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Sent via email (PDF attachment)

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Valois Shea  
U.S. Environmental Protection Agency Region 8  
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Subject: Comments on UIC Class V Draft Permit No. CO52209-08412 Issued to Powertech (USA) Inc. and dated May 2011

Dear Ms. Shea:

Thank you for the opportunity to comment on the third draft Underground Injection Control permit issued to Powertech (USA) Inc. for a proposed Class V well located in Section 33, Township 10N, Range 67W in Weld County, Colorado.

I hereby incorporate by reference my July 24, 2009 comments on the first draft permit and December 24, 2009 comments on the second draft permit, all comments submitted by Coloradoans Against Resource Destruction on all three draft permits, the two petitions for review of the first final permit (filed with the Environmental Appeals Board), and all other comments submitted on all three draft permits to the extent such comments address issues or detail facts or evidence not included in my comments.

Regarding the third draft permit, I make the following comments:

1. The permittee has conducted previous pump tests in Section 33 that presumably yielded data on formation permeability and integrity of confining layers. These data would be helpful in predicting the movement of groundwater during the proposed pump test and injection activity. It is my understanding that the EPA did not require the permittee to submit these data as part of the agency's review of this permitting action. The EPA should require the permittee to submit all data obtained from previous pump tests, and these results should be reviewed to determine the likely behavior of groundwater during the pump test and subsequent injection.

2. The draft permit requires the permittee to collect groundwater samples from the A2 sandstone of the Upper Fox Hills Formation before an aquifer pump test begins. Pursuant to the draft permit, these samples must be collected from a single well – the pumping and injection well designated IN08-33-PW1. These samples will be analyzed ostensibly to determine baseline water quality in the area potentially affected by the proposed injection activity. It is unclear from the Statement of Basis how it was determined that collecting samples from a single well could adequately characterize the baseline quality of the groundwater in the area of the A2 sandstone potentially affected by injection. The Statement of Basis should include data and calculations supporting this determination.
3. The draft permit requires sampling and testing of the injection fluid “before injection begins.” Conceivably, the permittee could collect the samples immediately following the pumping of the groundwater into the metal storage tanks. Under this scenario, the quality of the injection fluid would be expected to be comparable to the groundwater in the target aquifer (assuming the tanks are reasonably clean). However, the injection fluid will reside in the tanks for weeks or months while the EPA reviews the results of the aquifer pump test and reaches a decision whether to authorize injection. During this time, the composition of the injection fluid may potentially change due to microbial activity and/or contamination from chemical residues contained in the tanks. To obtain samples that more accurately represent the water quality of the injection fluid at the time of injection, the sampling should occur after the EPA has reviewed the pump test results and has determined that there is no potential for migration of injection fluid or A2 sandstone aquifer fluids into the overlying Laramie Formation.
4. The draft permit requires the permittee to “collect composite samples from the storage tanks containing the groundwater pumped from the A2 sandstone of the Upper Fox Hills Formation and analyze the samples as described in Part II, Section D.3.” The tanks may have previously been used to store different fluids and sludges (including hazardous wastes). Further, tank cleaning effectiveness may vary among different tanks. By mixing samples from different tanks prior to testing, test results may not be representative of injection fluid from individual tanks. To obtain analytical results that accurately reflect the water quality in the individual tanks, and to identify those storage tanks wherein the water may require treatment procedures to achieve permitted constituent concentration limits, individual samples should be collected from each tank and tested separately.
5. To ensure sampling integrity, sampling of injection fluid from storage tanks should be conducted by a party independent of the permittee, and proof of chain of custody from the sampling sites to the testing laboratory should be submitted to the EPA.
6. Consistent with separate sampling and testing of injection fluid from each tank, any authorization to commence injection should be specific to individual storage tanks.
7. The draft permit calls for the EPA Director to review the results of the pump test to determine if there is a hydrologic connection between the A2 sandstone and the overlying Laramie Formation, and to review the analytical results of the injection fluid samples to

determine if corrective action needs to be taken to restore the injection fluid to permit limits. The draft permit calls for the Director to make a subsequent determination whether to issue an Authorization to Commence Injection. By limiting the review to EPA staff, the draft permit excludes the public from any review of and comment on this critical data. Any final permit should be modified to allow a brief but reasonable period of time for public review and comment on these test results.

I look forward to reviewing the EPA's responses to these comments. Please contact me if you have any questions.

Sincerely,

/s/James B. Woodward