



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

PMB 2020
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August 11, 2010

Mr. Richard E. Blubaugh, Vice President
Environmental, Health & Safety
Powertech (USA), Inc.
5575 DTC Parkway, Suite 140
Greenwood Village, CO 80111

Re: Dewey-Burdock Project, Groundwater Discharge Permit Draft Monitoring Proposal

Dear Mr. Blubaugh,

This letter is in response to Powertech's draft groundwater discharge monitoring plan proposal. Please be advised, Powertech will need to fully comply with the State of South Dakota groundwater quality standards, ARSD 74:54:01, groundwater discharge rules, ARSD 74:54:02, mining rules, ARSD 74:29:05:14-20, and will need to complete a Groundwater Discharge Permit application. I have enclosed a copy of the application form for your use in addition to copies of the groundwater quality standards, groundwater discharge rules and the mining rules concerning land application. The Department has reviewed the draft monitoring proposal and has the following concerns.

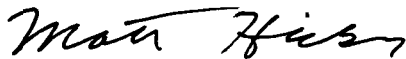
- Regarding Figure 1 (Land Application Sampling Locations), the majority of the monitor wells appear to be bedrock wells, some completed as deep as the Sundance. Additionally, some of the groundwater monitoring locations are situated at significant distances (several in excess of one mile) from the proposed land application areas. The Department will not allow the use of bedrock wells to evaluate shallow groundwater impacts from land application. The Department will require the installation of shallow wells within appropriate distances (e.g., within the land application areas and to ½ mile out, depending on proposed land application operations) to accurately monitor groundwater discharge from the land application sites.

- Regarding Table 1-2 (Operational Monitoring Parameters for Water), Powertech lists the regulatory limit (according to ARSD 74:54:01:04) for both pH and total dissolved solids (TDS) as "N/A". ARSD 74:54:01:04, Table 2 states the ground water quality standard for pH as 6.5 – 8.5 and total dissolved solids as 1,000 mg/l. The only instance where these parameters are not applicable, is when the receiving discharge is from a publicly owned treatment works, such as a municipality.
- The monitoring plan summary does not appear to include baseline groundwater monitoring locations or a baseline monitoring plan. ARSD 74:54:02:18 requires that a minimum of four samples be collected from each applicable well within a six month period. This would include baseline sampling of all shallow wells required for the groundwater discharge permit operation. In its Ground Water Discharge Permit application Powertech must include a baseline monitoring plan and sampling schedule.
- The Department has concerns over the potential for heavy metals and metalloids, such as arsenic and selenium, to accumulate in vegetation as a result of land application, and the potential impact this could have on livestock and wildlife in the area. In its Ground Water Discharge Permit application Powertech must address the potential for this scenario to occur as well as plans for mitigation should it become a problem.
- The included map is difficult to correlate to the narrative monitoring plan summary. In its Ground Water Discharge Permit application Powertech must clearly identify and label all sampling locations listed in Table 1 in addition to discussing items included on the map, including land application regrading, land application containment areas, standby pivot areas, and area of influence.
- On the first page, third paragraph of the Monitoring Plan Summary, Powertech references ARSD 74:29:05:15 of the mining rules. Please be advised that ARSD 74:29:05 is not part of a Ground Water Discharge Plan. However, as land application at an in-situ leach facility would also be regulated under ARSD 74:29:05:15 of the mining rules, the Ground Water Quality Program will be working closely with the Minerals and Mining Program in the review of the Ground Water Discharge Plan. Additionally, Powertech incorrectly references ARSD 74:29:05:15. The collection of a sample for every 100,000 gallons is a requirement of ARSD 74:29:05:15, not a recommendation as implied by the draft monitoring proposal. The rules also state the grab sample shall be split, and one split sample of each five consecutive grab samples shall be composited and analyzed for the required

monitoring parameters. Therefore, there would only be one analysis every 500,000 gallons.

To clarify the Groundwater Discharge Permit application process, I have enclosed a Groundwater Discharge Permit application form. This form is also available on the Department website at: <http://denr.sd.gov/des/gw/GWDischarge/E0452V1-GWDischargeApp.pdf>. In addition, the Groundwater Discharge permitting rules and groundwater quality standards are also available on the internet at: <http://legis.state.sd.us/rules/DisplayRule.aspx?Rule=74:54>. The mining rules can also be found at: <http://legis.state.sd.us/rules/DisplayRule.aspx?Rule=74:29:05>. If you have questions regarding the Groundwater Discharge permitting process, please feel free to contact me at the number listed below.

Sincerely,



Matt Hicks
Senior Hydrologist
Ground Water Quality Program
SD Department of Environment and Natural Resources
Telephone: 605-773-3296

Enclosure:

CC: ✓ Mark Hollenbeck, Powertech (USA), Inc., Edgemont, SD
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