

August 27, 2015

Mr. Richard Bush, Program Manager  
U.S. Department of Energy  
Office of Legacy Management  
2597 Legacy Way  
Grand Junction, CO 81503

SUBJECT: U.S. DEPARTMENT OF ENERGY DATA VALIDATION PACKAGE ENTITLED "AUGUST AND SEPTEMBER 2014 GROUNDWATER AND SURFACE WATER SAMPLING AT THE TUBA CITY, ARIZONA, DISPOSAL SITE," DATED DECEMBER 2014, AND LETTER DATED MAY 18, 2015, RESPONDING TO THE U.S. NUCLEAR REGULATORY COMMISSION STAFF'S COMMENTS ON WATER QUALITY MONITORING AT THE MOENKOPI WASH (Docket Number WM-00073)

Dear Mr. Bush:

I am writing in response to the U.S. Department of Energy's (DOE's) Data Validation Package entitled "August and September 2014 Groundwater and Surface Water Sampling at the Tuba City, Arizona, Disposal Site" dated December 2014 (Agencywide Document Access and Management System (ADAMS) Accession Number ML15035A668), and your letter dated May 18, 2015, responding to the U.S. Nuclear Regulatory Commission (NRC) staff's comments on water quality monitoring at the Moenkopi Wash (ML15140A509).

Regarding the Data Validation Package we have the following comments:

1. The "Water Sampling Field Activity Verification Checklist" indicates that three locations near Moenkopi Wash (965, 1571 and 1573) were not sampled. However, no rationale is provided as to why the sampling was not performed, other than the "site lead" instructed that the sampling not be performed.
2. The "Potential Outliers Report" states that outliers were observed at 21 locations, but this is misleading as 41 outliers were observed, with the most number of outliers at location 1115. The staff suggests that the DOE review this information to determine if it is significant.
3. The "Static Water Level Data" indicates that the water elevation has varied by more than 10 feet from the previous report in wells 268, 273, 275, 276, 286, NMW 3A and NMW 7D, with the water elevation variance for wells NMW 3A and NMW 7D at 100 feet and 73 feet respectively. The staff suggests that the DOE review the data to determine if it is in error or if it indicates a significant change in water elevation at the sites.
4. The Time Concentration Graphs only provide information on ammonia, sulfate and uranium. It would be useful to provide time concentration graphs for all constituents sampled. In addition, the time and concentration information provided for location 262

(page 356) is inconsistent with previous reports. Suggest this time concentration graph be reviewed to determine if it is in error.

Regarding the May 18, 2015, letter: While agreeing with the NRC staff that the possibility of a hydraulic connection may exist between the disposal cell and Moenkopi Wash, and as such, monitoring Moenkopi Wash upstream and downstream of the disposal cell is warranted, you state that you will not sample Moenkopi Wash near locations 902 and 965, as we suggested in our March 9, 2015, letter (ML15041A276). Rather, you state that you will sample at locations 778, 759, and 1568. We believe that, while these locations may provide valuable information, a location farther upstream near location 965 will provide better information on background conditions in Moenkopi Wash, and the staff suggests that you include an additional sample at this location. Finally, we note that it appears that the decision to modify the ground water monitoring locations was made during the August and September 2014 sampling event by the site lead. Although the Long-term Surveillance Plan for the site provides flexibility for the DOE in monitoring the Moenkopi Wash, it would be helpful if the DOE would inform the NRC staff of changes to the ground water monitoring plan or provide an explanation for the change in the DVP.

In accordance with Title 10 of the *Code of Federal Regulations* (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 ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions concerning the NRC staff comments, please contact me at 301-415-6749, or by e-mail at: [Dominick.Orlando@nrc.gov](mailto:Dominick.Orlando@nrc.gov).

Sincerely,

*/RA/*

Dominick A. Orlando, Senior Project Manager  
Materials Decommissioning Branch  
Division of Decommissioning, Uranium Recovery,  
and Waste Programs  
Office of Nuclear Material Safety  
and Safeguards

Docket No. WM-73

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(page 356) is inconsistent with previous reports. Suggest this time concentration graph be reviewed to determine if it is in error.

Regarding your May 15, 2015, letter, while agreeing with the NRC staff that the possibility of a hydraulic connection may exist between the disposal cell and Moenkopi Wash, and as such, monitoring Moenkopi Wash upstream and downstream of the disposal cell is warranted, you state that you will not sample Moenkopi Wash near locations 902 and 965, as we suggested in our March 9, 2015, letter (ML15041A276). Rather, you state that you will sample at locations 778, 779, and 1568. We believe that, while these locations may provide valuable information, a location farther upstream near location 965 will provide better information on background conditions in Moenkopi Wash, and the staff suggests that you include an additional sample at this location. Finally, we note that it appears that the decision to modify the ground water monitoring locations was made during the August and September 2014 sampling event by the site lead. Although the Long-term Surveillance Plan for the site provides flexibility for the DOE in monitoring the Moenkopi Wash, it would be helpful if the DOE would inform the NRC staff of changes to the ground water monitoring plan or provide an explanation for the change in the DVP.

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Sincerely,

/RA/

Dominick A. Orlando, Senior Project Manager  
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