



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

April 8, 2003

Ms. Susan M. Frant
U.S. Nuclear Regulatory Commission
Fuel Cycle Licensing Branch
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards
Mail Stop T-8a33
Two White Flint North
11545 Rockville Pike
North Bethesda, MD 20852-2738

Subject: Homestake Mining Company Uranium Mill
Source Material License SUA-1471
Cibola County, New Mexico

40-8903

Dear Ms. Frant:

In accordance with the Memorandum of Understanding (MOU) between the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Environmental Protection Agency (EPA) for the Homestake Mining Company (HMC) uranium mill site (Site) in Cibola County, New Mexico, the EPA is providing comments on the document entitled "Statistical Evaluation of Alluvial Groundwater Quality Upgradient of the Homestake Site Near Grants, NM." The EPA is also providing comments on the overall ground-water remediation (corrective action) program being undertaken by HMC at the Site. See EPA comments enclosed.

It is our understanding that a revised Corrective Action Plan (CAP) for ground water is to be submitted by HMC for approval by the NRC. The EPA requests a copy of the CAP for review and comment. The EPA also requests that a copy be provided to Mr. David Mayerson of the New Mexico Environment Department's Superfund Oversight Section

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If you have any questions, please contact Mark Purcell of my staff by telephone at 214-665-6707 or by e-mail at purcell.mark@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Don Williams", written in a cursive style.

Don Williams
Technical Support Team Leader
Superfund Division

Enclosure

cc: David Mayerson, NMED
Jeff Sanders, NMED

April 8, 2003

EPA COMMENTS

on the

Homestake Mining Company's Statistical Evaluation of Alluvial Groundwater Quality Upgradient of the Homestake Site Near Grants, NM

Dated September 30, 2002

1. The United States Environmental Protection Agency (EPA) believes that the ground-water standards originally established by the U.S. Nuclear Regulatory Commission (NRC) for the Homestake Mining Company (Homestake) uranium mill site (Site) were based on very limited data and, therefore, may not be representative of actual background ground-water quality. Under such circumstances, the statistical evaluation that has been conducted by Homestake, and presented in the document entitled "Statistical Evaluation of Alluvial Groundwater Quality Upgradient of the Homestake Site Near Grants, NM" (Report) is a reasonable approach for defining more realistic standards for the various contaminants and constituents of concern. The Report makes good use of data for the Alluvial Aquifer. Further, the statistical procedures used for data preparation, distribution testing, comparisons of near and far upgradient data sets, and computation of upper tolerance levels are appropriate and appear to have been performed correctly.
2. In addition to the Alluvial aquifer, Homestake needs to determine background concentrations for each of the other affected individual ground-water aquifers at the Site: the Lower Chinle, Middle Chinle, and Upper Chinle aquifers, along with the identified mixing zone (the latter under the assumption that Homestake cannot demonstrate that background contaminant concentrations for each of the other four aquifers in its occurrence within the mixing zone are similar).

Homestake also needs to utilize existing wells and/or new wells, as appropriate, to make such determinations. In order to identify existing wells that are suitable for such effort, Homestake should first identify any suitable locations where the hydrogeology allows access to ground water that is unimpacted both by Site-derived contaminants and by nearby mixing with ground water from other aquifers. Second, Homestake should identify any existing wells within those suitable locations that meet the criteria of having appropriate completion and construction documentation to justify the selection as a background well.

3. It is recognized that finding suitable locations for the determination of background levels for some of the aquifers will be difficult. In the event that Homestake can justify that no on-Site locations (existing wells or new wells) satisfy the background well criteria, Homestake needs to utilize data from existing wells or new wells at nearby off-Site locations, as appropriate.
4. Please include data from only the near-upgradient wells to determine background concentrations in the Alluvial Aquifer. Eliminate from the study the data collected from the far-upgradient wells.

April 8, 2003

EPA COMMENTS

on the

Homestake Mining Company's Current Ground-Water Corrective Action and Monitoring Programs

Under the Memorandum of Understanding (MOU) between the EPA and the NRC, the NRC is currently the lead regulatory agency for the byproduct material disposal area (*i.e.*, License Boundary) and is regulating Homestake's ground-water corrective action and monitoring programs in accordance with the NRC-approved Corrective Action Plan (CAP). At this time, the NRC does not regulate the ground water impacted by Site-related contaminants and constituents of concern off-site of the License Boundary.

The EPA's role under the MOU is to monitor such activities and provide review and comments directly to the NRC to assure that activities conducted under the NRC's regulatory authority allow attainment of applicable or relevant and appropriate requirements under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) outside of the License Boundary. Since the areal extent of ground-water contamination extends outside of the License Boundary, the EPA is providing the following comments on Homestake's current ground-water remediation and monitoring activities at the Site:

1. The EPA believes that, consistent with the roles and responsibilities defined in the MOU, the NRC should formally assume responsibility, as the lead federal agency, to regulate all of Homestake's activities for ground-water remediation and monitoring outside of the License Boundary. Homestake's secondary ground-water remedial system, which is comprised of collection wells and two irrigation systems located south and southwest of the residential subdivisions, is currently designed to cleanup the ground-water aquifers downgradient of the License Boundary. However, those activities are not currently regulated by the NRC.

If the NRC is willing to expand its regulatory authority to include those impacted ground-water areas outside of the Lease Boundary, the EPA believes that a letter from the NRC memorializing such agreement would be appropriate, and could be appended to the MOU.

Additionally, if the NRC is willing to expand its regulatory authority as described above, the EPA requests that Homestake and the NRC revise the existing CAP to explicitly define the boundary of the NRC's regulatory authority to include all ground water that has been impacted by Site-derived contaminants. The revised CAP should establish ground-water protection standards and points of compliance for the Site-related contaminants and constituents of concern at those impacted areas

outside of the License Boundary, including both radiological and non-radiological contaminants/constituents. Further, the revised CAP should specify all of the ground-water remediation activities currently being implemented by Homestake, including the secondary remedial system and those monitoring activities which are necessary to assure attainment of CERCLA requirements (*see also* EPA Comment No. 3, below).

2. In accordance with the MOU, the EPA requests that the NRC coordinate its regulatory efforts for areas outside of the License Boundary with the State of New Mexico (*i.e.*, the New Mexico Environment Department (NMED)) to assure that they are compatible with NMED's ground-water discharge plan.
3. In order to monitor the effectiveness of the ground-water remedial systems in attaining established cleanup standards throughout all impacted aquifers, as well as during the post-closure monitoring period, a new ground-water monitoring program needs to be designed and implemented. This ground-water monitoring program should include a network of monitoring wells and point of compliance (POC) wells, in addition to the existing POC wells, for ground-water sampling and analysis. The new monitoring/POC wells need to include wells located off the License boundary in down-gradient areas of the Site where the aquifers are known to have been impacted by Site-related contaminants/constituents of concern, including areas where there may be residual hot spots of contamination.
4. As part of the effort to design a new ground-water monitoring program, Homestake needs to examine the construction and completion records of all existing wells to be used for ground-water monitoring, including the POC wells, to determine their suitability. The NMED has indicated to the EPA that POC Monitoring Well X may not be a suitable monitoring well.
5. Based on the monitoring data collected to date, further characterization and possible remediation of contaminant hot spots and other ground-water contamination outside of the License Boundary may be warranted.