

CROW BUTTE RESOURCES, INC.

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

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

February 29, 1996

Mr. Joseph Holonich, Chief
High Level Waste & Uranium Recovery Projects Branch
Division of Waste Management
NMSS (T-7-J9)
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, MD 20850

RE: Docket No. 40-8943
License No. SUA-1534

Dear Mr. Holonich:

As reported on January 3, 1996 to your Agency, the Single Upper Control Limit (UCL) for Chloride was exceeded in shallow monitor well SM4-7. Since that time well SM4-7 has been analyzed weekly for all five of the biweekly monitoring parameters.

The purpose of this letter is to fulfill the requirements of License Condition 46 which requires CBR to submit a report within two months of excursion confirmation. This letter contains the required description of corrective actions taken and results obtained to date.

Well SM4-7 has been at 23 ppm Chloride for the last six consecutive weekly samples, compared to the Single UCL of 20 ppm Chloride for this well. Sampling results from selected dates are shown in Table 1. For comparison, the levels of the same chemical parameters are noted for our mining solutions. Complete sampling results from March 24, 1994 through February 26, 1996 for well SM4-7 are shown in Figure 1 (attached).

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Table 1

Parameter	SM4-7 Multiple UCL	SM4-7 Single UCL	SM4-7 12-27-95	SM4-7 1-2-96	SM4-7 1-29-96	SM4-7 2-26-96	Injection Lixiviant 2-27-96	Production Lixiviant 2-27-96
Sodium (mg/l)	132	158	122	122	122	122	1,228	1,217
Sulfate (mg/l)	59	71	51	50	51	51	1,128	1,164
Chloride (mg/l)	17	20	21	20	23	23	598	573
Conductivity (micro-mhos)	752	903	570	560	570	570	5,570	5,430
Alkalinity (mg/l)	236	284	200	190	190	190	950	950

A comparison of the **baseline** values for these same excursion indicators was made for the eleven shallow monitor wells in Mine Unit 4 and is shown in Table 2.

Table 2

Parameter	Average Value	Standard Deviation	Minimum Value	Maximum Value	SM4-7 Baseline
Sodium (mg/l)	132	24	92	168	110
Sulfate (mg/l)	60	22	26	100	49
Chloride (mg/l)	29	16	11	66	11
Conductivity (micro-mhos)	707	104	532	854	612
Alkalinity (mg/l)	211	52	95	274	192

Well SM4-7 had the lowest baseline Chloride of the eleven shallow monitor wells for Mine Unit 4. The four shallow monitor wells (SM4-5, SM4-6, SM4-8, SM4-9) surrounding SM4-7 had an average baseline Chloride of 30 ppm, with a high of 66 ppm for the four SM4 wells and a low of 13 ppm.

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Distances to the nearest injection / extraction wells around SM4-7 are shown in Table 3. The nearest active well to SM4-7 is an extractor (P419) at 13 feet. The well completions and original Mechanical Integrity Tests (MIT) for the wells immediately surrounding SM4-7 were reviewed. No problems which could lead to a shallow excursion were noted in either the completions or the MIT.

Table 3
Distance from Well SM4-7
to Surrounding Injection / Extraction Wells

Nearest Injection / Extraction Wells	Well Type	Approximate Distance from Well SM4-7 (feet)	Results of Original MIT
P419-12	Extraction	13	OK
I533-9	Injection	76	OK
I546-9	Injection	153	OK
I600-12	Injection	51	OK
I601-12	Injection	53	OK
I608-9	Injection	105	OK

The slight increase in Chloride concentrations from its original low baseline level, as well as the long term stability of the other monitoring parameters shown in Figure 1, indicates that Well SM4-7 is tending toward an average for Chloride and is not on excursion. In a letter dated February 22, 1996, to your office, CBR has proposed raising the control limits of wells SM4-7 and SM4-2 (another shallow monitor well with lower than average baseline values) to reflect the average of Mine Unit 4 shallow monitor wells.

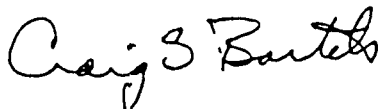
CBR will continue to maintain the weekly sampling frequency of SM4-7 until:

- (a) it has been determined that an excursion of leach solution has actually taken place, in which case the excursion will be mitigated, or
- (b) three consecutive one-week samples are below the exceeded UCL. Continue sampling at a weekly frequency for an additional three weeks after this has been achieved, or

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- (c) CBR is notified by your office, and all other proper regulatory entities, that a revision of Upper Control Parameters is appropriate and acceptable, and as a result, SM4-7 is no longer considered on excursion.

Sincerely,



Craig S. Bartels
Wellfield Manager

Attachments

cc: Ross Scarano - Region IV
Stephen Collings
Rhonda Grantham

Figure 1
Sampling Results from Shallow Monitor Well SM4-7
Crow Butte Project
March 24, 1994 through February 26, 1996

