

February 19, 2009

Tom Hardgrove
Manager, Environmental
and Regulatory Affairs
COGEMA Mining, Inc.
and Pathfinder Mines Corporation
P.O. Box 730
935 Pendell Blvd.
Mills, Wyoming 82644

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION, LICENSE RENEWAL
REQUEST, COGEMA MINING, INC., IRIGARAY AND CHRISTENSEN RANCH
IN SITU URANIUM RECOVERY PROJECT, SOURCE MATERIALS LICENSE
SUA-1341 (TAC J00564)

Dear Mr. Hardgrove:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated May 30, 2008, (ADAMS Accession No. ML081850689), COGEMA Mining, Inc. (COGEMA) submitted an application to renew Source Materials License SUA-1341 for activities at its Irigaray/Christensen Ranch facilities. NRC accepted the application for review in a letter to COGEMA dated December 29, 2008 (ADAMS Accession No. ML082760265).

NRC staff has completed a detailed safety review of COGEMA's application. NRC staff requires additional information from COGEMA in order for us to complete our assessment of the license renewal application. We identified concerns related to both groundwater and radiological protection. The additional information needed in order for us to complete our review is identified in the enclosure. Within 30 days, please either provide the information requested or inform us of the date you expect to provide the information. We are available to meet with you to discuss the requested information. An additional request for information will be forthcoming from NRC staff regarding the environmental review of the license renewal application by March 31, 2009.

If you have any questions concerning this letter, please contact me, either by telephone at (301) 415-7777, or by e-mail at ron.linton@nrc.gov.

T. Hardgrove

- 2 -

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," 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/

Ron C. Linton, Project Manager
Uranium Recovery Licensing Branch
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No. 040-08502

Enclosure:
Request for Additional Information

cc: G. Mooney, WDEQ

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," 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/

Ron C. Linton, Project Manager
Uranium Recovery Licensing Branch
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No. 040-08502

Enclosure:
Request for Additional Information

cc: G. Mooney, WDEQ

Distribution:

KMcConnell, DURLD
JWhitten, RIV

J Webb, URLB
LGersey, RIV

RLenhard, CNWRA
JMoore, ERB

ML090330584

OFC	DWMEP/DURLD	DWMEP/DURLD	DWMEP/DURLD	DWMEP/DURLD
NAME	RLinton:dm	BGarrett	BVonTill	RLinton
DATE	02/9/09	02/10/09	02/19/09	02/19/09

OFFICIAL RECORD COPY

COGEMA MINING, INC.
Irigaray and Christensen Ranch License Renewal Application
Request for Additional Information

Section 2.5 Climatology and Meteorology

1. Please provide an assessment or data indicating whether or not the long-term trends of meteorological parameters, such as temperature, precipitation, and wind speed/direction, have significantly changed from previous applications. If meteorological conditions have changed since the last renewal, please provide quantitative measures of those changes. Up-to-date meteorological data are important for evaluating exposure pathways and doses. This information is needed for the NRC staff to determine compliance with 10 CFR Part 40, Appendix A, Criteria 7 and 8.
2. Provide additional information on air quality in the region of the Irigaray/Christensen Ranch facilities. In particular, address whether the region is in attainment according to National Ambient Air Quality Standards including classifications for affected counties within 80 km [50 mi] of the facility. This information is needed to fully describe the existing air quality in the region to meet the requirements of Regulatory Guides 3.63 and 3.46.

Section 2.7 Hydrology

The licensee indicates there are currently five CBM wells within the Christensen Ranch licensing area. To determine the impact of coal bed methane (CBM) operations on surface water quality, the following information is required by NRC staff to determine compliance with 10 CFR Part 40, Appendix A, Criteria 5 and 7.

1. Provide maps that show all existing and planned CBM well locations within 0.8 km [0.5 mi] of the Christensen Ranch licensed boundary.
2. Provide maps that show existing or planned National Pollution Discharge Elimination System permit CBM water discharge points to surface water features or drainages within 0.8 km [0.5 mi] of the Christensen Ranch licensed boundary.
3. Provide water quality, permitted volume, and known volume of any CBM-produced water to be discharged to surface drainages or impoundments within 0.8 km [0.5 mi] of the Christensen Ranch licensed boundary.
4. Discuss whether the CBM-produced water discharge to surface waters or drainages may impact the surface water quality within the Christensen Ranch licensed boundary.
5. Assess how CBM-produced water discharge may impact baseline water quality in the overlying aquifer (i.e., the "J" unit) within the Christensen Ranch licensed boundary.

Enclosure

Section 2.9 Background Radiological Characteristics

Provide information, or the location of the information, on the depth of soil sampling discussed in Section 2.9 of the licensee's 1996 license renewal application (COGEMA Mining Inc., 1996). Background soil sampling was included in the application, but the depth of the soil samples was not found.

Section 3.4.1.7 Wastewater Management

Describe wastewater management operations within the Christensen Ranch licensed boundary and the number of evaporation ponds and deep injection wells planned to be used. In this section, the licensee described wastewater management facilities at the Irigaray site, while the information relevant to the Christensen Ranch licensed site was not found. The complete information is needed to determine compliance with 10 CFR 40.32(c).

Section 4.2 Liquids and Solids

Provide additional information regarding liquid waste control for the site. This information is necessary for the NRC staff to assess the licensee's ability to properly dispose liquid and solid wastes to determine compliance with 10 CFR Part 40, Appendix A, Criteria 2 and 5A.

1. Specify under which circumstances each of the three bleed disposition options will be used (COGEMA Mining Inc., 2008, Section 4.2.1, p. 4-7). The licensee only mentions that three options are available for disposition of the liquid effluent without specifying how they will be selected in practice.
2. Provide the maximum injection rate allowed for deep injection well Christensen 18-3 based on results of a step-injection test the licensee performed (COGEMA Mining, Inc., 2008, Section 4.2.1.4, p. 4-11).

Section 5.0 Operations

1. Describe, or identify the location in the license renewal application, the permanent retention period for the following records:
 - a. Records of onsite radioactive waste disposal such as by deep well injection, land application, or burial as specified by 10 CFR 20.2002 and 20.2007
 - b. Records specified by 10 CFR 20.2103(b)(4)
 - c. Records specified by 10 CFR Part 40, Appendix A, Criteria 8 and 8A
 - d. Records containing information for decommissioning and reclamation
 - e. Records used to demonstrate compliance and evaluate dose, intake, and releases to the environment as specified by 10 CFR Part 20

2. Describe or identify the location in the license renewal application where it states that records will comply with 10 CFR Part 20, Subpart L.
3. Describe or identify the location in the license renewal application where the 3-year retention period for survey and calibration records is described or referenced as specified by 10 CFR Part 20.

Section 5.7.1 Effluent Control Techniques

Provide a spill contingency plan for potential spills that may occur during lixiviant transportation from the Christensen Ranch satellite plant to the Irigaray central processing facility. This information is necessary for NRC staff to assess the licensee's radiation safety control measures as required by 10 CFR Part 40, Appendix A, Criterion 6.

Section 5.7.2 External Radiation Exposure Monitoring Program

Describe or identify the location in the license renewal application of the program to monitor beta radiation, including a description of techniques and instruments used. A monitoring program must protect workers from hazards of beta radiation as specified by 10 CFR 20.1501.

Section 5.7.4 Exposure Calculations

Provide or identify the location in the license renewal application of calculations for prenatal and fetal radiation exposure. Calculation of dose to a fetus from the occupational exposure of a declared pregnant woman must be compared to dose limits to the fetus as specified by 10 CFR 20.1208.

Section 5.8.2 Groundwater and Surface Water Monitoring Program

Demonstrate whether excursion indicators (i.e., chloride, conductivity, and total alkalinity) in the overlying aquifer at Christensen Ranch would or would not be affected by CBM-produced water. Infiltration of CBM-produced water may interfere with excursion monitoring wells. This information is needed for NRC staff to assess the adequacy of the groundwater monitoring program as specified by 10 CFR Part 40, Appendix A, Criteria 5B(1), 5B(5), and 5C.

Section 6.1.3 Proposed Restoration Program

Provide a technical basis of why 10 pore volumes are reasonable for the reverse osmosis permeate injection phase of the groundwater restoration. The licensee updated the pore volumes specified in the original license renewal application (COGEMA Mining, Inc., 2008) in a letter addressed to NRC on October 31, 2008, citing the use of historical data for Christensen Ranch. A detailed technical basis of the update is needed for the NRC staff to determine compliance with 10 CFR 40.32(c).

Section 6.2 Decontamination and Decommissioning

Provide a more thorough description of decontamination and decommissioning for the facilities.

1. Describe or refer to the statistical procedure that will provide a 95 percent confidence that the survey units meet the soil cleanup guidelines. Soil cleanup is required to meet 10 CFR Part 40 guidelines with 95 percent confidence. Describe or identify where in the license renewal application this requirement is addressed.
2. Describe how COGEMA will comply with timeliness requirements in decommissioning for well field restoration as required by 10 CFR 40.32(c), or reference the location in the license renewal application where this information is provided. COGEMA has well fields that share trunk lines that may not allow for restoration and production to occur simultaneously.

References

COGEMA Mining, Inc. "Permit to Mine No. 478, A-2 Update and U.S. NRC License Renewal Application: Source Material License SUA-1341." Mills, Wyoming: COGEMA Mining, Inc. January 1996.

COGEMA Mining, Inc. "Irigaray and Christensen Ranch Projects, U.S. NRC License Renewal Application: Source Material License SUA-1341." Mills, Wyoming: COGEMA Mining, Inc. May 2008.