

IN RE BEAR LAKE PROPERTIES, LLC

UIC Appeal No. 11-03

ORDER DENYING REVIEW IN PART AND REMANDING IN PART

Decided June 28, 2012

Syllabus

Mr. William A. Peiffer, Jr. and Mr. Paul T. Stroup (together “Petitioners”) petitioned the Environmental Appeals Board (“EAB” or “Board”) to review the U.S. Environmental Protection Agency, Region 3’s (“Region”) decision to issue two Underground Injection Control (“UIC”) permits to Bear Lake Properties, LLC (“Bear Lake”), pursuant to Part C of the Safe Drinking Water Act (“SDWA”), 42 U.S.C. §§ 300h-300h-8, and EPA’s implementing regulations at 40 C.F.R. parts 124 and 144-148. The permits authorize construction and operation of two Class II injection wells referred to as Bittinger #1 and Bittinger #4 in Columbus Township, Warren County, Pennsylvania.

On appeal Petitioners argue that the Region’s decision to issue the permits was deficient in six respects. In particular, Petitioners argue that the Region clearly erred by 1) failing to establish that it satisfied its regulatory obligations to account for and consider all drinking water wells within the area of review of the injection wells; 2) failing to properly account for the depth of water wells in Columbus Township; 3) failing to account for all gas wells in the area of review of the injection wells; 4) failing to consider the population growth of Columbus Township and the possible adverse economic impacts of the injection wells; 5) failing to consider the potential for earthquakes; and 6) accepting late-filed comments on the draft permit.

Held: The Board remands the permit on the issue of whether the Region adequately articulated in the record and to the public that the Region satisfied its regulatory obligations to account for and consider all drinking water wells within the area of review of the injection wells. The Region had a responsibility to ensure that accurate data as to drinking water wells within the area of review of the proposed injection wells were identified and considered. The record does not support a finding that the Region satisfied its responsibility in this regard. In particular, the Region failed to clearly articulate its regulatory obligations or compile a record sufficient to assure the public that the Region relied on accurate and appropriate data in satisfying its obligations. The permit is therefore remanded. Review is denied on all other issues.

*Before Environmental Appeals Judges Catherine R. McCabe,
Kathie A. Stein, and Anna L. Wolgast.*

Opinion of the Board by Judge Wolgast:

I. STATEMENT OF THE CASE

On June 8, 2011, the U.S. Environmental Protection Agency (“EPA” or “Agency”) Region 3 (“Region”) issued two Underground Injection Control (“UIC”) permits to Bear Lake Properties, LLC (“Bear Lake”), pursuant to Part C of the Safe Drinking Water Act (“SDWA”), 42 U.S.C. §§ 300h – 300h-8, and EPA’s implementing regulations at 40 C.F.R. parts 124 and 144-148. The permits authorize construction and operation of two Class II injection wells¹ referred to as Bittinger #1 (permit number PAS2D216BWAR) and Bittinger #4 (permit number PAS2D215BWAR) in Columbus Township, Warren County, Pennsylvania. Both permits authorize injection into the Medina Formation, Bittinger #1 into the perforated interval between 4210 feet and 4327 feet, and Bittinger #4 into the perforated interval between 4285 feet and 4302 feet.² On July 8, 2011, Mr. William A. Peiffer, Jr. and Mr. Paul T. Stroup (together, “Petitioners”) filed with the Environmental Appeals Board (“EAB” or “Board”) a petition for review of the Permits (“Petition”). The Region filed a response to the Petition. *See* Region III’s Response to Petition for Review (“Region’s Response”). For the reasons set forth below, the Petition is denied in part and granted in part, and the permits are remanded for further action consistent with this decision.

¹ Under 40 C.F.R. § 144.6, injection wells fall into five classes depending on the material being disposed of in the well. Class II wells are used to inject fluids:

- (1) Which are brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection. (2) For enhanced recovery of oil or natural gas; and (3) For storage of hydrocarbons which are liquid at standard temperature and pressure.

40 C.F.R. § 144.6(b).

² *See* Statement of Basis for Underground Injection Control (UIC) Program Draft Class II Permit No. PAS2D215BWAR at 2, and Statement of Basis for Underground Injection Control (UIC) Program Draft Class II Permit No. PAS2D216BWAR at 2.

II. ISSUES ON APPEAL

The Petition filed in this case presents the following issues:

1. Have Petitioners demonstrated that the Region clearly erred by failing to establish that it satisfied its regulatory obligations to account for and consider all drinking water wells within the area of review of the injection wells?
2. Have Petitioners demonstrated that the Region clearly erred by failing to properly account for the depth of water wells in Columbus Township?
3. Have Petitioners demonstrated that the Region clearly erred by failing to account for all gas wells in the area of review of the injection wells?
4. Have Petitioners demonstrated that the Region clearly erred by failing to consider the population growth of Columbus Township and the possible adverse economic impacts of the injection wells?
5. Have Petitioners demonstrated that the Region clearly erred by failing to consider the potential for earthquakes?
6. Have Petitioners demonstrated that the Region clearly erred by accepting late-filed comments on the draft permit?

III. STANDARD OF REVIEW

In determining whether to review a petition filed under 40 C.F.R. § 124.19(a), the Board first considers whether the petitioner has met threshold pleading requirements such as timeliness, standing, and issue preservation. *See* 40 C.F.R. § 124.19; *In re Beeland Group, LLC*, 14 E.A.D. 189, 194-95 (EAB 2008); *In re Indeck-Elwood, LLC*, 13 E.A.D. 126, 143 (EAB 2006); *In re Avon Custom Mixing Servs., Inc.*, 10 E.A.D. 700, 704-08 (EAB 2002); *In re Knauf Fiber Glass, GmbH*, 9 E.A.D. 1, 5 (EAB 2000). For example, a petitioner must demonstrate that any issues it appeals were either raised with reasonable specificity during the public comment period or were not reasonably ascertainable during that period. 40 C.F.R. §§ 124.13, 124.19(a); *see, e.g., Indeck*, 13 E.A.D. at 143; *In re Mille Lacs Wastewater Treatment Facility*, 11 E.A.D. 356, 363 & n.7 (EAB 2004); *In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 249-50 & n.8 (EAB 1999).

Assuming that a petitioner satisfies its threshold pleading obligations, the Board then considers the petition to determine if review is warranted. *Beeland*, 14 E.A.D. at 194-95; *Indeck*, 13 E.A.D. at 143. Ordinarily, the Board will not review a petition filed under 40 C.F.R. § 124.19(a) unless it appears from the petition that the permit condition in question is based on a clearly erroneous finding of fact or conclusion of law or involves an exercise of discretion or an important policy consideration that the Board, in its discretion, should review. 40 C.F.R. § 124.19(a); accord *In re Chukchansi Gold Resort & Casino*, 14 E.A.D. 260, 264 (EAB 2009); *In re Scituate Wastewater Treatment Plant*, 12 E.A.D. 708, 717 (EAB 2006); *In re Gov't of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 332-33 (EAB 2002); *In re New Eng. Plating Co.*, 9 E.A.D. 726, 729 (EAB 2001). In considering permit appeals, the Board is guided by the preamble to the part 124 regulations, which explains that review should be “only sparingly” exercised and that “most permit conditions should be finally determined at the Regional level.” Consolidated Permit Regulations, 45 Fed. Reg. 33,290, 33,412 (May 19, 1980); accord *Scituate*, 12 E.A.D. at 717; *In re City of Moscow*, 10 E.A.D. 135, 140-41 (EAB 2001).

For each issue raised in a petition, the burden of demonstrating that review is warranted rests with the petitioner, who must raise objections to the permit and explain why the permit issuer’s previous response to those objections is clearly erroneous or otherwise warrants review.³ *In re Teck Cominco Alaska, Inc.*, 11 E.A.D. 457, 494-95 (EAB 2004); *In re Westborough*, 10 E.A.D. 297, 305, 311-12 (EAB 2002); *In re City of Irving*, 10 E.A.D. 111, 129-30 (EAB 2001), review denied sub nom. *City of Abilene v. EPA*, 325 F.3d 657 (5th Cir. 2003). Consequently, the Board has consistently denied review of petitions which merely cite, attach, incorporate, or reiterate comments previously submitted on the draft permit. E.g., *In re City of Pittsfield*, NPDES Appeal No. 08-19 (EAB Mar. 4, 2009) (Order Denying Review), *aff'd*, 614 F.3d 7 (1st Cir. 2010); *City of Irving*, 10 E.A.D. at 129-30; *In re Hadson Power 14*, 4 E.A.D. 258, 294-95 (EAB 1992) (denying review where petitioners merely reiterated comments on draft permit and attached a copy of their comments without addressing permit issuer’s responses to comments); see also *In re Peabody W. Coal Co.*, 12 E.A.D. 22, 33

³ Federal circuit courts of appeal have upheld this Board requirement that a petitioner must substantively confront the permit issuer’s response to the petitioner’s previous objections. *City of Pittsfield v. U.S. EPA*, 614 F.3d 7, 11-13 (1st Cir. 2010), *aff'g In re City of Pittsfield*, NPDES Appeal No. 08-19 (EAB Mar. 4, 2009) (Order Denying Review); *Mich. Dep’t Envtl. Quality v. U.S. EPA*, 318 F.3d 705, 708 (6th Cir. 2003) (“[Petitioner] simply repackag[ing] its comments and the EPA’s response as unmediated appendices to its Petition to the Board * * * does not satisfy the burden of showing entitlement to review.”), *aff'g In re Wastewater Treatment Facility of Union Township*, NPDES Appeal Nos. 00-26 & 00-28 (EAB Jan. 23, 2001) (Order Denying Petitions for Review); *LeBlanc v. EPA*, 310 Fed. Appx. 770, 775 (6th Cir. 2009) (concluding that Board correctly found petitioners to have procedurally defaulted where petitioners merely restated “grievances” without offering reasons why Region’s responses were clearly erroneous or otherwise warranted review), *aff'g In re Core Energy, LLC*, UIC Appeal No. 07-02 (EAB Dec. 19, 2007) (Order Denying Review).

(EAB 2005) (“[P]etitioner may not simply reiterate comments made during the public comment period, but must substantively confront the permit issuer’s subsequent explanations.”).

IV. PROCEDURAL AND FACTUAL HISTORY

Under SDWA section 1421, 42 U.S.C. § 300h, the EPA Administrator is required to promulgate regulations for state UIC programs to protect underground sources of drinking water (“USDWs”).⁴ The EPA has promulgated such implementing regulations, which are found at 40 C.F.R. parts 144 through 148. The SDWA and the UIC regulations focus exclusively on groundwater that is or may be a source of drinking water. EPA administers the UIC program in those states that, like Pennsylvania, are not yet authorized to administer their own programs. *See* 40 C.F.R. §§ 144.1(e), 147.1951. The UIC permit application procedures are set forth in section 144.31, which provides: “All injection activities including construction of an injection well are prohibited until the owner or operator is authorized by permit.” *Id.* § 144.31(a).

On October 29, 2010, Bear Lake submitted permit applications for construction and operation of the Bittering #1 and Bittering #4 injection wells located in Warren County, Pennsylvania, close to the New York State border. In January of 2011, following review of the applications, the Region issued draft permits and a statement of basis supporting the draft permits, along with a public notice re-

⁴ The purpose of the UIC program is to protect underground water that “supplies or can reasonably be expected to supply any public water system.” SDWA § 1421(d)(2), 42 U.S.C. § 300h(d)(2); *see In re NE Hub Partners, L.P.*, 7 E.A.D. 561, 566 (EAB 1998), *review denied sub nom. Penn Fuel Gas, Inc. v. U.S. EPA*, 185 F.3d 862 (3d Cir. 1999); *In re Envotech, L.P.*, 6 E.A.D. 260, 263-64 (EAB 1996); *In re Brine Disposal Well*, 4 E.A.D. 736, 742 (EAB 1993) (“[T]he Agency’s UIC regulations are oriented exclusively toward the statutory objective of protecting drinking water sources.”). The UIC regulations define the term “USDW” as:

[A]n aquifer or its portion:

- (a)(1) Which supplies any public water system; or
- (2) Which contains a sufficient quantity of ground water to supply a public water system; and
 - (i) Currently supplies drinking water for human consumption; or
 - (ii) Contains fewer than 10,000 mg/l total dissolved solids; and
- (b) Which is not an exempted aquifer.

40 C.F.R. § 144.3.

questing comments and scheduling a public hearing. The Public Hearing took place on March 23, 2011. The Public Comment period closed on March 30, 2011.⁵ The Region issued final permits for Bittinger # 1 and Bittinger #4 on June 8, 2011, along with a response to comments document.

On July 8, 2011, Petitioners filed the petition for review at issue in this matter. The Region filed its Response on August 25, 2011.

V. ANALYSIS

A. *Petitioners Have Demonstrated That the Region Failed to Establish That It Satisfied Its Regulatory Obligations to Account for and Consider All Drinking Water Wells Within the Area of Review of the Injection Wells*

The question before the Board is whether the Region met its regulatory obligations to identify and consider appropriate and accurate site-specific information in its review of Bear Lake's permit applications. The regulations governing the issuance of UIC permits prohibit the movement of fluid containing any contaminant into USDWs as a result of underground injection activity if the contaminant may cause a violation of any primary drinking water standard or may otherwise adversely affect human health. 40 C.F.R. § 144.12(a). To assist the Agency in determining whether contamination will occur, the regulations require an applicant to provide to the Agency:

A topographic map (or other map if a topographic map is unavailable) extending one mile beyond the property boundaries of the source depicting * * * those wells, springs and other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within a quarter mile of the facility property boundary.

Id. § 144.31(e)(7). This information must be considered by the Region in authorizing Class II wells. *See id.* § 146.24(a)(1); *In re Beckman Prod. Servs.*, 5 E.A.D. 10, 21 (EAB 1994) (the Region must consider site-specific information when deciding whether to issue a new Class II UIC permit) (citing 40 C.F.R.

⁵ The public hearing was initially scheduled to take place on February 23, 2011. The Region later extended the date for the public hearing, as well as the deadline for submitting public comments, until March 23, 2011. *See* Responsiveness Summary to Public Comments for the Issuance of Underground Injection Control Permits for Bear Lake Properties, LLC ("RTC") at 1. During the public hearing, the Region extended the comment period until March 30, 2011. *Id.*

§ 146.24)). This includes information on any water wells within the “area of review.” *See* 40 C.F.R. § 146.24(a)(1)-(2). Under 40 C.F.R. § 144.3, “area of review” is defined as the area surrounding the injection well calculated according to the criteria set forth in 40 C.F.R. § 146.6. Section 146.6 calls for the area of review to be determined according to calculation of a “zone of endangering influence” or according to a “fixed-radius method.” In this case, the Region adopted Bear Lake’s calculation of a zone of endangering influence encompassing a one-quarter-mile radius around the wells. *See* Region’s Response Ex. 2 (Permit Application for Bittinger #1); *id.* Ex. 3 (Permit Application for Bittinger #4). Petitioners do not object to the Region’s area of review determination.

In its application for construction and operation of Bittinger #1, Bear Lake, through its contractor, Tetra Tech, concluded that no groundwater wells existed within a one-mile radius of the well. *See* UIC Permit Application for Bittinger #1, App. A (Region’s Response Ex. 2). According to the application, the closest ground water well is located approximately one and a quarter miles from the facility. *Id.* at section 2 (Area of Review). In its application for construction and operation of Bittinger #4, Bear Lake concluded that no groundwater wells existed within a one-quarter-mile radius, and that only five water wells existed within a one-mile radius. *See* UIC Permit Application for Bittinger #4, App. A (Region’s Response Ex. 3).⁶

Through both written comments and oral testimony during the public hearing, commenters expressed concern over whether Bear Lake had adequately surveyed drinking water wells located in New York State and whether data used to identify local water wells in the area surrounding Bittinger #1 and #4 was outdated. RTC, Response No. 7 (Region’s Response Ex. 6); *see also* E-mail from Mary Heston to Stephen Platt, EPA Region 3 (Apr. 1, 2011) (Region’s Response Ex. 12). The gist of the comments appears to be a general concern about whether the Region complied with its obligation to identify drinking water wells within the area of review of the Bittinger #1 and #4 wells. In responding to these comments, the Region stated as follows:

Subsequent to the public hearing, EPA requested that Bear Lake Properties conduct another survey of drinking water wells located within one mile of the proposed injection well facility. This one mile survey did include properties located in New York State. The revised survey map Bear Lake Properties provided to EPA, with GPS lat-

⁶ The Board notes that the Region’s Response includes an incomplete version of the permit applications for Bittinger #1 and #4. On June 6, 2012, at the request of the Clerk of the Board, the Region filed a complete version of the applications. Citations to the applications (Region’s Response Exs. 2-3) in this decision are to the complete versions filed on June 6, 2012.

itude/longitude locations, identified 10 private drinking water wells located in New York State, within one mile of the Bittering #4 well, the closest well to the New York/Pennsylvania state line.

RTC, Response No. 7; *see also* E-mail from S. Stephen Platt, EPA Region 3, to Karl (Apr. 1, 2011) (Region’s Response Ex. 11) (requesting that Bear Lake conduct “one final review, and provide documentation to EPA, on any additional private drinking water wells * * * located within one mile of the facility boundary”).⁷ The results of this additional survey are attached as Exhibit 11 to the Region’s Response (hereinafter cited as “Supplemental Survey”).⁸

On appeal, Petitioners assert that even with the supplemental survey, the Region has still failed to adequately survey waters wells. *See* Petition at 4-6. According to the Petition, even after the additional survey of water wells, the Region failed to correct information provided in Bear Lake’s original permit application regarding wells near Bittering #1 and failed to provide accurate information regarding the number of water wells within a one-mile radius of Bittering #4. *Id.* at 5. Petitioners assert that “[a]ccurate information about both Bittering wells from both New York and Pennsylvania must be included and considered to provide complete and comprehensive information. Both the initial information as well as the amended information submitted by Permittee is factually incorrect.” *Id.* The Region, Petitioners argue, clearly erred by relying on inaccurate and insufficient information when making its permit determination.⁹ *Id.* at 5-6.

⁷ The E-mail does not include a last name or title for “Karl.” The Board assumes that this individual is an employee of, or contractor for, Bear Lake.

⁸ The initial as well as the more recent surveys of existing water wells appears to have been conducted by Bear Lake’s contractor, Tetra Tech. *See, e.g.*, Region’s Response Exs. 2-3 (containing selected portions of the Bittering #1 and #4 permit applications), Ex. 11 (providing supplemental data on water wells within a one-mile radius of injection wells). The Board notes that the Region’s Response includes an incomplete version of Exhibit 11. On May 5, 2012, at the request of the Clerk of the Board, the Region filed a complete version of this exhibit. *See* Region III’s Supplemental Filing of Administrative Record. Citations to Exhibit 11 in this decision refer to the complete version filed with the Board on May 5, 2012.

⁹ In support of its argument on this issue, Petitioners rely, in part, on an exhibit to the Petition purporting to show water wells in proximity to Bittering #1 and Bittering #4. The exhibit is titled “Location sketch of water wells in proximity to Bittering No. 4 and Bittering No. 1” and is designated by Petitioners as “Exhibit C” to the Petition. The face of the Exhibit indicates that it was prepared on July 2, 2011, by petitioner Mr. William A. Peiffer, Jr. As this Board has previously held, however, the administrative record in a permit proceeding under 40 C.F.R. part 124 is closed at the time of permit issuance and documents submitted subsequent to permit issuance may not be considered part of the administrative record. *In re Dominion Energy Brayton Point, LLC*, 12 E.A.D. 490, 518 (EAB 2006). Because Petitioners’ Exhibit C was prepared after the June 8, 2011 issuance of the permits in this matter, the Exhibit is not part of the administrative record for the permitting decisions. The Board has,

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The Region does not directly respond to Petitioners' assertions. Instead, the Region argues that the permits' conditions are protective of any water wells located within one mile of the injection wells and that Petitioners have failed to identify "any deficiencies in any particular permit conditions imposed by the Region." Region's Response at 14. According to the Region, even if the record failed to account for all drinking water wells, the Board should nevertheless deny review because "the permits are designed to protect all nearby water wells." *Id.* at 14-15. Inexplicably, the Region's Response does not provide this Board with any substantive discussion or analysis of the surveys of drinking water wells conducted prior to issuance of the permits, nor does the Region attempt to demonstrate, with citations to the administrative record, that the surveys adequately accounted for all drinking water wells. The Board is therefore left to wade through the record to determine whether the Region has satisfied its regulatory obligations.

The record does not support a finding that the Region considered appropriate and accurate site-specific information in reaching its permit decisions. As stated above, as a result of concern expressed by commenters during the public comment period regarding the accuracy of this information, the Region requested that Bear Lake conduct a supplemental review of all water wells within a one-mile radius of Bittinger #1 and #4. Rather than providing clarity, however, this Supplemental Survey raises additional questions. For example, while the information submitted with the permit applications did not identify any water wells within one mile of Bittinger #1, the Supplemental Survey appears to identify fourteen groundwater wells within this same area. *Compare* Bittinger #1 Permit Application (Region's Response Ex. 2) (table titled "Bittinger Area: Columbus Twp: Warren County, PA, Wells w/in 1 mile radius of Bittinger #1") *with* Supplemental Survey (table titled "Groundwater Wells Within 1 Mile of Bittinger #1 Well, Warren County, PA"). The Region does not explain or comment on this apparent discrepancy. Similarly, while the original survey of water wells within one mile of Bittinger #4 (submitted as part of the permit application) identified five water wells, the Supplemental Survey appears to identify seventeen wells (none of which appear to correspond to the five wells identified in the permit application). *Compare* Bittinger #4 Permit Application (Region's Response Ex. 3) (table titled "Bittinger Area: Columbus Twp: Warren County, PA, Wells w/in 1 mile radius of Bittinger #4") *with* Supplemental Survey (table titled "Groundwater Wells Within 1 Mile of Bittinger #4 Well (Warren County, PA)"). Again, the Region does not explain or comment on this apparent discrepancy. Further, as stated above, the

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in certain circumstances, considered documents presented on appeal that were not part of the administrative record. *See, e.g., In re Guam Waterworks Auth.*, 15 E.A.D. 437, 456 (EAB 2011) (stating that the Board has considered documents not part of the administrative record where, for example, the appeal process is the logical and/or first opportunity to present such documentation). Nevertheless, as Exhibit C appears to be a tracing of a map prepared by Bear Lake, and because the map itself is already part of the administrative record, the Board declines to consider this exhibit.

Region's response to comments document states that the Supplemental Survey identified ten drinking water wells in New York State located within one mile of Bittering #4, yet these wells are not identified in the list provided in the Supplemental Survey, nor does the Region explain why these ten wells were not previously identified during the permit application process.

Given these apparent discrepancies, as well as the Region's failure to provide the Board with a clear explanation or analysis supporting its conclusion that all water wells within the area of review have been identified and considered, the Board is unable to determine, based on the current record, if the Region has satisfied its regulatory obligations.¹⁰ The Region had a responsibility to ensure that accurate data regarding the number and location of drinking water wells within its selected area of review were identified and considered. The record before the Board is insufficient to support a finding that the Region satisfied its responsibility in this regard. In particular, the Region has utterly failed to clearly articulate its regulatory obligations or compile a record sufficient to assure the public that the Region relied on accurate and appropriate data in satisfying its obligations. Indeed, the Region has failed to clearly articulate what data it relied upon in making its determination.¹¹

Under these circumstances, the Board concludes that the Region has committed clear error by failing to provide a reasoned analysis in the record evidencing compliance with its regulatory obligation to ensure that water wells within the applicable area of review are properly identified and considered prior to permit issuance. *See* 40 C.F.R. §§ 144.31(e)(7), 146.24(a). A clear articulation of the Region's regulatory obligations and record evidence of the data relied on in reaching its decision is particularly important where, as here, the record indicates commenters' confusion with both regulatory requirements and the data relied on by the Region.¹² Accordingly, the permits are remanded to Region 3 for reconsideration.

¹⁰ As stated above, the Region argues that even if all water wells were not accounted for, the permits include conditions sufficient to protect USDWs. While this may be true, it does not relieve the Region of its regulatory obligation to properly identify and consider the presence of all water wells in the area of review.

¹¹ The Board does not hold that the Region failed to assess water wells within the area of review. Rather, the Board concludes that the record is insufficient to determine if the Region has satisfied its obligations.

¹² The Board notes that much of the confusion surrounding this issue may be of the Region's own making. As stated above, the Region determined that the applicable area of review/zone of endangering influence encompassed a one-quarter-mile radius around the injection wells. *See* Region's Response at 16 & Exs. 2-3. Similarly, the regulations at 40 C.F.R. § 144.31(e)(7) require that applicants provide a topographical map depicting, among other things, water wells within a quarter mile of the injection wells. Nevertheless, without explanation, the Region required that Bear Lake's Supplemental Survey identify drinking water wells within one mile of the proposed injection wells. In addition, in its

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tion. On remand, the Region must clearly articulate its obligations and the data relied upon in complying with its obligations. If the Region decides to reissue the permits, the Region shall include specific and detailed findings and make those findings available to the public for review and comment.¹³

B. Petitioners Have Not Demonstrated That the Region Clearly Erred by Failing to Properly Account for the Depth of Water Wells in Columbus Township

Petitioners assert that the information in the record regarding the depth of water wells in Columbus Township, Pennsylvania is not accurate. *See* Petition at 6-7. In particular, Petitioners argue that the depth of wells in the Township reaches two-hundred-fifty-feet rather than the one-hundred-thirty-feet depth stated by Bear Lake in its permit application. *Id.* at 6. As a result of this alleged error in assessing the depth of water wells, Petitioners assert that the “well construction standards, mechanical integrity testing requirements, and monitoring requirements which were established by EPA with regard to the Bittering Wells could not have been accurate.” *Id.*

Petitioners’ allegations are not supported by the record. As the Region points out in its Response, the record indicates that the permittee identified the depth of the lowermost USDW as three-hundred-feet below surface elevation. *See* Region’s Response at 15; Statement of Basis for Underground Injection Control (UIC) Program Draft Class II Permit No. PAS2D216BWAR (“Statement of Basis for Bittering #1”) at 2, and Statement of Basis for Underground Injection Control (UIC) Program Draft Class II Permit No. PAS2D215BWAR (“Statement of Basis for Bittering #1”) at 2.¹⁴ Further, as the Region stated in responding to comments relating to well construction and mechanical integrity testing:

The Bittering #1 and Bittering #4 proposed UIC permits both require that surface casing be set 50 feet below the lowermost USDW * * * . The lowermost USDW has been identified at a depth of 300 feet and the Bittering #1

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Response, the Region stated, again without explanation, that the “UIC Regulations require that the permit application identify water wells located within *one mile* of the facility boundary.” *Id.* at 12 (citing 40 C.F.R. § 144.31(e)(7)) (emphasis added).

¹³ Petitioners have also asserted that the Region erred by failing to account for all wells in Columbus Township Pennsylvania. Petition at 3-4. As stated above, however, the regulations do not require the identification of all water wells in the Township, but only those within the area of review of the proposed injection wells. Review is therefore denied on this issue.

¹⁴ The Statement of Basis for the permits states further that injected fluids will be separated from the lowest USDW by an interval of approximately 3910 feet for Bittering #1 and 3985 feet for Bittering #4. Statement of Basis for Bittering #1 at 2; Statement of Basis for Bittering #4 at 2.

and Bittinger #4 wells have surface casing set at 401 feet and 506 feet respectively. This is well below the “fresh water” that would be protected under the PADEP ^[15] requirements.

* * *

Prior to operating of the wells, EPA requires that the wells be tested for mechanical integrity. Cementing records and logs are required to show that each well has adequate cement to prevent fluid migration out of the injection zone and an internal pressure test is required to ensure that the casing, tubing and packer will not leak during the well’s operation. The internal pressure test requires the annulus of the well (the space between the production casing and the tubing and packer) to be pressure tested to ten percent above the permitted maximum injection and held for at least 30 minutes, with no more than five percent loss in pressure allowed.

RTC, Response No. 8. The Region concluded that the permits would effectively protect USDWs. *Id.*

Because the record indicates that the permit conditions regarding the wells’ depth and construction are sufficiently protective of USDWs and because Petitioners failed to state why the Region’s response to comments regarding the wells’ construction, mechanical integrity, and testing standards were clearly erroneous or otherwise warrants review, review is denied on this issue. *See In re Shell Off-shore, Inc.*, 15 E.A.D. 536, 542 (EAB 2012) (petitioners must demonstrate why the Region’s response to comments is clearly erroneous or otherwise warrants review); *In re Guam Waterworks Auth.*, 15 E.A.D. 437, 444 (EAB 2011) (same).

C. Petitioners Have Not Demonstrated That the Region Clearly Erred by Failing to Account for All Gas Wells in the Area of Review of the Proposed Injection Wells

Petitioners assert that the review of the Bittinger #1 and #4 permits is warranted because the Region clearly erred by failing to ensure that Bear Lake properly identified all gas wells or abandoned wells within the applicable “zone of

¹⁵ The regulations governing the UIC program for the State of Pennsylvania require that the owner of a Class II well install casing from the surface to at least fifty-feet below the base of the lowermost USDW. *See* 40 C.F.R. § 147.1955(b)(1).

endangering influence.”¹⁶ See Petition at 7. According to Petitioners, the Region erroneously accepted Bear Lake’s conclusion that no gas wells (other than wells owned by Bear Lake) or abandoned wells were present in the zone of endangering influence.¹⁷ Petitioners contend that seventy oil and gas wells exist in the zone of endangering influence. *Id.* at 8. In responding to comments concerning the identification of any abandoned wells, the Region stated, in part:

During the public hearing, commenters indicated to EPA that they did not think that all abandoned wells near the proposed injection site had been documented. It was unclear whether these wells might exist within the zone of endangering influence, outside of this area, or might be wells that do not penetrate the injection zone. EPA requested that Bear Lake Properties conduct another survey of the area surrounding the proposed injection operation, using information provided at the public hearing, to determine whether other abandoned wells did, in fact, exist. Public records, obtained by EPA subsequent to the public hearing, indicated no record of wells being drilled in the area of the proposed injection operation prior to the wells that are present today. The additional information and maps, submitted to EPA, provided information on all of the gas wells that are located within a two mile radius of the injection well site. This map confirmed the information submitted by Bear Lake Properties, that only gas production wells owned by Bear Lake Properties exist within the zone of endangering influence. The additional survey conducted by Bear Lake Properties indicated that only the Bittinger #1 and Bittinger #4 are contained within the area of review.

EPA has also required in the proposed permits monitoring of the fluid level in the injection zone during injection operations to ensure that pressure created by the injection operation will not cause migration of fluid up abandoned wells that could exist. By monitoring fluid level, and making sure that it remains safely below the lowermost

¹⁶ As stated above, the Region determined the zone of endangering influence to be a one-quarter-mile radius from Bittinger #1 and #4.

¹⁷ The Petition does not cite to any statutory or regulatory provisions that they allege the Region has violated. The Board presumes that Petitioners are alleging a violation of the corrective action requirements set forth in 40 C.F.R. §§ 144.55 and 146.7, which focus on the need to ensure that other wells in the vicinity of a proposed well do not provide a conduit for migration of injected fluids.

USDW, then even if an abandoned well were to exist (i.e., a well that might have been drilled in the past without having information of public record), the monitoring would detect and prevent fluid migration into the lowermost USDW. EPA Region III has a permit condition in the proposed Bear Lake Properties permits that requires the fluid level to be monitored during the injection operation.

RTC, Response No. 6; *see also* Statement of Basis for Bittering #1 at 2 (“After extensive research of local, county and state well records, no wells other than Bear Lake Property gas production wells, were found which penetrate the injection zone within this Area of Review.”); Statement of Basis for Bittering #4 at 2 (same).

Petitioners mistakenly equate the Region’s assessment of wells within a two-mile radius with the Region’s zone of endangering influence determination. Under this mistaken assumption, Petitioners assert that the Region’s determination that no gas or other wells exist within the zone of endangering influence is clearly erroneous. According to Petitioners, the zone of endangering influence contains a total of seventy oil or gas wells located in Pennsylvania and New York. Petition at 7-8. Petitioners, however, erroneously state that the zone of endangering influence encompasses a *two-mile radius* around the wells. *Id.* at 7-8 (emphasis added). As noted above, Bear Lake calculated, and the Region adopted, a zone of endangering influence encompassing a *one-quarter-mile radius* around the injection wells. While Bear Lake also submitted, and the Region considered, information on wells beyond the one-quarter-mile zone of endangering influence, this did not, as Petitioners suggest, result in an expansion of the zone from a one-quarter-mile radius to a two-mile radius. Under these circumstances, Petitioners have failed to establish that the Region’s determination on this issue was clearly erroneous or otherwise warrants Board review.

D. Petitioners Have Not Demonstrated That the Region Clearly Erred by Failing to Consider the Population Growth of Columbus Township and the Possible Adverse Economic Impact of the Injection Wells

Petitioners assert that the Region clearly erred in its permit determination by failing to consider the rapid population growth of Columbus Township, Pennsylvania and the economic impact that the wells will have on residents. Petition at 9. Because these considerations are outside the scope of Board review, the Petitioner for review is denied on this issue.

The UIC permitting process is narrow in its focus and the Board’s review of UIC permit decisions extends only to the boundaries of the UIC permitting program, which is limited to the protection of underground sources of drinking water.

See *In re Env'tl. Disposal Sys., Inc.*, 12 E.A.D. 254, 266 (EAB 2005); *In re Am. Soda, LLP*, 9 E.A.D. 280, 286 (EAB 2000) (“the SDWA * * * and the UIC regulations * * * establish the only criteria that EPA may use in deciding whether to grant or deny an application for a UIC permit”) (quoting *In re Envotech, LP*, 6 E.A.D. 260, 264 (EAB 1996)); *In re NE Hub Partners, LP*, 7 E.A.D. 561, 567 (EAB 1998) (“[P]rotection of interests outside of the UIC program [is] beyond our authority to review in the context of [a UIC] case.”), *review denied sub nom. Penn Fuel Gas, Inc. v. EPA*, 185 F.3d 862 (3rd Cir. 1999); *In re Brine Disposal Well*, 4 E.A.D. 736, 742 (EAB 1993) (“[P]arties objecting to a federally issued UIC permit must base their objections on the criteria set forth in the [SDWA] and its implementing regulations.”). Accordingly, where petitioners raise concerns outside the scope of the UIC program, the Board will deny review. See, e.g., *In re Federated Oil & Gas*, 6 E.A.D. 722, 725-26 (EAB 1997); *In re Terra Energy, Ltd.*, 4 E.A.D. 159, 161 n.6 (EAB 1992).

E. *Petitioners Have Not Demonstrated That the Region Erred in Considering the Potential for Earthquakes*

Petitioners argue that the Region erred by failing to consider that the proposed wells are located in an earthquake prone area and that underground injection can cause earthquakes. See Petition at 10-12. In responding to comments raised during the public comment period on this issue, the Region stated:

EPA has no evidence the location proposed for this injection operation is located in an earthquake prone area. Evidence indicates that there are no deep-seated transmissive faults that intersect the proposed injection zone or that could be influenced by the proposed injection operation in the future. It is important to keep in mind that the reservoir proposed for injection, the Medina Formation, produced, and continues to produce, natural gas. Over the past three decades, natural gas has been removed from the pore space within this reservoir, depleting the formation of much of the natural gas it contained as well as reducing the formation's reservoir pressure. Earthquakes can occur when a geologic formation becomes under-pressurized (i.e., through geologic formation collapse causing the structure of the formation to shift) or when it becomes over-pressurized. The Medina Formation in this location is presently under-pressurized from decades of natural gas production and there has been no evidence of earthquakes due to the removal of this natural gas. In addition, the proposed injection operation will not over-pressurize the formation. Because of the removal of millions of cubic feet of natural gas, pore space has been created to accept the

injection of fluid. The permits would also be conditioned to prevent the over-pressurization, or fracturing, of the formation.

RTC, Response No. 4.

According to Petitioners, the Region's reasoning is flawed because "it is irresponsible for the EPA to wait until an earthquake occurs to determine that a specific injection well facility is located in an earthquake-prone area, but, also, it fails to take into consideration the fact that earthquakes have been" acknowledged previously as being a problem resulting from injection wells. Petition at 10. Petitioners cite to two publications (attached as exhibits H and I to the Petition) purporting to document a relationship between injection from UIC wells and seismic activity. *Id.* at 11. Petitioners also assert, without support, that a well in New York (identified by Petitioners as "Tecrony No. 1") located three and three quarter miles from Bittering #4 was shut down due to seismic activity. Petition at 11-12 & Ex. 5. Finally, Petitioners cite to a local news report from a Syracuse, New York, television station questioning whether a connection may exist between injection wells and seismic activity in Arkansas. *Id.* at 12 & Ex. K.

In response to the Petition, the Region acknowledges, as it did in responding to comments, that, although some injection activities have been associated with seismic activity, this seismic activity has occurred in geologic formations in other part of the United States. *See* Region's Response at 18. The Region states that there is no evidence that any seismic activity has or will occur in the Medina Formation and that none of the injection wells permitted by Pennsylvania since 1985 have experienced injection-related seismic activity. *Id.* Further, the Region points out, as it did in responding to comments on this issue, that the wells will be operated at a pressure well below formation fracture pressure. *Id.* at 19; *see also*, RTC Response No. 4, Statement of Basis for Bittering #1 at 3 ("The maximum allowable surface injection pressure for the permitting operation will be 1696 psi. The maximum bottom-hole pressure shall not exceed 3916 psi. Pressure will be continuously monitored. This pressure limitation will meet the regulatory criteria of 40 CFR § 146.23(a)."); Statement of Basis for Bittering #4 at 3 ("The maximum allowable surface injection pressure for the permitting operation will be 1726 psi. The maximum bottom-hole pressure shall not exceed 3984 psi. Pressure will be continuously monitored. This pressure limitation will meet the regulatory criteria of 40 CFR § 146.23(a).").¹⁸

¹⁸ 40 C.F.R. § 146.23 states, in part, that:

Injection pressure at the wellhead shall not exceed a maximum which shall be calculated so as to assure that the pressure during injection does not initiate new fractures or propagate existing fractures in the confining

Continued

As the Board has previously stated, a petitioner's burden to demonstrate that review is warranted is particularly heavy in cases where a petitioner seeks review of issues that are fundamentally technical or scientific in nature, as the Board typically defers to the expertise of the permit issuer on such matters if the permit issuer adequately explains its rationale and supports its reasons in the record. See *NE Hub*, 7 E.A.D. at 567-68; accord *In re Dominion Energy Brayton Point, LLC*, 12 E.A.D. 490, 510 (EAB 2006); *In re Peabody W. Coal*, 12 E.A.D. 22, 33-34 (EAB 2005). The publications Petitioners cite purporting to show a connection between underground injection and seismic activity are not part of the permitting record in this matter and thus were not considered by the Board.¹⁹ Further, nothing in the record supports Petitioners' assertion regarding injection-related seismic activity at Tecrone No.1. In its Response, the Region states that it consulted with Region 2 regarding the circumstances of this well and learned that "[n]either Region II nor the New York Department of Environmental Conservation had information that this well was connected to injection-related seismic activity." Region's Response at 18 n.3. While Petitioners clearly disagree with the Region's determination regarding the threat of seismic activity in the area surrounding the injection wells, Petitioners have failed to meet their heavy burden of demonstrating that the Region erred in making its technical and scientific determination regarding the threat of injection-related seismic activity in the Medina Formation. *NE Hub*, 7 E.A.D. at 567.

F. *Petitioners Have Not Demonstrated That the Region Clearly Erred by Accepting Late-Filed Comments on the Draft Permit*

Petitioners argue that the Region clearly erred by failing to provide public notice that the public comment period on the draft permit had been extended from March 30, 2011, to April 15, 2011. Petition at 12. According to Petitioners, "[t]his lack of notice prevented additional comments from being submitted and is prejudicial to the rights of those interested parties * * * ." *Id.* at 13.

(continued)

zone adjacent to the USDWs. In no case shall injection pressure cause the movement of injection of formation fluids into an underground source of drinking water.

40 C.F.R. § 146.23(a)(1) (entitled Operating, monitoring, and reporting requirements) .

¹⁹ See *Dominion*, 12 E.A.D. at 518 (administrative record in a permit proceeding under 40 C.F.R. part 124 is closed at the time of permit issuance and documents submitted subsequent to permit issuance may not be considered part of the administrative record). Even were the Board to consider these publications, the publications do not undermine the Region's determination regarding seismic activity in the area surrounding Bittinger #1 and #4.

As the Region points out, however, the public comment period was not extended to April 15, 2011. While the Region accepted and considered certain late-filed comments from several commenters, including the Chautauqua County Department of Health, *see* Region's Response at 20 & Ex. 12, this did not result in a reopening of the comment period. *See In re Weber #4-8*, 11 E.A.D. 241, 243 n.2 (EAB 2003) (considering and responding to late-filed comments does not result in the reopening of the comment period because, "as a matter of good governance, the Region should retain the flexibility to freely respond to citizens' concerns, even those belatedly raised, without impairing the efficiency and finality of the permitting process"). Moreover, Petitioners do not allege any specific prejudice as a result of the Region's acceptance of the late-filed comments, nor do they state what issue(s) they would have raised, if any, had the public comment period in fact been extended. Accordingly, review is denied on this issue.

VI. CONCLUSION

As explained above, the Board is unable to determine based on the current state of the record if the Region has satisfied its regulatory obligation to ensure that all water wells within the area of review are properly identified and considered. The permit is therefore remanded to the Region to allow the Region the opportunity to cure the record deficiencies. The Region must clearly articulate its obligations and the data relied upon in complying with its obligations. If the Region decides to reissue the permits, the Region shall include specific and detailed findings and make those findings available to the public for review and comment. Review is denied on all other issues.

So ordered.