



Grants Reclamation Project

Homestake Mining Company of California

Thomas Wohlford  
Interim Closure Manager

May 16, 2017

**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

**Re: Reply to a Notice of Violation, Docket No. 040-08903/2016-001, License No. SUA-1471**

Dear Sir or Madam:

During an NRC inspection conducted August 24-25, 2016, at the Homestake Mining Company of California (HMC) facility in Grants, NM, the NRC identified a single violation of NRC requirements with three components, *viz.*, that in August 2015, HMC failed to verify through appropriate testing and analysis that radon releases did not exceed 20 pCi/m<sup>2</sup>s; failed to ensure that a single set of radon flux measurements were made; and failed to have the required 100 measurements from each mill tailings pile. The NRC determined that this constituted a Severity Level IV violation.

**Reason for the Violation**

HMC first conducted radon measurements on the tailings piles in response to a request by the NRC in 1996 in support of a reclamation milestone. Since 2003 the radon annual flux measurements have been conducted annually in the same manner and the results provided to the NRC. At the time of the August 2016 inspection, the NRC expressed concern that the method being used to measure flux was not in compliance with EPA Method 115. By letter dated September 8, 2016, HMC provided the NRC with an explanation supporting its radon flux measurement method as appropriate and consistent with Method 115. Over the next several months, the NRC considered the appropriate methodology to be applied to the large and small tailing piles at the Grants facility, and ultimately determined in its letter of April 20, 2017, that the method used by HMC was not in compliance with Method 115.

HMC does not challenge the violation, but states that the violation was not intentional or negligent, but was due to a reasonable reading of ambiguous language in Method 115 that the NRC has ultimately determined to be incorrect.

**Corrective Action – Actions Already Taken and Future Actions**

Since the inspection, HMC has placed additional interim cover on identified surface areas of the large tailings pile based on results from the flux measurements. After that interim step, HMC is now considering whether as additional short term action, it should increase the interim cover thickness in

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order to further attenuate the radon flux on the large tailings pile to a level below the standard, and/or increase the water content within the existing interim cover. In either case, standard computer codes for estimating radon flux (RADON or RAECOM) will be used to determine the required cover thickness and/or water content. HMC will make a determination of the appropriate action within 30 days of this letter, and notify NRC in advance of the proposed action and implementation schedule.

For any future sampling of radon flux, HMC will increase the number of samples at each tailing pile to 100, with no use of historical samples in determining average values. HMC's current intention is to take all 100 samples from the tops of the tailings piles. Should it later determine to include side slope samples, it will notify NRC and in taking those samples would need to re-open side slopes that are now closed.

Longer term, HMC will demonstrate compliance with the flux standard using a procedure to be submitted by HMC to the NRC for review and approval as allowed in 10 CFR 40 Appendix A, Criterion 6 (2). This procedure will be submitted to the NRC for review and approval within 30 days of the date of this letter. Once approved by NRC, full compliance with radon flux measurement and calculation methodology will occur with the following radon flux measurement cycle.

Sincerely,



Thomas Wohlford  
Interim Closure Manager  
Homestake Mining Company, Grants, NM

cc: Dr. Robert Evans (electronic copy)  
Matthew Meyer (electronic copy)  
Regional Administrator, Region IV (document)  
Michael McCarthy (electronic copy)  
Holton Burns (electronic copy)  
Gerald George (electronic copy)