.40	0.39
P3653	1/13/2025	611	42.88	147	15.08	1223	881	2835	7.99	1758	0.01	6.78	0.77
P3689	1/13/2025	591	46.32	102	14.38	1216	888	2792	7.85	1731	0.01	3.14	0.25
P3834	1/13/2025	512	21.75	132	6.31	498	367	2432	7.93	1508	0.00	2.17	0.29
P3840	1/13/2025	644	25.94	199	8.37	634	482	3096	8.02	1920	0.00	2.12	0.29
P3905	1/13/2025	643	26.00	164	7.53	599	437	2933	8.05	1818	0.00	3.53	0.30
P3910	1/13/2025	438	28.33	86	9.82	890	603	1935	7.75	1200	0.00	5.30	0.74
P3912	1/13/2025	471	20.76	109	7.04	931	605	2051	8.06	1272	0.00	6.78	1.01
P3927	1/13/2025	453	20.85	81	6.60	896	557	1851	8.21	1148	0.00	9.81	1.44
P3928	1/13/2025	543	26.89	125	8.94	1062	712	2389	8.08	1481	0.00	14.21	1.09
P4190	1/13/2025	483	18.63	151	5.44	505	375	2377	7.98	1474	0.00	1.15	1.14
P4320	1/13/2025	504	18.03	145	5.13	466	310	2167	7.97	1344	0.00	2.01	1.62
P4327	1/13/2025	591	22.15	169	7.09	596	427	2760	7.78	1711	0.01	5.84	0.70