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Electronic Delivery

October 24, 2025

Nuclear Regulatory Commission (NRC)
Executive Director for Operations
Petition.Resource@nrc.com

Re: New Mexico Environment Department 10 CFR § 2.206 Petition to the Nuclear Regulatory Commission Regarding the Homestake Mining Company Grants Reclamation Project near Grants, New Mexico

Dear NRC Executive Director for Operations,

The New Mexico Environment Department (NMED) formally requests through a 2.206 petition that the Nuclear Regulatory Commission (NRC) reevaluate and amend or change the site-specific groundwater protection standards (GWPSs) at the Homestake Mining Company Grants Reclamation Project site which is regulated under the Source Materials License No. SUA-1471.

In July 2006, an amendment to License Condition 35 of NRC License SUA-1471 was approved, establishing revised GWPSs for selenium, uranium, molybdenum, and other groundwater constituents of concern in the Alluvial aquifer. The approved uranium GWPS in the Alluvial aquifer in 2006 was established at 0.16 mg/L and is still the current uranium GWPS for the Alluvial aquifer. The current New Mexico groundwater standard and Environmental Protection Agency (EPA) drinking water standard for uranium is 0.03 mg/L. This value was codified by NMED on November 22, 2006, which was after the current NRC GWPSs were approved. NMED and EPA lowered this value from 5 mg/L based on health-based studies.

On May 30, 2023, the EPA and NMED distributed a Groundwater Background Reassessment Technical Memorandum for the Homestake site. This memorandum (see ML23156A508) presents a reassessment of the natural groundwater background conditions, which are critical in determining the extent of cleanup required at Superfund sites. It represents the culmination of a nine-year effort to reevaluate natural groundwater quality and previous decisions at the Homestake Site through groundwater geochemical modeling. The EPA and NMED determined that a site-specific scientifically supported groundwater background concentration for uranium in the San Mateo Alluvial aquifer is 0.049 mg/L. Other constituents that include selenium, chloride, nitrate, and Total Dissolved Solids (TDS) were also reevaluated and new values proposed for both the Alluvial and Chinle aquifers.

NMED would like to summarize the following points that provide multiple justifications supporting a 2.206 petition of site GWPSs:

1. In 2023, the EPA and NMED submitted and validated a scientifically based reassessment of natural

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groundwater background conditions in the San Mateo Alluvial aquifer. Homestake has rejected this reassessment responding in a letter dated November 14, 2023 (see ML23341A133). The EPA plans to reference the revised groundwater background proposed values in the forthcoming CERCLA Remedial Investigation and Feasibility Study (RI/FS) and in the issuance of a Record of Decision (ROD) as clean up concentrations for the site, likely in 2027. NMED is also intending to include this value in an updated site-specific Discharge Permit (DP-200) which is currently in the NMED renewal process.

2. The Homestake site is an example of a dual federal and state regulatory authority site, where having concordant groundwater background values established by both federal and state agencies would be most protective of human health and the environment. The current GWPSs are not in alignment with EPA and NMED completed work and deviate significantly from agency health-based standards.
3. Strong opposition to the Homestake GWPSs has been ongoing for nearly four decades by nearby residents and the grassroots organizations Bluewater Valley Downstream Alliance (BVDA) and the Multicultural Alliance for a Safe Environment (MASE). These groups have consistently conveyed their concerns, through numerous letters and technical memorandums, that the GWPSs are inappropriate and not only scientifically questionable but also ethically indefensible (see ML20014E631, ML20014E633).
4. While NMED acknowledges the authority of the NRC for the regulation of 11e.(2) byproduct material at active sites, and the Department of Energy Legacy Management (DOE-LM) for the long-term stewardship of these sites, this jurisdiction is limited to areas within an established license boundary. Outside of the license boundary, NMED retains regulatory authority, and state groundwater standards must be recognized. Groundwater does not conform to regulatory boundaries delineated on maps. NMED has significant concerns about the potential for groundwater contamination to migrate beyond federal license boundaries in the future. A relevant example is the groundwater plume from the Bluewater Disposal Site, located northwest of the Homestake Site.

It is expected Homestake will propose to cease all groundwater protection actions as part of efforts to work towards site closure and transfer to DOE-LM. Currently, the only assurance for long-term groundwater protection relies on predictive modeling. Based on extensive work on similar sites in the region, NMED has observed predictive models have often failed to accurately reflect site-specific conditions over time.

5. NMED is also aware that EPA is currently undertaking a background reassessment for the Rio San Jose Alluvial aquifer. NMED expects the results will be similar to those found in the work discussed in Item 1 above.

NMED is formally petitioning the NRC under 10 CFR § 2.206 to reevaluate the Homestake Site GWPS in the San Mateo Alluvial aquifer and the Upper, Middle, and Lower Chinle aquifers for uranium, selenium, chloride, nitrate, sulfate, and TDS to align with the recent work by EPA and NMED, and in closer alignment to State of New Mexico groundwater standards.

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Please contact Corey Dimond of MECS by phone at (505) 795-4216 or by email at corey.dimond@env.nm.gov or mecs.general@env.nm.gov with any questions.

Sincerely,

DocuSigned by:



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Jonas Armstrong, Director
Water Protection Division
New Mexico Environment Department

JF:cd,ar

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MECS Reading File