

NRC and Powertech Detailed Discussion Summary

1) Hydrology/Site Characterization

NRC staff stated that the potential for breccia pipes and thinning of the Morrison formation (the Morrison) caused staff to question the adequacy of this formation as an underlying confining layer.

Powertech presented information related to the Morrison to substantiate it as a competent aquitard (underlying confining layer) (**See ML091800160**). Powertech addressed the two issues brought up by NRC staff: 1) breccia pipes, and 2) thinning of the Morrison.

Regarding breccia pipes, Powertech submitted a U.S. Geological Survey (USGS) map with locations of breccia pipes in the area. Powertech presented information that demonstrates that breccia pipes are located near faults. Powertech stated that since there are no major faults in the area they do not believe that breccia pipes exist within the Permit Area. In addition, Powertech stated that the 4000 exploratory drill holes in the Permit Area do not show deformation associated with breccia pipes. Lastly, Powertech referred to results of pumping tests in the Unkpapa that would indicate no breccia pipes in the Permit Area.

Regarding the thinning of the Morrison, Powertech stated that more detailed characterization of the Morrison would be found during the development stage. Powertech also stated that additional USGS information regarding the thickness of the Morrison and an isopach of the Morrison is available but was not submitted with the NRC application.

2) Waste Disposal

NRC staff stated that basic information regarding the proposed storage and radium settling ponds is needed for our review. This includes soil information, stability analysis and other information addressed in Regulatory Guide 3.11. Also, information addressing 10 CFR 20.2002 requirements regarding deep well disposal is needed.

Powertech stated that deep well disposal in the states of Wyoming and Nebraska is no longer viable. They are still seeking a Class 5 deep well in South Dakota from EPA. Regarding the ponds, Powertech stated that they have additional drawings that were included in a separate report that was not submitted with the NRC application.

3) Well Field Location and Layout

NRC staff stated that a fuller discussion of uranium recovery locations within the Permit Area is needed. For example, the staff was not able to locate information indicating where wellfield operations would occur.

Powertech produced a drawing titled "Proposed Facilities and Wellfields" that partly addressed this issue (**See ML091800186**).

4) Protection of Water Resources

For water wells located within the proposed aquifer exemption area, Powertech stated that they have a surface use agreement with all surface users that gives them the right to plug and replace wells. This information was not included in the NRC application. Powertech stated that information on this users agreement can be made available to NRC staff.

5) Operations Information

NRC staff indicated to Powertech that in some cases there was not enough site-specific information and that instead there was too much reliance on generic guidance. One example staff discussed was wellfield distance and spacing.

Powertech described their rationale for using a 400 ft spacing which was based on previous experience. Powertech further explained that modeling is not very exact and that the 400 ft spacing accounts for human error with a margin of safety.

6) Path Forward

As a result of NRC staff's acceptance review of this application, and these discussions, the staff determined that Powertech's application for a new ISR facility is not sufficiently complete for detailed technical review and will not be docketed. NRC staff gave Powertech the option of either withdrawing the aforementioned application or receiving a letter from NRC staff stating the reasons for not accepting the application. Powertech stated that they would respond to these choices on or about June 19, 2009.