

February 20, 2014

Mr. Michael C. Holland, Project Manager
ExxonMobil Environmental Services Company
25915 SE Frontrage Road, 126
Channation, IL 60410

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION STAFF REVIEW OF
EXXONMOBIL'S LICENSE AMENDMENT REQUEST AND WORK PLAN
PROPOSAL

Dear Mr. Holland:

On May 10, 2011, ExxonMobil Environmental Services Company (EMES) submitted a license amendment request (ML11136A199) to the U.S. Nuclear Regulatory Commission (NRC) to expand the long-term surveillance boundary and establish new and revised alternate concentration limits, with associated point of compliance (POC) and point of exposure (POE) locations, at the Highland uranium mill tailings facility located near Douglas, Wyoming.

On August 14, 2012, NRC and EMES met to discuss NRC's Requests for Additional Information (RAIs) and to provide EMES the opportunity to have a technical discussion with NRC staff to get clarification of what NRC required to finish the review of the license amendment request. As agreed to in the August 14, 2012 meeting summary (ML12249A061), ExxonMobil prepared a partial response (ML131230247) to the RAIs, along with a work plan that outlines proposed well locations, target geologic units and depths, and data collection activities for new monitoring wells for NRC's review and comment.

By letter dated February 11, 2013 (ML13105A059), ExxonMobil requested that the NRC staff make a "final legal determination" that the Pit Lake at the Highland uranium mill tailings facility contains 11e.(2) byproduct material, as defined under Section 11(e) of the Atomic Energy Act of 1954, as amended. The NRC determined that the ExxonMobil request was duplicative of the original license amendment request (ML11136A199) that is currently being reviewed by the NRC staff and responded (ML13199A480) to ExxonMobil's request on August 12, 2013.

The NRC has reviewed the partial response to the RAIs and work plan and has determined that the plan is acceptable with the following conditions:

- ExxonMobil should consider installation of additional wells, including collection of groundwater and aquifer material in the Tailing Dam Sandstone and backfill material between the tailings impoundment and the pit lake to provide more direct evidence demonstrating that 11e.(2) products have been migrating to the pit lake.

Note: The concentrations of uranium and selenium in the groundwater at POC well 175 have not been elevated significantly with respect to the levels in the tailings (although they are above the respective site background values). This is likely due to natural attenuation. However, the concentrations of uranium and selenium observed in the pit lake are significantly above the concentrations detected at POC well 175. If 11e.(2)

products are present in the pit lake, the tailings impacted groundwater has to migrate through other pathways (other than POC well 175) to reach the Pit Lake.

- ExxonMobil should conduct limited quarterly groundwater monitoring with a complete chemical analysis to support future geochemical modeling efforts.

Note: For example, it is noted that alkalinity was not routinely analyzed in the past.

- ExxonMobil should consider additional geochemical characterization of the ambient groundwater entering the pit lake from the upgradient direction. This additional groundwater characterization will support future evaluation of the geochemical status for the pit lake.

With the inclusion of the above conditions, and the acquisition of additional data to fill identified data gaps, NRC believes that a complete response to the RAIs will be provided by ExxonMobil and determination of 11e.(2) material in the pit lake can be supported.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions regarding this letter or the enclosure, please contact Ted Carter, NRC Project Manager for the Highland Reclamation Project, at (301) 415-5543 or via e-mail to Ted.Carter@nrc.gov.

Sincerely,

/RA/

Andrew Persinko, Deputy Director
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 40-8102
License No.: SUA-1139

cc:
M. Zuschek, Counsel
S. Ingle, WDEQ
T. King, WDEQ

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With the inclusion of the conditions above, and the additional data acquisition to fill identified data gaps, NRC is convinced that a complete response to the RAIs will be provided by ExxonMobil and determination of 11e.(2) material in the pit lake can be supported.

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Docket No.: 40-8102
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Region IV

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