

February 27, 2004

Mr. Michael L. Griffin, Manager  
Health, Safety, and Environmental Affairs  
Crow Butte Resources, Inc.  
86 Crow Butte Road  
P.O. Box 169  
Crawford, Nebraska 69339-0169

SUBJECT: CROW BUTTE RESOURCES, INC. AMENDMENT REQUEST CONCERNING  
LICENSE CONDITION 10.3C - GROUNDWATER RESTORATION PLAN  
(TAC LU0022)

Dear Mr. Griffin:

We have reviewed your amendment request concerning License Condition 10.3C - Groundwater Restoration Plan for Materials License SUA-1548, transmitted by letter dated November 14, 2003.

The staff did, however, identify additional information that should be provided to us at your earliest convenience. The Request for Additional Information is enclosed.

If there are any questions, I can be reached at 301-415-7694 or by e-mail at [jhl@nrc.gov](mailto:jhl@nrc.gov).

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

**/RA/**

John H. Lusher, Project Manager  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 40-8964  
License SUA-1548

Enclosure: Request For Additional Information

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Docket No. 40-8964  
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Enclosure: Request For Additional Information

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<b>NAME</b>	J. Lusher		B. Garrett		R. Nelson	
<b>DATE</b>	2/27/04		2/27/04		2/27/04	

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**CROW BUTTE RESOURCES, INC.  
REQUEST FOR ADDITIONAL INFORMATION  
LICENSE AMENDMENT REQUEST**

**Groundwater Restoration Plan, Stability Monitoring Program**

1. **Action:** Add the following language or similar language to the proposed Section 3.1 of the Crow Butte Resources, Inc., (CBR) Groundwater Restoration Plan:

A physical composite sample of the individual wells will also be included with the discrete grab samples.

**Basis:** A composite sample should be taken at the same time as the grab samples to ensure that physical composite samples are yielding similar results as statistical composite samples.

2. **Action:** Add the following language or similar language to the proposed Section 3.2 of the CBR Groundwater Restoration Plan:

CBR will sample and analyze discrete grab samples from each individual restoration well approximately three months after the post-restoration (i.e., first round of stabilization) sampling. A physical composite sample of the individual wells will also be included with the discrete grab samples.

**Basis:** Quarterly samples are required to ensure that sample “hot spots” are not overlooked and groundwater outside of the production zone is not adversely affected. Quarterly grab sampling is consistent with Decommissioning Guidance in NUREG 1757, Volume 2, Appendix F.5 and other *in situ* leach licensee stability monitoring programs.

3. **Action:** Add the following language or similar language to the proposed Section 3.3 of the CBR Groundwater Restoration Plan:

A composite sample of the individual wells will also be included with the discrete grab samples.

**Basis:** A composite sample should be taken at the same time as the grab samples to ensure that physical composite samples are yielding similar results as statistical composite samples.

Enclosure

4. **Action:** Add the following language or similar language to the proposed Section 3.4 of the CBR Groundwater Restoration Plan:

If one or more of the monitored constituents exhibit significant increasing trends after the six-month stability monitoring period, quarterly grab sample monitoring and monthly composite sample monitoring will continue until no significant increasing trends are observed or until continued restoration is initiated. Individual monitored constituents that exhibit no significant increasing trends after the six-month stability monitoring period may be removed from the sampling plan upon approval by the regulatory agency.

**Basis:** The restoration plan does not outline monitoring requirements if individual constituents exhibit significant increasing trends after the six-month stability monitoring period. Quarterly sampling for selected constituents showing significant increasing trends will keep the licensee and the regulatory agency informed on the behavior of the constituents within the mine unit. This data is necessary to determine if additional restoration efforts are required. Quarterly samples will ensure that sample “hot spots” are monitored and that groundwater outside of the production zone is not adversely affected. Quarterly sampling is consistent with Decommissioning Guidance in NUREG 1757, Volume 2, Appendix F.5. Monthly composite sampling will ensure that the monitoring plan complies with requirements of the Nebraska Underground Injection Control Permit.

#### **Performance-Based Restoration Plan Revisions**

5. **Action:** Clarify that the CBR Safety and Environmental Review Panel (SERP) determination of mine unit restoration prior to stability monitoring is for only the primary restoration goals or standards defined in licensee condition 10.3.

**Basis:** If primary restoration goals are not met, the proposed groundwater restoration plan requires that restoration be reinitiated or that documentation be submitted to the regulatory authority demonstrating efforts to meet the standards and justifying alternate or secondary parameter values. The regulatory authority must concur with CBR that the best practical technology has been attempted and used in the restoration and that CBR has justification for using secondary parameters as defined in License Condition 10.3. Authority to use secondary restoration goals may not be decided by the SERP.