

August 28, 2008

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In the Matter of
CROW BUTTE RESOURCES, INC.
(License Renewal for the In Situ Leach Facility, Crawford, Nebraska)
Docket No. 40-8943-OLA
ASLBP No. 08-867-02-OLA-BD01

Pursuant to the email sent by Counsel for the NRC Staff to the Board, August 26, 2008, at 1:18 P.M., the NRC Staff formally submits for filing the attachment (License Renewal Application p. 3-22) referenced in the "NRC Staff Response in Opposition to Petitioners' Consolidated Request for Hearing and Petition for Leave to Intervene," at pages 49-50, which was inadvertently omitted from its August 25, 2008 submittal of said pleading.

Respectfully submitted,

Executed in Accord with 10 CFR 2.304(d)

Brett Michael Patrick Klukan
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Dated at Rockville, Maryland
This 28th day of August, 2008

Enclosures: Attachment (License Renewal Application p. 3-22)

cc: Attached Service List

CROW BUTTE RESOURCES, INC.

SUA – 1534 License Renewal Application



Wellhead pressure is restricted to less than 0.63 psi per foot of well depth. Injection rates are adjusted to maintain wellhead pressure below that level.

Each new production well (extraction and injection) will continue to be pressure tested to confirm the integrity of the casing prior to being used for mining operations. Wells that fail pressure testing will be repaired or cemented and replaced as necessary.

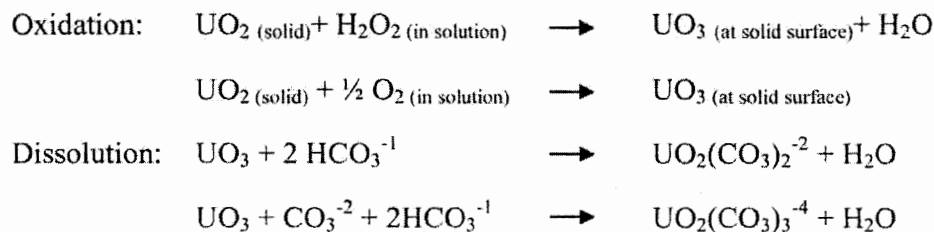
Water level measurements will continue to be routinely performed in the production zone and overlying aquifer. Sudden changes in water levels within the production zone may indicate that the wellfield flow system is out of balance. Flow rates would be adjusted to correct this situation. Increases in water levels in the overlying aquifer may be an indication of fluid migration from the production zone. Adjustments to well flow rates or complete shut down of individual wells may be required to correct this situation. Increases in water levels in the overlying aquifer may also be an indication of casing failure in a production, injection or monitor well. Isolation and shut down of individual wells can be used to determine the well causing the water level increases.

To ensure the leach solutions are contained within the designated area of the aquifer being mined, the production zone and overlying aquifer monitor wells will continue to be sampled once every two weeks as discussed in **Section 5.8.8**.

3.1.4 Process Description

Uranium solution mining is a process that takes place underground, or in-situ, by injecting lixiviant (leach) solutions into the ore body and then recovering these solutions when they are rich in uranium. The chemistry of solution mining involves an oxidation step to convert the uranium in the solid state to a form that is easily dissolved by the leach solution. Hydrogen peroxide (H_2O_2) or gaseous oxygen (O_2) is typically used as the oxidant because both revert to naturally occurring substances. Carbonate species are also added to the lixiviant solution in the injection stream to promote the dissolution of uranium as a uranyl carbonate complex.

The reactions representing these steps at a neutral or slightly alkaline pH are:



The principal uranyl carbonate complex ions formed as shown above are uranyl dicarbonate, $(\text{UO}_2)(\text{CO}_3)_2^{-2}$, (UDC), and uranyl tricarbonate $(\text{UO}_2)(\text{CO}_3)_3^{-4}$, (UTC). The relative abundance of each is a function of pH and total carbonate strength.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
) Docket No. 40-8943
CROW BUTTE RESOURCES, INC.)
) ASLBP No. 08-867-08-OLA-BD01
(License Renewal for the In Situ Leach Facility,)
Crawford, Nebraska))

CERTIFICATE OF SERVICE

I hereby certify that copies of "LETTER TO THE BOARD" in the above captioned proceeding have been served upon the following persons by Electronic Information Exchange this 28th day of August, 2008:

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