



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

Response to Comments
for
The Reissuance of an Underground Injection Control (UIC) Permit
for
EnerVest Operating, LLC VAS2D950BBUC

On May 16, 2018, the U.S. Environmental Protection Agency Region III (EPA or the Region) issued a public notice requesting comment and announcing the opportunity for a public hearing for the proposed reissuance of two Underground Injection Control (UIC) permits, VAS2D950BBUC and VAS2D957BDIC, to EnerVest Operating, LLC (EnerVest) for one Class II-D underground injection well for each permit. A tentative hearing was scheduled for June 28, 2018 at the Dickenson County Judicial Center located in Clintwood, Virginia. However, because EPA did not receive any requests for a hearing, or other indication of significant degree of public interest in a hearing, EPA did not hold the hearing. In total, EPA received one written comment regarding permit VAS2D950BBUC. During the public comment period, all the information submitted by the applicant was available for review at the Jonnie B. Deel Memorial Library located at 198 Chase Street, Clintwood, Virginia and at the EPA regional office in Philadelphia.

The following responds to the comment received:

- 1) At 0.34 miles of the injection well located in Buchanan County, VA (VAS2D950BBUC) is Russell Prater Creek, where the federally threatened Big Sandy crayfish has been documented. The species was not likely considered when the permit was originally issued. I'd like additional information on potential impacts to Russell Prater Creek and the Big Sandy crayfish.

EPA conducted a search for endangered species located in Buchanan County, Virginia on the Fish and Wildlife's website <http://eocs.fws.gov/ipac/> on February 15, 2018. The Big Sandy crayfish was identified in that search.

The well injects fluid over 4,000 feet below land surface and the well is designed to have no impact on surface water. In order to protect underground sources of drinking water (USDWs) and prevent fluid migration to the surface, 40 C.F.R §146.22 requires that Class II wells be "sited in such a fashion that they inject into a formation which is separated from any USDW by a confining zone that is free of known open faults or fractures within the area of review." The injection zone is the Weir Formation at a depth of 4,354 to 4,464ft. The confining zone, the Big Lime Formation, is located immediately above the Weir Formation and consists of 199ft of dense carbonate (limestone). Multiple additional confining units of shale and other dense rock exist between the injection zone and the surface.



EnerVest has constructed the well with surface casing from ground level to a depth of 395ft and cemented back to the surface. This exceeds the technical and generally-accepted criteria of surface casing placement at no less than 50ft below the lowermost USDW. Long string casing was placed to a depth of 6,099ft and cemented back to a depth of 2,570ft. This exceeds the standard practice of cementing long string casing back to no less than 100ft above the injection zone.

EnerVest proposed a fixed radius of one-quarter mile (1320ft) for the Area of Review (AOR). The regulations require corrective action to address abandoned wells in the AOR, in order to prevent abandoned wells to serve as conduits that would allow the fluid to migrate to a USDW or to the surface. EPA calculated the zone of endangering influence through a formula derived from an agency-accepted standard operating procedure (SOP-WD-UIC-07, Rev. 1, November 2010). The EPA has determined that the one-quarter mile AOR is sufficient. Russell Prater Creek is located outside of the AOR.

Surface activity, as well as surface spills are regulated by the Commonwealth of Virginia. EnerVest has to comply with State spill prevention requirements at this injection well facility. In the case of any surface spill at the injection well facility, these spill prevention requirements should adequately prevent any fluid migration to any nearby surface water body.

Federal Underground Injection Control Program Permit Appeals Procedures

The provisions governing procedures for the appeal of an EPA permitting decision are specified at 40 C.F.R. Part 124.19 (Please note that the changes to this regulation became effective on March 26, 2013. See 78 Federal Register 5281, Friday, January 25, 2013.) Any person who commented on the draft permit, either in writing during the comment period can appeal the final permit by filing a written petition for review with the Clerk of the EPA Environmental Appeals Board (EAB). Persons who have not previously provided comments are limited in their appeal rights to those points which have been changed between the draft and final permits, if any. Citizens, groups, organizations, governments and the permittee can appeal the permit within this procedural framework.

A petition for review must be filed within thirty (30) days of the date of the notice announcing EPA's permit decision. This means that the EAB must receive the petition within 30 days. (Petitioners receiving notice of the final permit by mail have 3 additional days in accordance with 40 C.F.R. 124.20(d).) The petition for review can be filed by regular mail sent to the address listed below with a copy sent to EPA Region III at the address listed below.

Environmental Appeals Board
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue N.W.
Mail Code 1103M
Washington, DC 20460-0001

U.S. Environmental Protection Agency Region III
Ground Water & Enforcement Branch (3WP22)
Water Protection Division
1650 Arch Street
Philadelphia, PA 19103-2029

See the Federal Register notice cited above or the EAB website:
http://yosemite.epa.gov/oa/EAB_Web_Docket.nsf) for how to file with the EAB electronically or by hand delivery.

The petition must clearly set forth the petitioner's contentions for why the EAB should review the permit. The petition must identify the contested permit conditions or the specific challenge the permit decision. The petitioner must demonstrate the issues raised in the petition had been raised previously during the comment period. If the appeal is based on a change between the draft and final permit conditions, the petition should state so explicitly. The petitioner must also state whether, in his or her opinion, the permit decision or the permit's conditions appealed are objectionable because of:

1. Factual or legal error, or
2. The incorporation of a policy consideration which the EAB should, at its discretion, review.

If a petition for review of this permit is filed, the permit conditions appealed would be deemed not to be in effect pending a final agency action.

Within a reasonable time of receipt of the Appeals Petition, the EAB will either grant or deny the appeal. The EAB will decide the appeal on the basis of the written briefs and the total administrative record of the permit action. If the EAB denies the petition, EPA will notify the petitioner of the final permit decision. The petitioner may, thereafter, challenge the permit decision in Federal Court. If the EAB grants the appeal, it may direct the Region III office to implement its decision by permit issuance, modification or denial. The EAB may order all or part of the permit decision back to the EPA Region III office for reconsideration. In either case, if the permit is appealed, a final agency decision occurs when, after appeal, the permit is issued, modified or denied and an Agency decision is announced. After this time, all administrative appeals have been exhausted, and any further challenges to the permit decision must be made to Federal Court.