

June 11, 2003

Mr. Alan D. Cox, Manager  
Homestake Mining Company  
6719-D Academy Road, NE  
Albuquerque, NM 87109

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - HOMESTAKE REQUEST TO  
REVISE BACKGROUND WATER QUALITY CONCENTRATIONS TO SITE  
LICENSE SUA-1471 - DOCKET NO. 40-8903, HOMESTAKE URANIUM MILL,  
GRANTS, NEW MEXICO

Dear Mr. Cox:

The U S. Nuclear Regulatory Commission (NRC) staff has reviewed your December 15, 2001, license amendment request to revise site water quality background concentrations. In accordance with a Memorandum of Understanding between the U.S. Environmental Protection Agency (EPA) and the NRC, EPA and the New Mexico Environment Department (NMED) were consulted on this review. Several meetings were held with the EPA and NMED in New Mexico to discuss these issues and our staff have kept Homestake informed on the progress of the review and interaction with the stakeholders. By letter dated April 8, 2003, the NRC received comments from the EPA (Enclosure 1). The enclosed request for additional information encompasses comments from the regulatory agencies and must be addressed in order for the NRC to complete its review of Homestake's license amendment request (Enclosure 2). Please provide a schedule and plan to address these comments within 30 days upon the receipt of this letter.

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> (the Public Electronic Reading Room).

If you have any questions regarding this letter or the NRC staff review, please contact me at (301) 415-6251 or by email at [rwv@nrc.gov](mailto:rwv@nrc.gov).

Sincerely,

**/RA/**

William von Till, Project Manager  
for the Homestake Uranium Mill  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 40-8903  
License No. SUA-1471

Enclosures: 1. U.S. EPA Letter of April 8, 2003  
2. Request for Additional Information

cc: M. Purcell, USEPA  
D. Mayerson, State of NM  
J. Sanders, State of NM

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Docket No. 40-8903  
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cc: M. Purcell, USEPA  
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J. Sanders, State of NM

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<b>OFC</b>	FCFB		FCFB			
<b>NAME</b>	B. von Till*		R.Weller, Acting SC			
<b>DATE</b>	6/11/03		6/11/03			

**OFFICIAL RECORD COPY**

**REQUEST FOR ADDITIONAL INFORMATION  
HOMESTAKE MINING COMPANY GRANTS SITE  
GRANTS, NEW MEXICO**

Background water quality concentrations need to be determined for each affected aquifer unit (in addition to the Alluvial Aquifer); the Lower Chinle, Middle Chinle, and Upper Chinle. The mixing zone identified by Homestake should be designated as a separate unit and a background concentration proposed if it is determined that the water quality is not similar to the other above mentioned aquifers. Existing wells or additional wells need to be utilized to make these determinations. Proposed wells utilized for background determinations can not be affected by site derived contamination. Well construction information is necessary to provide a basis for an appropriate background well.

**ACTION:** Homestake must utilize existing wells or install additional wells to determine background levels for the distinct units of the Lower Chinle, Middle Chinle, Upper Chinle, and the mixing zone if this water can not be categorized under one of the other aquifers.

**BASIS:** 10 CFR Part 40, Appendix A, Criterion 5B(5) states "at the point of compliance, the concentration of a hazardous constituent must not exceed (a) The Commission approved background concentration of that constituent in the ground-water". NUREG-1620 Rev. 1 states that "zones of different background water quality are delineated"....."a table for each zone of distinct water quality, listing summary statistics (i.e. mean, standard deviation, and number of samples) for baseline water quality sampling for each constituent of concern, is provided."