Department of Energy
Washington, DC 20585

WM-00016 D

October 17, 2012

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

Subject: Response to U.S. Nuclear Regulatory Commission Letter Dated August 28, 2012 Regarding U.S. Department of Energy Report Entitled "Work Plan for the Enhanced Characterization of the Surficial Aquifer, Riverton, Wyoming, Processing Site"

To Whom it May Concern:

This letter is in response to the U.S. Nuclear Regulatory (NRC) review and comments on the *Work Plan for the Enhanced Characterization of the Surficial Aquifer, Riverton, Wyoming, Processing Site* provided in your letter dated August 28, 2012. The work plan distributed in June 2012 described collection of soil and groundwater samples in response to local stakeholder concerns regarding increased contaminants resulting from the 2010 historic flood event. The site characterization effort is in addition to the monitoring and analysis required for compliance with the long-term surveillance and monitoring program at the Riverton, Wyoming, processing site. Although the field work was completed prior to receipt of your comments, as discussed on an October 11, 2012 telephone call, reviews and insights from the NRC are appreciated. For future work plans, U.S. Department of Energy (DOE) will contact you directly to ensure sufficient time is allotted to address your comments earlier in the process. As data is processed and interpreted, DOE will continue to consider any comments and looks forward to increasing the dialog with NRC. Responses to the comments follow:

1) The primary mechanism being tested is the contribution of contaminants from the unsaturated zone into the groundwater due to periodic flooding. Other mechanisms and alternative conceptual models will be considered, in addition to data being interpreted.
2) A schedule date of field work was not provided in the work plan due to uncertainty in the schedule for obtaining access agreements and approvals of cultural resource surveys.
3) The grid proposed in the work plan and completed in the field for locating sample sites adequately defines the centroid of the constituent plume based on preliminary results.
4) DOE agrees soil sample analyses of uranium will help to substantiate the assumption that flood waters mobilize contaminants as well as comparing spatial distribution across the site.
5) It is not possible to use the same sampling protocol for temporary Geoprobe boreholes as used on permanently installed and developed monitoring wells; however, we will compare results of the groundwater samples with monitoring well analyses collected in June 2012 to examine consistency of results using different field methods.

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6) The plan specified driving Geoprobe rods to a 12-feet depth to provide consistency across the site and between sampling events, if the study is repeated in the future.
7) Soil cores were split where possible into two depth intervals at 34 locations.

Again, DOE appreciates the review and comments of NRC and looks forward to enhanced communications with NRC staff.

Please call me at (970) 248-6020 or Bill Dam at (970) 248-6484 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,

April Gil

April Gil, Ph.D.
Environment Team Lead

cc:
M. Meyer, NRC
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B. Dam, USGS (e)
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