

# Uranium Watch

76 South Main Street, # 7 | P.O. Box 344  
Moab, Utah 84532  
435-259-9450

October 31, 2012

via electronic mail

Document Control Desk  
c/o Mr. John Buckley, Senior Project Manager  
Decommissioning and Uranium Recovery Licensing Directorate  
Division of Waste Management and Environmental Protection  
Office of Federal and State Materials and Environmental Management Programs  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001  
[John.Buckely@nrc.gov](mailto:John.Buckely@nrc.gov)

RE: Comments on Grants Reclamation Project, Homestake Mining Company of California, Updated Corrective Action Program; March 2012. Docket No. 40-8903, License SUA-1471.

Dear Mr. Buckley:

Attached please find comments on the Homestake Mining Company of California's Updated Revised Corrective Action Program for the Grants Homestake Mill Reclamation Project, March 2012, and the proposed Nuclear Regulatory Commission Environmental Assessment for the Updated (2012) and Revised (2006) Ground Water Corrective Action Plan. These comments are submitted by Uranium Watch, a not-for-profit environmental organization that address the past, current, and future health, safety, and environmental impacts from uranium mining and milling in the Four-Corners region of the West.

Thank you for providing this opportunity to comment.

Sincerely,

/s/ Sarah M. Fields  
Program Director  
[sarah@uraniumwatch.org](mailto:sarah@uraniumwatch.org)

Enclosure: As stated.

**COMMENTS ON THE  
GRANTS RECLAMATION PROJECT - HOMESTAKE MILL  
REVISED and UPDATED CORRECTIVE ACTION PROGRAM  
Homestake Mining Company of California, March 2012**

**Uranium Watch  
October 31, 2012**

Comments on the Homestake Mining Company of California's (HMC's) Updated Corrective Action Program for the Grants Homestake Mill Reclamation Project, March 2012, and the proposed Nuclear Regulatory Commission (NRC) Environmental Assessment (EA) for the Revised (2006) and Updated (2012) Ground Water Corrective Action Program (CAP). License SUA-1471, Docket No. 40-8903.

1. Need for an Environmental Impact Statement

The NRC must develop an Environmental Impact Statement for the CAP and Reclamation of the Homestake Uranium Mill Reclamation Project (Grants Reclamation Project), near Milan, New Mexico, based on the following:

1.1. NRC criteria for and identification of licensing and regulatory actions requiring environmental impact statements states:

Licensing and regulatory actions requiring an environmental impact statement shall meet at least one of the following criteria:

(1) The proposed action is a major Federal action significantly affecting the quality of the human environment. [10 C.F.R. § 51.20(a)(1).]

The Council on Environmental Quality (CEQ) regulations regarding consideration of actions that significantly affect the environment are found in 40 C.F.R. § 1508.27:

"Significantly" as used in NEPA requires considerations of both context and intensity:

(a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

2. The degree to which the proposed action affects public health or safety.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

1.2. The NRC approval of the Revised and Updated CAP and reclamation plans for the Homestake Mill are major Federal actions that significantly affect the quality of the human environment and require an EIS. These NRC actions meet the definition of significance as outlined in 40 C.F.R. § 1508.27 above. The CAP 1) has the potential for both significant short-term and long-term beneficial and adverse impacts; 2) significantly affects public health and safety; 3) involves a geographic area with unique characteristics, including cultural resources, farmlands, human habitation, culinary and agricultural water resources, and geologic formations that contribute to the migration of radioactive and non-radioactive contamination; 4) has effects on the quality of the human environment that have been and continue to be controversial; 5) has effects on the human environment that are highly uncertain (e.g., success of groundwater corrective actions and length of time to complete actions) and involve unique or unknown risks; 6) may establish a precedent for future actions with significant effects; 7) is related to other actions that may be individually insignificant but have cumulatively significant impacts; and 8) has, in the past and currently, involved violations of Federal and State laws and requirements imposed for the protection of the environment.

1.3. The Homestake Reclamation Plan and CAP demand an EIS, because they have significant short and long-term effects, are interdependent parts of a single reclamation action, and have cumulatively significant impacts.

1.4. The Homestake Mill has historically had a significant impact on the human environment in the vicinity of the mill. This includes significant cumulative impact from the emission and dispersion of radioactive and non-radioactive gases and particulates into the air and groundwater. The presence of a plume of radioactive and non-radioactive contamination from the site has had, and continues to have, a significant impact on sources of water used for human culinary uses, domestic livestock, agriculture, and local flora and fauna in the community. The current (1989) and proposed CAP have a direct and significant impact in the continued release of radionuclides into the community from the two tailings impoundments that cannot receive their final radon barriers until the CAP is complete. Although the groundwater contamination and the efforts to remediate the groundwater have had significant impacts on the health, safety and quality of life of the citizens that live in the vicinity of the Homestake Mill, there has never been an EIS on the reclamation of the site, including the groundwater remediation program.

1.5. Over the past 20 years the NRC has approved various segments of the Homestake Uranium Mill Reclamation Plan, including groundwater remediation, in bits and pieces. NRC approved these licensing actions with minimal environmental analysis, if any. NEPA makes clear that an agency cannot divide a proposed action into smaller segments in order to avoid the development of a full EIS.<sup>1</sup>

---

<sup>1</sup> 40 C.F.R. § 1508.27(b)(7).

1.6. The NRC intends to consider Revision 1 (2006) and Revision 2 (2012) to the current CAP. In 2007, the NRC made clear that review the 2006 Revised CAP would be pursuant to the NRC guidance applicable to Reclamation Plans: NUREG-1620, Rev. 1, *Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978*.<sup>2</sup> The NRC also intends to review a revision to the surface Reclamation Plan. These licensing actions are connected, because the Licensee cannot complete the surface reclamation until completion of ground-water corrective actions (License Condition 36.A.(3)). Therefore, the CAP and the Reclamation Plan are connected and significant actions that demand an EIS.

1.7. Until 2012, there were few opportunities for the public to comment on the licensing actions associated with the reclamation and groundwater remediation of the Homestake Mill. This lack of meaningful opportunities for the public to have input on specific licensing actions, including those associated with site reclamation, has had a detrimental affect on the community and the regulatory programs associated with the Homestake Mill.

1.8. The NRC originally approved the Reclamation Plan for surface reclamation in 1993 and developed an 18-page Environmental Assessment (EA). The EA failed to address the environmental impacts of the CAP, which is an integral part of the Reclamation Plan. There are no NRC documents that show that the NRC published a notice inviting public comment on the scope of the 1993 EA or the draft EA. The 1993 Reclamation Plans that

---

<sup>2</sup> Acceptance for review of Grants Reclamation Project Groundwater Corrective Action Plan Revision for License SUA -1471 (TAC J00510), March 5, 2007.

are currently referenced in the Homestake License No. SUA-1741 were submitted **after** the release of the EA.

1.9. The approval of the 1993 Homestake Reclamation Plan was similar to the EA and Finding of No Significant Impact (FONSI) for the Atlas Uranium Mill, Moab, Utah, issued by the Uranium Recovery Field Office. In that instance, the NRC withdrew the EA and FONSI and developed a full EIS for the reclamation of the Moab Mill.

Therefore, there is precedence for the development of an EIS in a similar situation with a large unlined tailings impoundment and contamination of an aquifer due to the migration of radioactive and non-radioactive constituents from the tailings and mill site over time.

1.10. This is the proper time to commence the development of an EIS to take the required “hard look” at the environmental impacts, including cumulative impacts, from all of the past, current, and future actions associated with the reclamation of the Homestake Mill. This is the time to consider the alternative of removing the tailings to a new location. This EIS would also review the considerable data and information that has accumulated since the original Reclamation Plan and CAP were approved so many years ago.

2. The 1993 Reclamation Plan and EA did not address the reclamation of the sites where Homestake conducted uranium recovery operations at uranium mines. The uranium recovery operations using ion exchange (IX) columns were incorporated into the Homestake Mill license. IX effluents were discharged at the mine sites and some effluents were re-injected into uranium mines. These uranium recovery operations contaminated soils and water courses, with no evidence of a remedial action plan. The

Revised and Updated CAP and NRC NEPA Review must address the contamination of water from the operation of the IX columns, old-stope leaching, and other off-site uranium recovery operations (licensed or unlicensed) that provided feed to the Homestake Mill. This would include any old-stope leach or mine-water removal operations owned by other mine operators that were the source of effluents that were processed through the IX columns or directly at the Mill.

### 3. Reclamation Milestones.

3.1. On October 4, 2012, the NRC issued License Amendment 45 to SUA-1471. The amendment revised the reclamation milestones in License Conditions (LCs) 36.A(3), 36.B(1) and 36.B(2), which had been improperly extended by the NRC on August 7, 2008, via License Amendment 41. Amendment 45 returned the reclamation milestone dates to those approved by the NRC on February 6, 2004 (Amendment 36). The milestones affected were for the placement of final radon barrier, placement of erosion protection, and completion of ground-water corrective actions to meet performance objectives specified in the ground-water corrective action plan. However, by returning these enforceable reclamation dates to those approved in 2004, the milestone for the completion of the ground-water corrective actions in LC 36.B(2) (ie., December 31, 2011) is now past. Therefore, the Licensee is now out of compliance with LC 36.B.(2). The NRC has not acknowledged this, nor explained what they intend to do regarding this non-compliance with an enforceable license condition.

3.2. Although the Licensee proposed a new CAP milestones in the 2012 Updated CAP, the NRC has not noticed those milestones for public comment and opportunity for the public to request a hearing. Instead, the NRC told the Licensee, "The NRC staff expects



HMC to request revisions to these license conditions in the near future with the submittal of the updated Reclamation Plan.” And, “It should be noted that reclamation dates proposed in the updated Reclamation Plan should be consistent with the dates provided in the updated groundwater Corrective Action Plan (CAP) currently under review by NRC.” Therefore, the NRC has no intention of issuing a *Federal Register* Notice to provide an opportunity for public comment and an opportunity to request a hearing on the reclamation milestones extensions requested in the 2012 Updated CAP. A public notice and opportunity to request an adjudicatory hearing is a requirement for reclamation milestone extension requests. It seems that the NRC does not want the public to have an opportunity at this time to consider all aspects of the Updated CAP; that is, the reclamation milestones included in the Updated CAP. That, I believe, is contrary to the intent of NRC and Environmental Protection Agency (EPA) regulation and the 1991 Memorandum of Understanding between the EPA, NRC, and NRC Agreement States.<sup>3</sup>

3.3. The original projected date for the completion of the ground-water corrective actions was May 1, 2010. This was extended in 2004 to December 31, 2011 (License Amendment 36). The milestone was extended by the NRC to December 31, 2017, pursuant to the proposed date in the 2006 Revised CAP. In the 2012 Updated CAP, HMC proposed to extend the milestone to 2020, 10 years beyond the original estimated date for completion of ground-water corrective action. Clearly, HMC and the NRC have not accurately assessed the length of time required for the groundwater clean up process. HMC and the NRC must fully explain the reasons for this extensive delay and the reasons

---

<sup>3</sup> 56 Fed. Reg. 55432; October 25, 1991.

why they have not been able to accurately determine the time it will take to meet the required cleanup standards.

4. The proposed EA, or the EIS that should be developed by the NRC, must include a full description of all groundwater corrective actions that have taken place since 1976, the effectiveness of those actions, and impacts of those actions on the environment. The NEPA review must provide information regarding whether those actions were within the scope of the existing CAP and within the scope of any applicable EA.

5. The NRC NEPA review must look at all of the assumptions, explanations, justifications, and reasoning behind all of the groundwater corrective actions (the proposals, technical reviews, EAs, and related documentation) and determine whether there is currently any basis for the previous assumptions, explanations, justifications, and reasoning.

6. The NRC must list all the NRC, EPA, and State of New Mexico regulations related to the CAP and show how the Licensee will comply with and demonstrate compliance with each specific regulatory provision.

7. There has been ongoing concern regarding the potential for contamination from up-gradient sources, such as Ambrosia Lake and the Anaconda mine. This contamination and the contamination sources must be clearly characterized and delineated.

8. The NEPA review of the Revised and Updated CAP must also evaluate the impacts related to the extensive delay of the completion of the placement of the final

radon barrier caused by the ground-water remediation program. This must include a complete analysis of the Licensee's compliance with the 10 C.F.R. §§ 20.1301 and 20.1302 for dose limits for individual members of the public. The Licensee and the NRC must show that compliance is based on proper measurement techniques, accurate data for radon and radioactive particulate emissions, and accurate and timely data for the radon and radioactive particulates that nearby members of the public are exposed to.

9. The NRC NEPA review must consider the alternative of removing the tailings to a geologically and hydrogeologically appropriate tailings repository. The unending source of contamination must be removed, since the Licensee has not shown that it will be able to meet the groundwater reclamation standards in the near future. Therefore, the placement of the final radon barrier will be delayed indefinitely. The solution to this problem must not be deferred for decades, as has happened since groundwater contamination was first identified in the 1970s, almost 50 years ago.

10. The NRC must demand that HMC provide all the information requested in the NRC 2010 Request for Additional Information. This includes water quality data for the residential areas and the groundwater monitoring data required by the Atomic Energy Commission.

11. The current CAP is creating a greater problem by permitting the use of contaminated water for irrigation. The NEPA review must provide a complete assessment of this practice. The cumulative impacts from the surface disposal of

thousands of gallons of contaminated water at the Homestake site is technically and environmentally indefensible.

Sarah M. Fields  
Uranium Watch