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**From:** Richard Blubaugh [rblubaugh@powertechuranium.com]  
**Sent:** Tuesday, September 18, 2012 5:58 PM  
**To:** Burrows, Ronald  
**Cc:** 'John Mays'; 'Jack Fritz'; 'Richard Clement'; 'Hollenbeck, Mark'  
**Subject:** Re: Response to Action Items  
**Attachments:** Response\_120918.pdf

Ron,

We are in receipt of the Public Meeting Summary dated September 13, 2012, which summarized the public meeting of August 30, 2012 regarding the proposed Dewey-Burdock Project. Attached hereto are the responses to specific action items addressed on the Specific Action Item Table enclosed with the summary. The two items to be addressed initially pertain to the restoration schedule and the pore volume calculation regarding screened volume versus ore body thickness. Please review these responses and provide feedback regarding whether they are satisfactory or not.

The other item in the table specifically requiring Powertech's response pertains to a supplemental groundwater sampling plan. As noted, Powertech will submit this plan within two weeks of receiving NRC's assessment of groundwater sampling locations.

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The following information was prepared by Powertech in response to actions items from the August 30, 2012 public meeting held with NRC to discuss Powertech's proposed environmental monitoring program. The quoted action items from the public meeting notes (ML12255A258) are provided below followed by the requested information.

***NRC staff stated that its analysis indicates that Powertech's restoration water balance is not consistent with the proposed pore volume. Powertech will provide a calculation addressing the restoration schedule.***

The water balance provided in Figure TR RAI P&R-14c-1 in the June 2011 TR RAI responses (ML112071064) states that the typical restoration flow rate will be 250 gpm each at the Burdock and Dewey sites. Please note that this is considered "typical" and as stated in the response to TR RAI P&R-14(c) (page 71) the total project-wide restoration extraction flow rate will be approximately 500 gpm, while the specific contribution from the Dewey and Burdock well fields will vary.

The following restoration volume calculations were provided in the response to TR RAI 6.1-7 in ML112071064.

Pore volume = (well field pattern area) x (thickness) x (porosity) x (flare factor)

Restoration composite volume = (pore volume) x (number of pore volumes)

Thickness = 4.6 ft

Porosity = 0.30

Flare factor = 1.44

The financial assurance estimate in Appendix 6.6-A of ML112071064 assumes 70 ft x 70 ft patterns. The total number of patterns for both Dewey and Burdock well fields combined in the first year of operation is estimated at 195 patterns. This is assumed evenly split and equates to 98 patterns for Burdock and 97 patterns for Dewey.

Calculation of restoration duration for patterns operated in Year 1 at Burdock

Total Patterns = 98

Total area per pattern =  $98 * 4,900 \text{ ft}^2 = \underline{480,200 \text{ ft}^2}$

Total pore volume =  $480,200 \text{ ft}^2 * 4.6 \text{ ft} * 0.30 * 1.44 = 954,253 \text{ ft}^3/\text{pore volume} * x$

$7.4805 \text{ gallons}/\text{ft}^3 = \underline{7,138,293 \text{ gallons}/\text{pore volume}}$

Restoration composite volume =  $7,138,293 \text{ gallons}/\text{pore volume} * 6 \text{ pore volumes} = \underline{42,829,757 \text{ gallons}}$

Duration of restoration = restoration composite volume/flow rate

Duration of restoration =  $42,829,757 \text{ gallons}/250 \text{ gpm} = \underline{171,319 \text{ minutes}}$

Months of restoration =  $171,319 \text{ min.} \times 1 \text{ day}/24 \text{ hours} \times 1 \text{ hour}/60 \text{ min.} \times 1 \text{ month}/30.4 \text{ days} =$   
**3.9 months**

Calculation of restoration duration for patterns operated in Year 1 at Dewey

For Dewey, the restoration of 97 patterns at 250 gpm also has an estimated duration (rounded) of **3.9 months**.

This type of calculation was applied to generate the overall restoration schedule for the life of the project. Figure 6.1-1 in ML112071064 shows the estimated duration of restoration for each well field. The estimated durations range from one to three calendar quarters (three to nine months), depending on the size of the well fields.

This calculation shows that Powertech's restoration water balance is consistent with the proposed restoration schedule. Powertech will provide an updated version of the financial assurance calculations with the revised Technical Report that shows the duration of restoration for a typical well field.

***Clarification of pore volume calculation regarding screened volume versus ore body thickness.***

The screened interval thickness and average ore body thickness are the same for the Dewey-Burdock Project. This is described in Section 3.1.1.1 in the TR (emphasis added):

"For all injection and production wells, the base of casing will be established at or below the confining unit overlying the mineralized zone. **The screened interval will be completed only across the targeted ore zone.**"

In the pore volume calculations provided above, the term "thickness" represents the screened interval, which is the same as the average ore body thickness.