



Department of Energy
Washington, DC 20585

February 17, 2016

WM-00048

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Deputy Director
Mail Stop T8F5
Washington, DC 20555-0001

Subject: U.S. Department of Energy Office of Legacy Management (DOE-LM) Response to U.S. Nuclear Regulatory Commission (NRC) Comments on DOE-LM Plan to Decommission the Transient Drainage System at the Durango, Colorado, Uranium Mill Tailings Radiation Control Act (UMTRCA) Disposal Site dated August 10, 2015

To Whom It May Concern:

Thank you for your comments regarding the DOE-LM notification to NRC of DOE-LM's intent to decommission the evaporation pond and plug the transient drainage system at the Durango, Colorado, UMTRCA Disposal Site.

NRC's comments identified the need for more detailed information than what was included in the original transient drainage system closure plans presented in Attachment 3 of the 1996 Long-Term Surveillance Plan (LTSP), which has since been revised. The Transient Drainage and Evaporation Pond Removal Plan includes the following:

- Road Improvements and Evaporation Pond Removal Work Instructions
- Radioactive Waste Management Procedures
- Cleanup Criteria and Verification Sampling Plan
- Engineering Evaluation

Upon acceptance by NRC, DOE-LM will submit a revised LTSP for the Durango disposal site and include the plan as an attachment. DOE-LM provides the following responses to the comments included in the letter dated August 10, 2015. NRC comments are identified according to the bulleted sequence provided by NRC.

Bullet 1

Attachment 3 does not include a discussion of the procedures to ensure protection of the public and workers from residual radioactive material in the transient drainage system (i.e., a radiological health and safety plan).

Response

The DOE-LM Occupational Safety and Health Program derives from the requirements of 29 CFR 1910, 29 CFR 1926, 10 CFR 835, and a variety of DOE orders. Based on these regulatory requirements, DOE-LM requires the contractor to implement detailed policies, procedures, and other requirements in the planning and execution of work. To ensure protection of workers and the public during decommissioning activities at the Durango disposal site,



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DOE LM and its contractor will comply with all of the requirements in the DOE-LM *Radiological Control Manual* and *Health and Safety Procedures Manual*. At NRC's request, we can forward these manuals to you for review.

Bullet 2

Attachment 3, while referencing the remediation standards in 40 CFR 192, does not specifically state the cleanup criteria for the site and how they will be applied.

Bullet 3

Attachment 3 does not describe the final radiological survey that will be conducted to demonstrate that the site meets the specified cleanup criteria.

Response

Cleanup criteria and the final radiological survey are described in the *Cleanup Criteria and Verification Sampling Plan, Durango, Colorado*, which is included in the enclosed *Durango Transient Drainage System Closure and Evaporation Pond Removal Planning Documents* (February 2016).

Bullet 4

Attachment 3 does not describe the radioactive waste management procedures that will be employed to ensure that the waste being transported to the disposal site will not pose a threat to the public or workers.

Response

The waste management procedures are described in the *Radioactive Waste Management Procedures, Durango, Colorado*, which is included in the enclosed *Durango Transient Drainage System Closure and Evaporation Pond Removal Planning Documents* (February 2016).

Bullet 5

Attachment 3 states that the Department of Transportation has issued an exemption to the DOE for shipping low-level radioactive material. Since Attachment 3 was written almost 20 years ago, DOE should ensure that the exemption is still valid before shipping the residual radioactive material.

Response

The Department of Transportation exemption permit expired in 1998 and is no longer valid. To ensure that all regulatory requirements are met during shipping, DOE-LM will follow the protocols described in the enclosed *Radioactive Waste Transportation and Management Procedures, Durango, Colorado*.

Regulation Applicability

The NRC staff has concluded 10 CFR 40.27(e) applies to the removal of the transient drainage system and that the DOE should evaluate the project in accordance with these requirements (i.e. explain to the Commission which requirements from 10 CFR 19, 10, and 21 apply for the action and comply with the appropriate requirements).

Response

DOE-LM plans to close the transient drainage system. The transient drainage system components within the disposal cell will be closed but will remain intact and in place in the disposal cell. Only the evaporation pond will be permanently removed from the site.

DOE-LM has reviewed the requirements of 10 CFR 19, 20, and 21 and understands that, other than limited portions of 10 CFR 19, the requirements imposed by these regulations do not apply to the planned decommissioning project for removal of the evaporation pond and closing of the transient drainage system, particularly because of the limited scope of the proposed action. The eventual removal of the transient drainage evaporation pond was identified during the disposal cell construction and reflected in earlier regulatory documents. Removal of the evaporation pond was anticipated and planned for, and it should not be considered a significant construction, action, or repair.

Posting notices at the site entrance and making the *Legacy Management Radiological Control Manual* and the *Radiation Protection Plan* available to site workers will satisfy the applicable requirements of 10 CFR 19, "Notices, Instructions, and Reports to Workers." Following other DOE-LM policies and orders will satisfy requirements related to employment discrimination and employee protection.

Requirements of 10 CFR 19, 20, and 21 do not appear to explicitly apply to the Durango disposal site decommissioning activities. Health and safety, notifications and instructions, and reporting objectives will be adhered to under standard DOE-LM policies and procedures. These activities are consistent with DOE orders and include provisions for postings, monitoring, and dose limits.

Final Comment

Although Attachment 3 describes the management of the water seeping from the mill tailings pile it is unclear in Attachment 3 and your letter how the seep water will be managed in the future and what, if any impact the removal of the transient drainage system will have on the stability of the mill tailings pile.

Response

DOE-LM will only be removing the evaporation pond; the transient drainage system will be plugged and capped in place within the disposal cell. In late 2015 DOE-LM conducted an engineering evaluation of the impacts of these actions. Results of the evaluation are included in the Technical Memorandum in the enclosed *Durango Transient Drainage System Closure and Evaporation Pond Removal Planning Documents*.

Please contact me at (970) 248-6016 if you have any questions. Please address any correspondence to:

U.S. Department of Energy
Office of Legacy Management
2597 Legacy Way
Grand Junction, CO 81503

Sincerely,



Jalena Dayvault
Site Manager



Enclosures

cc w/enclosures:

D. Orlando, NRC

M. Cosby, CDPHE

W. Naugle, CDPHE

R. Bush, DOE-LM (e)

J. Carman, Navarro (e)

D. Miller, Navarro (e)

File: DUD 0505.10 (rc-grand.junction)



Department of Energy
Washington, DC 20585

April 30, 2015

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Deputy Director
Mail Stop T8F5
Washington, DC 20555-0001

Subject: Durango, Colorado, Uranium Mill Tailings Radiation Control Act, Disposal Site
Decommissioning and Reclamation of the Evaporation Pond

To Whom It May Concern:

In accordance with section 2.2.5 of the *Long-Term Surveillance Plan for the Durango Disposal Site, Durango, Colorado, January 2011* (LTSP), the U.S. Department of Energy Office of Legacy Management (DOE-LM) is providing notification to the U.S. Nuclear Regulatory Commission (NRC) and the Colorado Department of Public Health and Environment (CDPHE) of the decommissioning and reclamation of the remaining components of the transient drainage system. DOE-LM is planning removal of the evaporation pond and closing the toe drain in the fall 2015.

The processes for operating and closing the toe drain system and the evaporation pond were identified in the *Long-Term Surveillance Plan for the Bodo Canyon Disposal Site, Durango, Colorado* (DOE 1996). Decommissioning and reclamation of the evaporation pond will be consistent with protocols outlined in Attachment 3 of the 1996 LTSP, and the toe drain will be sealed at a point 2 feet below existing grade. The permeable reactive barrier was decommissioned in October 2010.

Closure requirements for the transient drainage system were met in 2006. DOE-LM, in consultation with the CDPHE, decided that removal of the pond and toe drain closure should be delayed until the cause of increasing uranium concentrations in well 618 was better understood. Over the past several years, DOE-LM has evaluated several possible causes for the variability of uranium concentrations in well 618; to date, there is no clear evidence identifying a specific cause. To eliminate the evaporation pond and toe drain as potential sources, DOE-LM and CDPHE considers removal of the evaporation pond and toe drain closure a prudent next step.

DOE-LM will notify NRC when the work is completed, so NRC, at its discretion, can perform a final inspection of the restored area.

~~ML15125A012~~



April 30, 2015

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U.S. Department of Energy
Office of Legacy Management
2597 Legacy Way
Grand Junction, CO 81503

Sincerely,



Jalena Dayvault
Site Manager

cc:

D. Orlando, NRC
M. Cosby CDPHE
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File: DUD 0505.10 (rc-grand junction)