

August 10, 2012

Matt Hicks
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Groundwater Quality Program
South Dakota Department of Environment & Natural Resources
523 East Capitol Avenue
Joe Foss Building
Pierre, SD 57501-3182

**Re: Response to July 16 and 30 Technical Comments
Dewey-Burdock Project Groundwater Discharge Plan Application**

Dear Mr. Hicks:

On behalf of Powertech (USA) Inc., this letter is provided in response to technical comments received July 16 and 30, 2012 for the above referenced application for a Groundwater Discharge Plan (GDP). For convenience, the comments are provided below along with the responses. Application replacement pages are enclosed along with an index of changes (two hard copies and one electronic copy on CD). Powertech (USA) Inc. will provide a separate comment response letter regarding your August 7, 2012 questions regarding Plate 3.6-10.

Technical Comment 1: On Table 6.1-3, what was the reason radon was excluded from the radiological parameters, and are the metals dissolved or total? (South Dakota's ground water standards are dissolved with the exception of mercury).

Response: Radon was inadvertently omitted from Table 6.1-3. An updated table is attached that includes radon and indicates that metal concentrations are dissolved with the exception of total mercury.

Technical Comment 2: On Table 6.4-1, nitrate is listed as a soil parameter to monitor. Is this related to possible fertilizer use, or are nitrates possible from part of the processing process (such as nitric acid)? Please also add sodium adsorption ratio (SAR) and sodium to the soils parameter list.

Response: Nitrate is proposed as a soil sampling parameter to assess nitrogen fertilizer needs. Nitric acid is not anticipated to be used at the Dewey-Burdock Project. An updated Table 6.4-1 is attached that includes SAR and sodium.

Technical Comment 3: Please provide more information about how Powertech (USA) will demonstrate that land application water will not accumulate in the catchment areas during dry conditions.

Response: The following response provides a summary of commitments already contained within the draft GDP to prevent water from accumulating in the catchment areas during normal operations. It also commits to mitigation measures to prevent water from accumulating in the catchment areas during normal operations (i.e., dry conditions).

The purpose of the catchment areas is to capture runoff from precipitation events or snowmelt on the land application areas (p. 120a). The land application rate will be maintained at an agronomic rate that will prevent water from accumulating in the catchment areas during normal operations. The application rate will be adjusted as necessary including temporary shutdown if needed to prevent excessive ponding in the catchment areas (p. 120a). Powertech (USA) will monitor the catchment areas daily to ensure that there is not excessive ponding and that adequate capacity is available for containment of rainfall/runoff from the 100-year, 24-hour storm (p. 164). Each catchment area will be routinely monitored, including after significant precipitation events (p. 120c). If a catchment area fills above the normal operating level, which includes designated freeboard volume for the 100-year, 24-hour storm event, a dewatering program will be initiated (p. 120c). Potential groundwater quality impacts from catchment areas will be evaluated through the commitment to install suction lysimeters within each catchment area (p. 143) and sample the lysimeters prior to each irrigation season, during each irrigation season (for lysimeters installed beneath operational catchment areas only), and once after each irrigation season (p. 145).

It is important to clarify that the term “normal operating level” is not meant to imply that the catchment areas will normally act as ponds filled to this level. As described on p. 120b, the normal operating level represents the excess capacity beyond the minimum required to contain the 100-year, 24-hour runoff event. If a catchment area fills above the normal operating level with runoff or snowmelt, a dewatering program will be initiated. The catchment areas will not be allowed to fill with land application solutions to the normal operating level. Following are additional commitments to ensure that the catchment areas do not accumulate water during normal operations (i.e., dry conditions). These commitments are provided in the enclosed replacement pages to the draft GDP.

Powertech (USA) will record daily precipitation totals and use this information along with the daily catchment area monitoring results to evaluate whether the catchment areas accumulate water during normal operations (i.e., dry conditions). If water accumulates in the catchment areas during dry conditions, Powertech (USA) will implement a dewatering program. The accumulated water will be conveyed to the storage ponds or pumped to a land application pivot area (primary or standby area). In the annual report following each land application cycle, Powertech (USA) will provide the results of daily catchment area monitoring and a description of any dewatering activities.

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Thank you for the prompt technical review. Please direct any questions regarding these comment responses to Richard Blubaugh at (303) 790-7528 or Jack Fritz at (307) 672-0761.

Sincerely,



Jack Fritz, P.E.
WWC Project Manager

cc: Richard Blubaugh
Mark Hollenbeck
John Mays
Ronald Burrows, U.S. NRC
Valois Shea, U.S. EPA, Region 8
Marian Atkins, BLM

Encl: Change Index
Replacement Pages

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