



**Department of Energy**  
Washington, DC 20585

September 8, 2016

WM-00054

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

Subject: Sand Erosion from Base of Sherwood, Washington Disposal Cell Embankment

To Whom It May Concern:

The purpose of this letter is to inform the U.S. Nuclear Regulatory Commission (NRC) of erosion identified on the disposal cell embankment at the U.S. Department of Energy Office of Legacy Management (DOE-LM) Sherwood, Washington, Disposal Site.

During the annual site inspection of the Sherwood disposal site on May 18, 2016, DOE-LM identified a small area where sand has been washed out from underneath the protective rock cover at the base of the disposal cell embankment. The area where the erosion was discovered is approximately 800 feet away from the actual tailings cell contained atop the embankment.

The total volume of sand washed out is estimated to be 3 to 5 cubic yards. A small gully approximately 9 to 12 inches deep and 18 to 24 inches wide can be traced 50 feet back up the embankment. This area at the base of the embankment was not designed specifically for the discharge of run-off but appears to be concentrating water flow beneath the cover rock. The enclosed photographs indicate the extent and location of the erosion.

The embankment was constructed from compacted sandy/silty soils and has a base width of 660 feet and a top width of 25 feet, with drainage provided by an internal blanket drain. The downslope face of the embankment has been stabilized by using a 6-inch thick layer of 3-inch D50 rock riprap. The completion report does not indicate a protective bedding layer was placed under the rock mulch cover and a photograph from 1996 shows the rock mulch being placed directly on soil.

Determining the specific site conditions that contributed to the erosion will require further assessment, in accordance with Table 3-2 in Section 3.6.3 of the *Long-Term Surveillance Plan for the DOE Sherwood Project (UMTRCA Title II) Reclamation Cell, Wellpinit, Washington, February 2001*. Based on the criteria in Table 3-2, the response for minor erosion (erosion not immediately affecting the disposal cell) requires DOE-LM to evaluate, assess the impact, and respond as appropriate to eliminate the erosion problem. Accordingly, DOE-LM is planning a site visit in early October with engineering staff and a geotechnical cover design consultant to evaluate the cause and a possible remedy, if required.



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September 8, 2016

Please call me at (970) 248-6073 if you have any questions. Please send any correspondence to:

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

Sincerely,



Richard P. Bush  
Site Manager

Enclosure

cc:

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File: SHE 0100.02 (rc-grand junction)





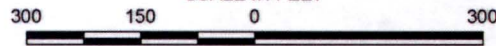
#### EXPLANATION

- Approximate Extent of Tailings Disposal Cell
- Washout

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SCALE IN FEET



U.S. DEPARTMENT OF ENERGY  
OFFICE OF LEGACY MANAGEMENT

Work Performed by  
Navarro Research & Engineering, Inc.  
Under DOE Contract Number DE-LM0000421

Sand Washout  
Sherwood, WA, Disposal Site

DATE PREPARED:  
September 8, 2016

FILE NAME:  
SHE\_SandWashout







