Crow Butte Resources, Inc.

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May 7, 1998

Mr. Joseph Holonich, Chief
Uranium Recovery Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards
Mail Stop T 7-J-8
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, MD 20850

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

Dear Mr. Holonich:

In a letter dated March 26,1998, Crow Butte Resources, Inc. (CBR) notified the Nuclear Regulatory Commission (NRC) about parameters exceeding Upper Control Limits (UCL) for shallow well SM6-26. As required by License Condition 12.2 of SUA-1534 this report is being submitted within 60 days of confirmation of the excursion and it will describe the event, report on corrective actions taken, and list the results obtained from these actions.

On March 19, 1998, during routine biweekly water sampling of CBR's shallow well SM6-26, the Multiple UCL for Sulfate and the Single UCL for Chloride were exceeded. As required by License Condition 11.2 of SUA-1534, a second sample was collected (March 21, 1998) within 48 hours from the time the first analysis was available and analyzed for all five of the biweekly monitoring parameters. The results of the second sample showed the Multiple UCLs for Sulfate and Sodium were exceeded and the Single UCL for Chloride was exceeded. Mr. Gould, of the USNRC 24-Hour Operations Center, was notified by telephone of this exceedance the afternoon of March 21, 1998.

SM6-26 monitors the Brule Formation in Mine Unit 6 (MU6). MU6 began operation on March 10, 1998 when Wellhouse 21 was brought on line. The nearest lixiviant injection to SM6-26 is greater than 2100 feet away. This is significant since there is no lixiviant injection in the immediate vicinity of this monitor well and, based on the values of the measured parameters, it is apparent the exceedance of UCLs was not caused by mining solution. The reason for the

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exceedance in SM6-26 may simply be the normal range of variability of the water quality of this area.

Because of this, CBR believes similar exceedances will occur in MU6 in the future which will be unrelated to mining activities. Our letter of March 26, 1998 proposed an amendment to SUA-1534 to reset the UCLs for eighteen of the shallow monitor wells in MU6. The action taken to correct this exceedance was to place the well on excursion status which meant increasing sampling frequency for SM6-26 to weekly. Prior to each weekly sampling, the well was pumped for three days in succession for 8 hours per day.

The well was sampled for 6 consecutive weeks. After the first 3 weeks, the well parameters were such that the well could be removed from excursion status. The additional 3 weeks of sampling was to satisfy Nebraska Department of Environmental Quality (NDEQ) requirements. The results obtained from the corrective action are listed below in Table 1.

Table 1
SM6-26 UCLs and Weekly Sample Analyses

UCLs and Dates	Sodium (mg/l)	Sulfate (mg/l)	Chloride (mg/l)	Conductivity (micro-mhos)	Alkalinity (mg/l)
Multiple UCL	32	18	7	605	257
Single UCL	39	22	9	726	308
19-Mar-98	29	19	11	480	200
21-Mar-98	33	19	9.7	470	200
26-Mar-98	30	17	7.6	470	200
2-Apr-98	30	16	7.6	470	200
9-Apr-98	31	15	6.9	460	205
16-Apr-98	32	14	6.9	470	205
23-Apr-98	29	14	6.5	470	200
30-Apr-98	32	13	6.5	460	210

If you need any additional information regarding this well, please contact me.

Sincerely,

Leland Huffman
Wellfield Engineer

cc: Ross Scarano - Region IV
Steve Collings
Mike Griffin