UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
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JUL 06 2011

Mr. Larry Camper
Division of Waste Management and Environmental Protection
United States Nuclear Regulatory Commission
Mail Stop T-8F5
11545 Rockville Pike
Rockville, MD 20852

Re: Homestake Mining Company Superfund Site, Grants, New Mexico

Dear Mr. Camper:

This is the letter you requested from my office as a follow-up to our teleconference of June 8, 2011.

The December 14, 1993 Memorandum of Understanding (MOU) between EPA Region 6 and NRC Region IV acknowledges that the parties have overlapping authority in connection with the Homestake Mining Company Site in Cibola County, New Mexico. The stated objective of EPA's review and comment on NRC closure activities is to assure that activities to be conducted under NRC's regulatory authority will allow attainment of applicable or relevant and appropriate requirements under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. 9601 et seq., outside of the byproduct material disposal site.

After attempting to work with the NRC in the general spirit of cooperation and in accordance with the MOU to help assure that remedial actions occur in a timely and effective manner (I. Purpose" 59 FR 3741), please consider this letter a notification of deficiency under MOU IV.3. 59 FR 3741. A listing of Likely Federal Radiation Applicable or Relevant and Appropriate Requirements is enclosed as Attachment A. Specific instances of NRC activities that do not comply with CERCLA standards and prevent the EPA from securing compliance are listed in Attachment B to this letter. The issues fall into the following major categories:

1. Protectiveness, Compliance with ARARs.

The EPA's role under the MOU (as well as CERCLA and the National Contingency Plan (NCP)) is to determine and document that the response action is protective and that compliance with ARARs is achieved. The EPA's attempts to secure information from NRC or from Homestake to inform and/or document determinations about the protectiveness of the remedy, particularly as it affects the area outside of the byproduct material disposal site, have been stymied by NRC at every turn. The most recent example is NRC's opposition and refusal to consider working with Homestake to gather additional information as recommended in the Remedial Site Evaluation

report. NRC has expressed opposition to a cooperative approach which allows both federal Agencies and the State of New Mexico to work collectively in considering appropriate requirements and subsequently calling for the licensee/PRP to implement remedial measures that protect the public.

2. Administrative Record for Rulemaking (deletion from the National Priorities List), 40 CFR §300.425(e).

Deletion of a site from the National Priorities List (NPL) is a rulemaking supported by an administrative record. Administrative Record requirements for remedy selection at 40 CFR 300.800 et seq. *(see, esp.* 40 CFR 300.810(a)) comprise a portion of the record supporting site deletion, along with site characterization, risk assessment, and remedy implementation records. In a typical case, such records are generated contemporaneously with the subject actions. A proposal to delete the Site (the area undergoing closure under the NRC license and the areal extent of contamination emanating from it) from the NPL will have to be supported by factual documentation supporting the legal conclusion that i) Responsible parties or other persons have implemented all appropriate response actions required; ii) All appropriate Fund-financed response under CERCLA has been implemented and no further response action by responsible parties is appropriate; or iii) The remedial investigation has shown that the release poses no significant threat to public health or the environment and, therefore, taking of remedial measures is not appropriate. 40 CFR 300.425(e)(1)(i)-(iii). A proposal to delete the Site from the NPL will also require concurrence from the State of New Mexico (40 CFR 300.425(e)(2)).

3. Community Relations.

Community outreach is an integral part of the NCP. Public interest generates questions about response measures in progress. In the course of a lengthy closure or remediation project constantly generating new information, the community may have questions about the validity of prior findings in view of more recent findings. Questions from the community, and substantive technical answers from the regulator or responsible party, are properly incorporated into the administrative record as a lasting record to demonstrate the validity of the decisions made and the actions taken. Apart from NCP regulatory requirements and federal policy promoting transparency in government, responding timely, directly, and substantively to community concerns engenders the sense within the community that their concerns are being addressed.

NRC appears to define its regulatory responsibilities narrowly, to exclude facilitating development of the information that enables EPA to fulfill its regulatory responsibilities. As a practical matter, to the extent that questions about the effect of Homestake's closure activities on areas outside those covered by the license are not sufficiently addressed and documented in real time, EPA will be compelled to revisit them in the context of compiling the record for deletion, whether in the form of an Expanded Site Investigation, a full Remedial Investigation, or some other NCP-mandated investigation to build the record necessary to support site deletion.

Please note that the EPA considers the issues discussed in this letter critical to the public's understanding of the remediation of the Site as well as critical to protection of public health.

Delaying commencement of the CERCLA process until the NRC process is completed is a waste of both private and public resources, contrary to the MOU objective of completing site actions in a timely and effective manner, and inconsistent with the most basic principles of good governance. Spending incrementally more time to investigate, consider, decide, respond, and document issues jointly in real time is far preferable – in EPA's view -- to subjecting the regulated entity and the community to sequential Agency actions.

Sincerely,

Samuel Coleman, P.E.
Director, Superfund Division

cc: John Buckley, Project Manager, NRC
Al Cox, Project Manager, Homestake Mining Company

ATTACHMENT A: Likely Federal Radiation Applicable or Relevant and Appropriate Requirements (Table from *Establishment of Cleanup Levels for CERCLA Sites with Radioactive Contamination,* OSWER Dir. No. 9200.4-18

Attachment A:

Likely Federal Radiation Applicable or Relevant and Appropriate Requirements (ARARs)

The attached draft table of Federal standards is a listing of Federal radiation regulations that may be "Applicable or Relevant and Appropriate Requirements" (ARARs) for Superfund response actions. This list is not a comprehensive list of Federal radiation standards. It must also be cautioned that the selection of ARARs is site-specific and those site-specific determinations may differ from the attached analysis for some of the following ARARs.

Likely Federal Radiation (AEA, UMTRCA, CAA, CWA, SDWA) ARARs			
Standard	**Citation**	**When is standard Applicable (Conduct/Operation or Level of Cleanup[1])**	**When is standard potentially a Relevant and Appropriate Requirement**
Maximum contaminant levels (MCLs). Drinking water regulations designed to protect human health from the potential adverse effects of drinking water contaminants.	40 CFR 141	*Rarely:* At the tap where water will be provided directly to 25 or more people or will be supplied to 15 or more service connections.	Where ground or surface water is considered a potential or current source of drinking water
Concentration limits for liquid effluents from facilities that extract and process uranium, radium, and vanadium ores.	40 CFR 440 Subpart C	*Very Unlikely:* Applies to surface water discharges from certain kinds of mines and mills	Discharges to surface waters of some kinds of radioactive waste.

Likely Federal Radiation (AEA, UMTRCA, CAA, CWA, SDWA) ARARs			
Standard	**Citation**	**When is standard Applicable (Conduct/Operation or Level of Cleanup[1])**	**When is standard potentially a Relevant and Appropriate Requirement**
Federal Water Quality Criteria (FWQC) and State Water Quality Standards (WQS). Criteria/standards for protection of aquatic life and/or human health depending upon the designated water use.	Water Quality Criteria; Report of the National Technical Advisory Committee to the Secretary of the Interior; April 1, 1968.	Discharge from a CERCLA site to surface water. (C/O)	Restoration of contaminated surface water. (LC)
Concentration limits for cleanup of radium-226, radium-228, and thorium in soil at inactive uranium processing sites designated for remedial action.[2]	40 CFR 192.12(a), 192.32(b)(2), and 192.41	*Never*: Standards are applicable only to UMTRCA sites that are exempt from CERCLA	Sites with soil contaminated with radium-226, radium-228, and/or thorium

[2]For further information, see OSWER directive entitled "Use of Soil Cleanup Criteria in Subpart B of 40 CFR Part 192 as Remediation Goals for CERCLA sites."

Likely Federal Radiation (AEA, UMTRCA, CAA, CWA, SDWA) ARARs			
Standard	**Citation**	**When is standard Applicable (Conduct/Operation or Level of Cleanup[1])**	**When is standard potentially a Relevant and Appropriate Requirement**
Combined exposure limits for cleanup of radon decay products in buildings at inactive uranium processing sites designated for remedial action	40 CFR 192.12(b)(1) and 192.41(b)	*Never*: Standards are applicable only to UMTRCA sites that are exempt from CERCLA	Sites with radioactive contamination that is currently, or may potentially, result in radon that is caused by site related contamination migrating from the soil into buildings
Concentration limits for cleanup of gamma radiation in buildings at inactive uranium processing sites designated for remedial action	40 CFR 192.12(b)(2)	*Never*: Standards are applicable only to UMTRCA sites that are exempt from CERCLA	Sites with radioactive contamination that is currently, or may potentially, emit gamma radiation
Design requirements for remedial actions that involve disposal for controlling combined releases of radon-220 and radon-222 to the atmosphere at inactive uranium processing sites designated for remedial action	40 CFR 192.02	*Never*: Standards are applicable only to UMTRCA sites that are exempt from CERCLA	Sites with radon-220 or radon-222 as contaminants which will be disposed of on-site.

Likely Federal Radiation (AEA, UMTRCA, CAA, CWA, SDWA) ARARs			
Standard	**Citation**	**When is standard Applicable (Conduct/Operation or Level of Cleanup[1])**	**When is standard potentially a Relevant and Appropriate Requirement**
Performance objectives for the land disposal of low level radioactive waste (LLW).	10 CFR 61.41	*Unlikely:* Existing licensed LLW disposal sites at the time of license renewal. (LC) *Unlikely that this would occur.*	Previously closed sites containing LLW if the waste will be permanently left on site.
National Emission Standards for Hazardous Air Pollutants (NESHAPs) under the Clean Air Act, that apply to radionuclides.	40 CFR 61 Subparts H and I	Airborne emissions during the cleanup of Federal Facilities and licensed NRC facilities. (CO)	Cleanup of other sites with radioactive contamination.
Radiological criteria for license termination.	10 CFR 20 Subpart E	Existing licensed sites at the time of license termination. (LC)	Previously closed sites.

1.Conduct/operation (C/O) refers to those standards which are typically ARARs for the conduct or operation of the remedial action. Level of Cleanup (L/C) refers to those standards which are typically ARARs for determining the final level of cleanup.

ATTACHMENT B

Examples of Deficiencies of Nuclear Regulatory Commission Actions under CERCLA

1. Exceedence of the standard published in NRC regulations. The annual air monitoring reports in 2006-2007 indicate releases of radon gas outside the area covered by NRC license in concentrations exceeding EPA standards. For purposes of its calculation, HMC removed radon daughters. EPA evaluates Rn-222 through the inhalation routes with daughters present, resulting in a difference of two orders of magnitude. EPA does not consider the NRC standards such as those found at 10 CFR 20, Appendix B, Table 2 to fall within the acceptable risk range published in the National Contingency Plan (NCP). However, even using the NRC standard as a reference point for releases of radon, the annual air monitoring reports indicate that it was exceeded in 2006-2007. Exceeding a standard that EPA may not consider protective in its own right raises questions concerning protectiveness of human health at this site.

2. Noncompliance with EPA's UMTRCA regulations. The annual air monitoring reports from 2006-2007 also indicate releases of 0.4 to 1.2 picocurie per liter (pCi/l) above the annual average concentrations. Regulations EPA published in the early 1990s at 40 CFR 192.02(b)(2) require reasonable assurance that releases of radon-222 from residual radioactive material to the atmosphere "will not…(2) Increase the annual average concentration of radon-222 in air at or above any location outside the disposal site by more than one-half picocurie per liter." Using the subject regulation as a potential ARAR or a reference point for evaluating protectiveness in light of releases of radon, the annual air monitoring reports indicate that the regulations were exceeded in 2006-2007, raising further questions concerning protectiveness of human health.

3. Noncompliance with potential ARARs (40 CFR 61, Subpart B, specifically 40 CFR 61.22). The National Emissions Standards for Hazardous Air Pollutants (NESHAP) standard requires limiting emission of radon-222 to the ambient air from an underground uranium mine so as not to exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/yr. This NESHAP provision is potentially relevant and appropriate because of the nature of the contaminants, including the decay chain, released to the ambient air. Releases at even 10 mrem/yr might be outside the NCP risk range, and therefore not protective of human health.

4. Exceedences of the NCP Risk Range. Over the last few years, the radon air monitors at the Homestake fenceline (especially air monitors HMC#4 and HMC#5, the closest monitors to the residential community) have been continuously recording outdoor ambient air radon concentrations associated with 1×10^{-3} and higher cancer risk levels. Recent data from 2010 air monitoring showed that the average radon concentration for the HMC#5 monitor was still high at 1.45 pCi/l. Subtracting the background concentration of 0.66 pCi/l, the excess average radon concentration was calculated to be 0.79 pCi/l. However, the 0.79 pCi/l air radon concentration represents a cancer risk of

2.9×10^{-3} through the inhalation and external exposure routes of intake. If we include the risk from radon background levels, that will be a risk of 5.3×10^{-3} cancer risk. The risk from the site more than doubles the risk from exposure solely from background levels. The cancer risks are greater than the EPA's acceptable cancer risk range of 1×10^{-4} to 1×10^{-6} as published in the NCP.

5. Administrative Record for Rulemaking (40 CFR 300.425(e)(4)). In order to delete a site from the NPL, the EPA must publish an administrative record for comment, take comments, and respond to the comments to determine whether deletion is appropriate. The EPA's practice is to respond to comments as they are received. The EPA received a number of comments on the Remedial Site Evaluation (RSE) report in late 2010 and early 2011, including the RSE recommendations for collection of additional data to resolve particular issues of concern to the authors of the report and the community. NRC has declined (without explanation) to pursue any of the recommendations in the RSE report.

6. Community Relations. Community involvement requirements run throughout the NCP; community acceptance is one of the nine criteria upon which CERCLA remedy selection is based (see, e.g., 40 CFR 300.430(e)(9)(I). The EPA practice is to keep the public informed through fact sheets, Q&A documents, open houses, and public meetings, in addition to the basic NCP-mandated opportunities for public participation. Responses to community concerns become an integral part of the record supporting Agency decision-making under the NCP. NRC's approach to community relations, apparently performing the minimum amount necessary under NRC rules, does not provide an adequate record for the EPA regulatory requirements.