



UNITED STATES

NUCLEAR REGULATORY COMMISSION

REGION IV

URANIUM RECOVERY FIELD OFFICE  
BOX 25325  
DENVER, COLORADO 80225

Return to URFO 467-53  
Docket 40-8786  
PDR

URFO:KBW  
Docket No. 40-8786  
04008786150E

DEC 29 1982

MEMORANDUM FOR: Docket File No. 40-8786

FROM: Kristin B. Westbrook, Project Manager  
Licensing Branch I  
Uranium Recovery Field Office  
Region IV

SUBJECT: AMENDMENT NO. 6 TO SOURCE MATERIAL LICENSE SUA-1400

The previous amendment to this license (Amendment No. 5) implemented a restoration plan by License Condition No. 17. URI sent NRC a letter dated September 2, 1982 objecting to provisions in License Condition No. 17 that require approval in writing from NRC prior to starting and stopping the specified post restoration groundwater stability monitoring period.

We have reviewed license conditions for other ISL projects and have found that we haven't been requiring such written approval and have further determined that such approval isn't necessary. To make our licensing requirements consistent and to avoid imposing delays on URI we recommend that License Condition No. 17 be changed to read as follows:

17. Restoration shall be accomplished through reverse osmosis or any method that doesn't involve the addition of chemicals to the injection stream except for H<sub>2</sub>S or SO<sub>2</sub> as indicated in the licensee's original application report of March, 1981. The licensee shall notify the USNRC, Uranium Recovery Field Office within thirty (30) days of any subsequent changes in the restoration methods specified in the licensee's May 10, 1982 submittal.

Restoration of the production aquifer and any other groundwaters that may be affected by mining operations shall be initiated within sixty (60) days after solution mining operations have been terminated.

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The objective of restoration shall be to return the groundwater quality, on a groundwater quality indicator by indicator basis, to baseline conditions for each well.

Water level readings shall be taken, recorded, and submitted during all groundwater quality analyses specified in the subsequent paragraphs.

During restoration, a sample shall be taken weekly from Well P-1 and analyzed for conductivity, chloride, and uranium until the data indicates restoration is complete.

The 10 wells (6 perimeter ore zone monitor wells and 3 shallow and 1 deep monitor well) shown on Figure C-5-2 of the licensee's March 31, 1981 Technical Report shall be used for groundwater quality monitoring during restoration. These wells shall be sampled monthly for conductivity, chloride, sodium, calcium, and alkalinity until restoration is achieved.

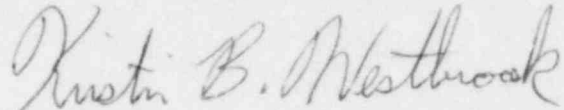
When URI's sampling results for Well P-1 show that restoration is achieved, a verification sample (including 5 injection-production wells and also any monitor well(s) ever having been declared on excursion during operation or restoration) shall be analyzed for the full suite of water quality indicators listed in Table 5.1.01 of the EIA.

In addition, all 10 monitor wells shall be analyzed for the following: conductivity, chloride, sodium, calcium, alkalinity, gross alpha, gross beta, nitrate, nitrite, lead-210, fluoride, and radium-226. The results of the verification samples shall be sent to NRC for evaluation within thirty (30) days.

Post restoration monitoring shall continue for a minimum of six (6) months after verification sample data has shown restoration to be complete. Well P-1 shall be analyzed monthly for the full suite of water quality indicators listed in Table 5.1.01 of the EIA. When sampling results from P-1 (for at least six months) indicate stability is achieved, a verification sample (including 5 injection and production wells and 10 monitor wells) shall be analyzed for the full suite of water quality indicators listed in Table 5.1.01 of the EIA. The results of the final post restoration verification samples shall be sent to NRC for evaluation within thirty (30) days.


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An additional objection is mentioned in URI's September 2, 1982 letter about our requirement to continue monitoring for alkalinity and calcium. As indicated in the Amendment No. 5 memo, NRC recognizes that mining operations may have elevated alkalinity and calcium in the monitoring wells. While NRC also recognizes that other causes might result in or contribute to these elevated levels, we feel it is necessary to continue with alkalinity and calcium as excursion indicators because we cannot conclusively determine the validity of URI's theories on "maturing wells" providing a soluble source of calcium and alkalinity.



Kristin B. Westbrook, Project Manager  
Licensing Branch I  
Uranium Recovery Field Office  
Region IV

Approved By:

  
John D. Linehan, Branch Chief  
Licensing Branch I  
Uranium Recovery Field Office  
Region IV

Case Closed: 04008786150E

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