

March 3, 2000

Mr. William P. Goranson
Manager, Radiation Safety, Regulatory
Compliance and Licensing
Rio Algom Mining Corp.
6305 Waterford Boulevard, Suite 325
Oklahoma City, OK 73118

Dear Mr. Goranson:

**SUBJECT: AMENDMENT 16 TO SOURCE MATERIAL LICENSE SUA-1548 –APPROVAL OF
SECOND CLASS I NON-HAZARDOUS INJECTION WELL.**

The U.S. Nuclear Regulatory Commission (NRC) staff has completed its review of the Rio Algom Mining Corporation's (RAMC) amendment request, as submitted by letter dated November 22, 1999, to allow deep well injection of process waste waters in the second disposal well at the Rio Algom Smith Ranch in-situ leach facility.

The NRC staff performed a technical evaluation (enclosure 1) and recommends approval of Rio Algom's request to approve the construction and operation of waste disposal well #2. No specific license amendment is necessary to the current license #SUA- 1548 other than to incorporate the update of the requirements of the correspondence dated November 22, 1999, consisting of cover letters and enclosures addressing deep well #2 injection of process waste waters.

Neither an environmental assessment nor an environmental report is necessary for this action. An environmental report from the licensee is not required by 10 CFR 51.60(b)(2). The environmental impact of installation and operation of a deep injection well for waste disposal has already been assessed and determined to be acceptable through NRC's review and approval of the first waste disposal well at the Smith Ranch site. Pursuant to the criterion for categorical exclusion in 10 CFR 51.22(c)(11), the issuance of this materials license amendment is eligible for a categorical exclusion from environmental review requirements, since: 1) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite; 2) there is no significant increase in individual or cumulative occupational radiation exposure; 3) there is no significant construction impact; and 4) there is no significant increase in the potential for or consequences from radiological accidents.

Therefore, pursuant to Title 10 of the Code of Federal Regulations, Part 40, Source Material License SUA-1548 is hereby amended by revising license condition No. 9.3. All other conditions of this license shall remain the same. The license (enclosure 2) is being reissued to incorporate the above modification.

W. Goranson

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These changes to SUA-1548 were discussed between you and Mr. John Lusher, the NRC Project Manager for the Smith Ranch facility, on February 28, 2000. If you have any questions concerning this letter or the enclosure, please contact Mr. Lusher at (301) 415-7694.

Sincerely,

/s/ Daniel Gillen for

Thomas H. Essig, Chief
Uranium Recovery and
Low- Level Waste Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 40-8964
SUA-1548, Amendment No. 16

Enclosures: 1. Technical Evaluation Report
2. License Amendment

cc: G. Cash, WDEQ
B. Ferdinand, RAMC

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Cases Closed: L51902

Enclosures: As stated

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B. Ferdinand, RAMC

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Technical Evaluation Report

DATE: February 22, 2000

REPORT: Rio Algom Smith Ranch Second Waste Disposal Well

LICENSEE: Rio Algom

FACILITY: Smith Ranch

PROJECT MANAGER: John Lusher

TECHNICAL REVIEWER: Jane Gunn

SUMMARY:

Rio Algom Mining Corporation has applied and received approval to modify its Underground Injection Control Permit to include the operation of a second Class I non-hazardous waste disposal well at its Smith Ranch Facility from the Wyoming Department of Environmental Quality - Water Quality Division. The second waste disposal well will tap the same aquifers and be operated within the same SOP's as the first waste disposal well, currently in operation.

DESCRIPTION OF THE REQUEST:

By letter dated November 22, 1999, Rio Algom Mining Corporation requested an amendment to its license from the U.S. Nuclear Regulatory Commission (NRC) to allow operation of a second deep injection waste disposal well. The proposed well will expand the licensee's ability to dispose of 11e.(2) byproduct material liquid waste generated as part of the In Situ Leach (ISL) mining process. The licensee has already obtained approval from the State of Wyoming Underground Injection Control Program, and amended its underground injection permit to allow for operation of the second waste disposal well.

TECHNICAL EVALUATION:

The proposed injection well will use permeable portions of three Cretaceous units; the Parkman, Teapot, and Teckla sandstones. The receiving formations are isolated by the Lewis Shale above, which is approximately 550 feet thick at the site of the proposed injection well, and the Lower Parkman and Steele Shale, which combine to a thickness of about 1000 feet at the site. Eight known wells in the area penetrate the formations targeted for injection, one currently serves as Smith Ranch's first deep disposal well, and the other seven are abandoned oil and gas exploration wells. Water analyses from the receiver zones indicate that the proposed receiver zones are not viable water source aquifers because of poor water quality, low porosity and permeability, depth, and hydrocarbon content.

Operation of the second waste disposal well will be the same as the currently operating well, to dispose of the same liquid waste stream. The waste is classified as 11e.(2) byproduct material by the Atomic Energy Act of 1954, as amended, and as nonhazardous waste in accordance with 40 CFR part 261. The second waste disposal well will inject the same waste stream into different areas of the same receiver units as the first waste disposal well. The additional well will allow for increased waste disposal capacity.

RECOMMENDATION:

NRC staff recommends approval of Rio Algom's request to approve the construction and operation of waste disposal well #2. No specific license amendment is necessary as the current license #SUA- 1548 other than to update the incorporated requirements of the correspondence dated October 30, 1995, consisting of cover letters and enclosures addressing deep well injection of process waste waters.

ENVIRONMENTAL ASSESSMENT EVALUATION:

Neither an environmental assessment nor an environmental report is necessary for this action. An environmental report from the licensee is not required by 10 CFR 51.60(b)(2). The environmental impact of installation and operation of a deep injection well for waste disposal has already been assessed and determined to be acceptable through NRC's review and approval of the first waste disposal well at the Smith Ranch site. Pursuant to the criterion for categorical exclusion in 10 CFR 51.22(c)(11), the issuance of this materials license amendment is eligible for a categorical exclusion from environmental review requirements, since: 1) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite; 2) there is no significant increase in individual or cumulative occupational radiation exposure; 3) there is no significant construction impact; and 4) there is no significant increase in the potential for or consequences from radiological accidents.

References:

1999, Department of Environmental Quality, State of Wyoming. Underground Injection Permit #UIC 99-347.

1999, Rio Algom Mining Corporation. Application for Amendment of Wyoming Underground Injection Control Permit for Class I Non-Hazardous Injection Wells.

1995, Rio Algom Mining Corporation. Application for Wyoming Underground Injection Control Permit for Class I Non-Hazardous Injection Wells.