

Orlando, Dominick

From: Orlando, Dominick
Sent: Monday, January 22, 2018 5:46 AM
To: 'Denny, Angelita'
Cc: Bush, Richard; Tyrrell, Evan (CONTR); Koenick, Stephen; Arlt, Hans
Subject: RE: Mexican Hat Update

Good Morning Angelita

Thank you for informing the Nuclear Regulatory Commission (NRC) staff of the situation that occurred at the Mexican Hat Uranium Mill Tailings Radiation Control Act site on the Navajo Nation in Utah. The NRC staff has reviewed the information in your email and have concluded that the actions by the Navajo Nation Uranium Mill Tailings Remedial Action/Abandoned Mine Lands Department (NN UMTRA/AML) are consistent with Priority 3 of Table 3-2 "DOE Criteria for Maintenance and Emergency Measures" in the Long Term Surveillance Plan (LTSP) for the Mexican Hat site and that the DOE acted in accordance with the procedures described in the LTSP. In addition, we have concluded that the actions proposed by the DOE to evaluate the potential impacts of the depressions on the disposal cell are acceptable. However, please emphasize to all personnel involved in the oversight of the UMTRCA sites that it is not appropriate or acceptable for individuals to access or disturb the disposal cells without DOE knowledge and approval and that it is the DOE's responsibility to ensure that the sites are managed and maintained in accordance with the LTSP and the NRC's regulations. Please provide the NRC with the "Mexican Hat UMTRCA Disposal Cell Northeast Slope Cover Depressions Evaluation Report" when it has been completed, and, if you determine that any conditions at the site exist that may compromise the disposal cell or site please contact the NRC.

In accordance with Title 10 of the Code of Federal Regulations (10 CFR) Section 2.390, a copy of this email will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Dominick Orlando, Senior Project Manager
Materials Decommissioning Branch
Division of Decommissioning, Uranium Recovery and Waste Programs
Office of Nuclear Material Safety and Safeguards
Mail Stop T-5A10
Washington D.C. 20555-0001
or
Mail Stop T-5A10
11545 Rockville Pike
Rockville, Maryland 20852
301-415-6749

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Mail Stop T-5A10
Washington D.C. 20555-0001
or
Mail Stop T-5A10
11545 Rockville Pike
Rockville, Maryland 20852
301-415-6749

From: Denny, Angelita [mailto:Angelita.Denny@lm.doe.gov]
Sent: Monday, January 08, 2018 2:47 PM
To: Orlando, Dominick <Dominick.Orlando@nrc.gov>
Cc: Bush, Richard <Richard.Bush@lm.doe.gov>; Tyrrell, Evan (CONTR) <Evan.Tyrrell@lm.doe.gov>
Subject: [External_Sender] Mexican Hat Update
Importance: High

Good afternoon Nick,

Per our conversation this morning, this email is written in response to the voicemail I left with you on December 21, 2017 pertaining to recent observations at the Mexican Hat, Utah, UMTRCA Title I Disposal Site.

A site visit was coordinated with representatives from the Navajo Nation Uranium Mill Tailings Remedial Action/Abandoned Mine Lands Department (NN UMTRA/AML) for December 14, 2017, to observe depression features that have been identified along the toe and lower portions of the northeast side slope of the Mexican Hat disposal cell. NN UMTRA/AML had received the draft *Mexican Hat UMTRCA Disposal Cell Northeast Slope Cover Depressions Evaluation Report* for review and were interested in viewing the depression features. However, during the visit NN UMTRA/AML representatives arrived onsite prior to the arrival of representation from the Department of Energy Office of Legacy Management, and hand removed small portions of the riprap and bedding layer cover components at a few locations to facilitate inspection of linear depressions observed near the toe of the northeast side slope. This work was not planned nor authorized to take place. This incident has been reported and is being addressed.

At one of the locations, a small void was observed at the apparent base of the bedding layer and upper portion of the radon barrier. The approximate dimensions of the void were 8 inches by 12 inches wide. The length of the void was unknown, but appeared to extend down slope along the interface of the bedding layer and radon barrier. However, there was no indication that the radon barrier had been breached; hand removal of cover components did not extend into the radon barrier. All removed riprap and bedding materials were ultimately replaced to restore the exposed areas.

Photographs of the void are attached. It appears that windblown materials have accumulated in the area of the observed void resulting in a cementitious layer at the base of the bedding layer that may be inhibiting interstitial flow through the bedding/filter layer, and creating a dam where runoff waters have caused bridging of the underlying materials and associated piping.

A prompt follow-up inspection was conducted with a radiological control technician on December 27, 2017 to assess radon and gamma readings at multiple locations across the site, including the area of the observed void. All radiological readings were consistent with background levels; no elevated radiological readings were observed.

An additional site visit to further evaluate the observed void and to assess the potential for additional areas with similar features is planned for this week (January 8-10, 2018). A group of engineers and other SMEs will be visiting the site. Riprap and bedding layer cover components at a minimum of two locations will be removed by hand (down to the top of the radon barrier as practical) to assess the cover conditions beneath a few of the depression areas. One area will include the area where the void was recently discovered. Additionally, cover components in an area that does not visually exhibit surface distress will be removed by hand as a control point to evaluate the underlying cover components to compare to areas where depression

features are evident. All removed riprap and bedding materials will be replaced to restore the exposed areas during this site visit.

These recent observations and subsequent follow-up site visits will be documented in the draft *Mexican Hat UMTRCA Disposal Cell Northeast Slope Cover Depressions Evaluation Report* that is currently in development. At this time, we have received comments from NN UMTRA/AML and are working to address their comments.

Please contact me at (970) 248-6621 if you have any questions.

Thank you,

Angelita Denny







