

**From:** "Mike Griffin" <mgriffin@citicnet.net>  
**To:** "Steve Cohen" <sjc7@nrc.gov>  
**Date:** 6/28/05 5:11PM  
**Subject:** Initial report of shallow excursion in SM6-12 -Docket 40-8943

Steve:

As we discussed by telephone earlier today, Crow Butte Resources (CBR) is placing shallow monitor well SM6-12 on excursion status based on exceedance of the chloride and conductivity upper control limits (UCLs). In the routine sample obtained on June 27 and a duplicate sample obtained on June 28 per NRC License requirements, water quality for SM6-12 exceeded the multiple UCL for conductivity and the single UCL for chloride.

CBR believes that this apparent excursion is due to increased groundwater levels caused by the significant amount of precipitation received at the facility this spring and is not caused by mining activities. This conclusion is supported by the following indications:

1.. Water level in the well has increased approximately 4 feet this spring. SM6-12 is located in Mine Unit 6 in an area of high groundwater near the springs that form the source of English Creek. Groundwater quality in this area is under the influence of surface water.

2.. The chloride concentration has increased from normal concentrations of approximately 6 mg/l to 26 mg/l. If the monitor well were affected by an excursion of mining solutions, it would be expected that the chloride concentration would be much higher due to its high concentration in the lixiviant (which typically contains chloride concentrations in excess of 500 mg/l) and its mobility in the environment.

3.. CBR recently reviewed monitoring data for 15 other shallow monitor wells in Mine Unit 6 (which is south of English Creek) and Mine Unit 8 (which is north of English Creek) that are showing similar increases in water level and the excursion indicators. This review was performed in support of a report for an apparent excursion in shallow monitor well SM6-28 (see attached copy), which was reported on June 17. A common characteristic of these wells is the close proximity to the creek.

4.. All wellheads, wellhouses, and trunklines were checked by CBR field staff and no apparent sources for the excursion were identified.

5.. Shallow monitor wells in this same area of Mine Unit 6 were placed on excursion status in 2000 following a similar increase in water level due to precipitation. These wells were removed from excursion status after water levels had decreased during the summer months.

CBR will prepare a report with well data for submittal as required in the NRC License.

If you have any questions, please feel free to call me.

Michael Griffin  
Manager of Health, Safety, and Environmental Affairs  
Crow Butte Resources, Inc.  
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**Mail Envelope Properties (42C1BCE4.F35 : 16 : 3893)**

**Subject:** Initial report of shallow excursion in SM6-12  
**Creation Date:** 6/28/05 5:10PM  
**From:** "Mike Griffin" <mgriffin@citcnet.net>

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SM6-28NRCFiveDayNotice.doc		241152
Mime.822	337991	

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# CROW BUTTE RESOURCES, INC.

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(308) 665-2215  
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June 22, 2005

Mr. Gary Janosko, Branch Chief  
Fuel Cycle Licensing Branch, FCSS  
c/o Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Re: Source Materials License SUA-1534  
Docket No. 40-8943  
SM6-28 Monitor Well Excursion

Dear Mr. Janosko:

On June 16, 2005 during routine biweekly water sampling of Crow Butte Resources, Inc. (CBR) shallow monitor well SM6-28, the multiple parameter upper control limit (UCL) for alkalinity and the single parameter upper control limit (UCL) for conductivity was exceeded. As required by License Condition 11.2 of Source Materials License SUA-1534, a second sample was collected within 48 hours and analyzed for the three excursion indicator parameters. The results of the second sample exceeded the multiple UCL for alkalinity and the single UCL for conductivity.

CBR notified Mr. Robert Nelsen by telephone on June 17, 2005 of the confirmation of the exceedance as required in License Condition 12.2. A confirmation e-mail was sent on the same date. Laboratory results for the sample analysis for SM6-28 are attached. In addition, graphs are attached for the three excursion indicator parameters and water level that cover the period from October 21, 2004 to June 21, 2005.

CBR believes that this apparent excursion is due to increased groundwater levels caused by the significant amount of precipitation received at the facility this spring and is not caused by mining activity. This conclusion is supported by the following indications:

1. Water level in the well has increased 4 feet this spring and is currently within 10 feet of the top of the casing at the well. SM6-28 is located in Mine Unit 6 in an area of high groundwater near the springs that form the source of English Creek. Groundwater quality in this area is under the influence of surface water.

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2. The chloride concentration has increased from normal concentrations of 6 mg/l to 15 mg/l and has not exceeded the UCLs. If the monitor well were affected by an excursion of mining solutions, it would be expected that the chloride concentration would be much higher due to its high concentration in the lixiviant (which typically contains chloride concentrations in excess of 500 mg/l) and its mobility in the environment.
3. There are fifteen other shallow monitor wells in Mine Unit 6 (which is south of English Creek) and Mine Unit 8 (which is north of English Creek) that are showing similar increases in water level, alkalinity, and conductivity with some minor increases in chloride concentrations. Over the past five months water levels have risen an average of 2.1 feet, alkalinity 7 mg/l, conductivity 48 umhos/cm and chlorides 2.6 mg/l. A common characteristic of these wells is the close proximity to the creek. The wells are highlighted on the attached map.
4. There are very few injection wells in operation near SM6-28. All wellheads, wellhouses, and trunklines were checked by CBR field staff on June 17, 2005 and no apparent sources for the excursion were identified.
5. This same shallow monitor well was placed on excursion status in May 2000 following a similar increase in water level due to precipitation (see excursion report dated May 30, 2000). The well was removed from excursion status in late June 2000 after water level had decreased during summer months (see excursion report dated June 27, 2000).

In accordance with License Condition 11.2, CBR will increase the sampling frequency for SM6-28 to weekly until three consecutive weekly samples are below the exceeded UCL. CBR will then continue weekly sampling for an additional three weeks after this goal has been achieved. If the well has not exceeded the UCL, it will be returned to normal status.

If you have any questions or require any further information, please do not hesitate to call me at (308) 665-2215.

Sincerely,  
CROW BUTTE RESOURCES, INC.

Michael Griffin  
Manager of Health, Safety, and Environmental Affairs

# CROW BUTTE RESOURCES, INC.



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Enclosures: As Stated

cc: U.S. Nuclear Regulatory Commission  
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Washington, DC 20555

Mr. Steve Collings - CBR, Denver