

November 16, 2009

David L. Mayerson  
Superfund Oversight Section  
Ground Water Quality Bureau  
New Mexico Environment Department  
Harold Runnels Building  
1190 St. Francis Drive  
Post Office Box 26110  
Santa Fe, New Mexico 87501-6110

SUBJECT: RESPONSE TO REQUEST FOR HEALTH-RELATED SAMPLING AND MONITORING ACTIVITIES BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY AND THE U.S. NUCLEAR REGULATORY COMMISSION FOR THE HOMESTAKE URANIUM MILL SUPERFUND SITE, DATED OCTOBER 17, 2007

Dear Mr. Mayerson:

This is in response to three New Mexico Environment Department's (NMED's) letters dated October 17, 2007 (ADAMS Accession Nos. ML072990509, ML073050051 and ML073050055), to the U.S. Nuclear Regulatory Commission (NRC). In these letters, NMED requests that NRC:

- (1) perform characterization studies of the San Andres aquifer near the Homestake Mining Company (HMC) site;
- (2) direct HMC to conduct both regularly-scheduled monitoring for saturation in existing Well 889, and to delineate and characterize the areas of saturation near the HMC site;
- (3) conduct a sampling and analysis program to determine the composition of the white residue from HMC's spray evaporative system;
- (4) conduct a program for ongoing monitoring and analysis of crops that are grown by HMC in conjunction with its ongoing irrigation remedial activities;
- (5) perform an assessment of radon exposure based on current and historical uranium concentrations in ground water; and
- (6) review ongoing air contaminant monitoring activities for potential enhancement to ensure protection of public and the environment.

In addition, NMED requested that NRC identify a role for NMED in the Corrective Action Plan (CAP) review process so that NMED may be able to raise its concerns. NMED requested a meeting with NRC and U.S. Environmental Protection Agency (EPA) to discuss the current status of the CAP review process, and to formalize its role in the review of the CAP.

In order to address NMED's issues, HMC was requested to provide NRC with available information on radiological and other monitoring that may be useful in addressing nearby residents concerns regarding the airborne spread of contaminants due to operation of HMC's spray evaporation system, monitoring the exposure due to consumption of animals that forage on crops grown in conjunction with HMC's irrigation remedial activities, and threats from exposure to radon in the water supply. HMC supplemented information in the annual

Environmental Monitoring Report and the EPA Record of Decision with additional radiological and monitoring data on August 20, 2008 (ADAMS Accession No. ML082460337).

Although it has been two years since NMED made these requests, NRC, EPA and NMED discussed these issues during the January 24, 2008, meeting in Santa Fe, NM. Following that meeting, NRC examined HMC's air monitoring system, the composition of the white residue, and the residents' risk from radon. The results of NRC's evaluations were provided to NMED in a teleconference on April 8, 2008, with the understanding that a formal response would be transmitted when the results of the remaining evaluations were completed.

As requested by NMED, EPA will be conducting the following two studies in the near future: (1) Follow-up Remedial System Evaluation; and (2) Risk Assessment. Based on the scope of these studies, it appears that EPA will evaluate Items 2 – 6 above as expressed by NMED in the October 17, 2007, letters. Therefore, since EPA plans to evaluate each of these issues in detail, in order to avoid duplication of effort between the NRC and EPA, NRC does not plan to formally respond to the issues identified in NMED's October 17, 2007, letter. To address Item 1 above, NMED collected samples from the San Andres aquifer in 2008.

With regard to NMED's role in the CAP review process, NRC's license amendment process provides an opportunity for NMED to raise its concerns via comments on the CAP and associated Environmental Assessment. HMC submitted the CAP to NRC on December 15, 2006. The CAP was posted on NRC's public web site on March 15, 2007, at which time the State had 60 days to request a hearing on HMC's license amendment request. No such request was made. NRC staff submits its draft Environmental Assessment (EA) for major licensing actions to the State for review and comment. During its review of a draft EA, the State also has an opportunity to provide NRC comments on the proposed licensing action. The staff is currently reviewing the CAP and will prepare a draft EA for State review and comment. In addition to the formal opportunities for review and comment on the CAP, there are informal opportunities for the State to raise its concerns about the CAP, such as during frequent teleconferences and meetings between NRC, EPA, and NMED. NRC plans to continue to periodically meet with NMED in the future. Further, the State can provide written comments to NRC anytime.

D. Mayerson

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If you have any questions regarding this letter, please contact me at (301) 415-6607, or by e-mail at [john.buckley@nrc.gov](mailto:john.buckley@nrc.gov).

Sincerely,

**/RA/**

John T. Buckley  
Reactor Decommissioning Branch  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

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Sincerely,

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