

**IN RE NE HUB PARTNERS, L.P.**

UIC Appeal Nos. 97-3 &amp; 97-4

***ORDER DENYING REVIEW***

---

Decided May 1, 1998

---

## Syllabus

Petitioners Penn Fuel Gas, Inc. and CNG Transmission Corporation filed petitions for review of two Underground Injection Control ("UIC") permit decisions issued by U.S. EPA Region III to NE Hub Partners, L.P. The permits would authorize NE Hub to construct and operate up to ten Class III wells for solution mining of salt and up to ten Class I brine disposal wells. The wells are to be located in Tioga County, Pennsylvania.

Petitioners' objections to the permits issued to NE Hub arise, in part, due to concern for Petitioners' underground natural gas storage facility, which is located in the same general area as NE Hub's proposed injection wells. Both the solution mining wells and the brine disposal wells involve drilling and/or injection into a formation known as the Oriskany Sandstone. Petitioners' natural gas storage facility is also located in the same formation.

Petitioners present a combination of substantive and procedural issues in their petitions for review. The substantive issues involve technical criticisms of permit conditions regarding the construction or operation of the UIC wells. The procedural issues pertain to the adequacy of the Region's responses to Petitioners' comments and the circumstances for reopening a public comment period during the permitting process. Petitioners also argue that EPA does not have jurisdiction to issue the brine disposal permit in light of the facts in this case.

## HELD:

- Review is denied of Petitioners' technical issues, including: drilling mud loss; cementing; maximum injection pressure ("MIP"); "area of review"; corrective action; monitoring; and injection fluid analysis. When issues raised on appeal challenge a Region's technical judgments, clear error or a reviewable exercise of discretion is not established simply because petitioners document a difference of opinion or an alternative theory regarding a technical matter. When, as here, we are presented with conflicting expert opinions, we look to see if the record demonstrates that the Region duly considered the issues raised in the comments and if the approach ultimately selected by the Region is rational in light of all of the information in the record, including the conflicting opinions.
- Different guidance documents from Region III and Region V regarding calculation of MIP do not persuade us to grant review. Different approaches to calculation of MIP are acceptable as long as the basis for the selected MIP is cogently explained and the MIP is reasonably designed to meet the appropriate regulatory standard.
- Review is denied with regard to the Region's response to comments. The Region satisfied its regulatory obligation to respond to all significant comments during the permitting

process. The Region is not required to provide an individual response to each comment submitted. The Region's decision to group related comments together and provide one unified response for each issue raised was an efficient technique, not an indication of unresponsiveness.

- Review is denied with regard to reopening the public comment period. The alleged changes to NE Hub's project plan cited by Petitioners and additional documentation received by the Region after the close of the public comment period do not amount to substantial new questions under 40 C.F.R. section 124.14(b).
- Review is denied with regard to the Region's authority to issue the brine disposal permit. The Region's duty is to make permit decisions based upon whether a project as proposed in a permit application conforms to statutory and regulatory requirements. If applicable requirements are satisfied, as was the case here, the Region may issue the permit.

***Before Environmental Appeals Judges Ronald L. McCallum, Edward E. Reich and Kathie A. Stein.***

***Opinion of the Board by Judge Stein:***

**I. BACKGROUND**

***A. The Permits and Petitions for Review***

Petitioners Penn Fuel Gas, Inc. and CNG Transmission Corporation (collectively, "Petitioners") filed petitions for review of two Underground Injection Control ("UIC") permits issued by United States Environmental Protection Agency Region III ("Region") to NE Hub Partners, L.P. ("NE Hub"). The permits correspond to two phases of a project being pursued by NE Hub to construct an underground natural gas storage facility in Tioga County, Pennsylvania. Permit No. PAS3G934BTIO, which is the subject of UIC Appeal No. 97-4, authorizes NE Hub to construct and operate up to ten Class III wells for solution mining of salt. NE Hub plans to inject fresh water into salt formations located approximately 4550-5500 feet below the surface and extract the resulting brine solution. The caverns created after extraction of the brine are intended to be used for storage of natural gas.<sup>1</sup> Permit No. PAS1X933BTIO, at issue in UIC Appeal No. 97-3,

---

<sup>1</sup> Because gas storage is the ultimate goal of this project, the Federal Energy Regulatory Commission ("FERC") must also approve the project. FERC's review is currently underway, and includes an environmental assessment under the National Environmental Policy Act ("NEPA"). See U.S. EPA Region III, Response to Petition for Review of a UIC Permit and to a Supplement to the Petition for Review, UIC Appeal No. 97-3 at 3-4 ("Region III's Response to Petition for Review 97-3"); U.S. EPA Region III, Response to Petition for Review of a UIC Permit and to a Supplement to the Petition for Review, UIC Appeal No. 97-4 at 3 ("Region III's Response to Petition for Review 97-4").

Continued

authorizes reinjection of the extracted brine through up to ten Class I disposal wells.

Petitioners own and operate an underground gas storage facility called the Tioga Storage Complex in the same general area as NE Hub's proposed injection wells. The Tioga Storage Complex is located in a geologic formation known as the Oriskany Sandstone. Pursuant to the solution mining permit, NE Hub's wells will be drilled through the Oriskany Sandstone to reach underlying salt deposits. The brine disposal permit authorizes injection of brine into the Oriskany and other geologic formations. Petitioners object to both permits, primarily due to concerns about impacts from the construction and operation of NE Hub's wells on the Tioga Storage Complex.

NE Hub submitted applications for these UIC permits to Region III in March 1996.<sup>2</sup> The Region reviewed the applications, obtained additional information from NE Hub, and developed two draft permits. One permit governed the solution mining activity and the second permit covered disposal of the resulting brine through reinjection. EPA Region 3 Responsiveness Summary for Response to Comments Received Relative to Final Permit Determination for NE Hub Partners, L.P. Tioga Storage Project at Farmington and Lawrence Townships, Tioga County, Pennsylvania (Introduction) (Feb. 1997) ("Responsiveness Summary" or "RS"). The Region held a public hearing in September 1996 and also accepted written comments on the draft permits. *Id.*

The Region originally issued UIC permit decisions to NE Hub on February 18, 1997. Petitioners appealed the original permit decisions to the Environmental Appeals Board ("Board") in March 1997. The Region moved for a voluntary remand of the permits in order to reconsider comments that had been provided by Petitioners during the public hearing and public comment period. The Board granted the remand and dismissed the petitions for review "without prejudice to the filing of new petitions for review following the Region's issuance

---

On April 29, 1998, NE Hub filed a motion with the Board indicating that FERC completed its review on April 20, 1998. Permittee's Motion to Lodge Federal Energy Regulatory Commission Order Issuing Certificate and Motion for Expedited Dismissal of Appeals, UIC Appeal No. 97-4. NE Hub's motion also requests expedited dismissal of Petitioners' appeals. *Id.* In light of the Board's disposition of these appeals in this Order Denying Review, it is unnecessary to rule upon NE Hub's motion. The Board expresses no opinion regarding the merits of the motion.

<sup>2</sup> Underground injection activities are regulated pursuant to the Safe Drinking Water Act and its implementing regulations. 42 U.S.C. §§ 300h - 300h-7; 40 C.F.R. part 144. The regulations prohibit construction of new underground injection wells such as those proposed by NE Hub until a permit is issued. 40 C.F.R. § 144.11.

of new permit decisions on remand.” *In re NE Hub Partners, L.P.*, UIC Appeal Nos. 97-1 & 97-2 (EAB, May 30, 1997) (Remand Order).

During the remand period, the Region prepared a supplement to the responsiveness summary that both responded to comments raised during the public comment period that had not been addressed in the original responsiveness summary and expanded on certain issues that had been included in the RS. The Region reissued the two UIC permit decisions on August 28, 1997 with no changes from the February 1997 permits. EPA Region 3 Supplemental Response to Comments Relative to Final Permit Determination for NE Hub Partners, L.P. Tioga Storage Project at Farmington and Lawrence Townships, Tioga County, Pennsylvania (Introduction) (Aug. 1997) (“Supplemental Response to Comments” or “SRC”).

Petitioners filed the present petitions for review with the Board on September 26, 1997.<sup>3</sup> Petitioners were also granted leave to file supplements to the petitions for review<sup>4</sup> and replies to the Region’s responses to the petitions for review.<sup>5</sup> Many of the issues raised by Petitioners are identical to those raised in their previous appeal. Petitioners raise substantive issues regarding the adequacy of certain permit conditions and procedural objections regarding the Region’s conduct of the public notice and comment process. Although the petitions for review argue against issuance of these permits in their present form, Petitioners principally seek another remand to the Region with instructions from the Board regarding how to remedy the perceived substantive and procedural errors in the permits. *See* Petition for Review 97-3 at 40; Petition for Review 97-4 at 29.

#### *B. Issues Raised in the Petitions for Review*

Petitioners present a combination of substantive and procedural issues in their petitions for review. In each case, the substantive issues involve technical criticisms of permit conditions regarding the con-

---

<sup>3</sup> Petition for Review of UIC Permit, UIC Permit No. PAS1X933BTIO (“Petition for Review 97-3”); Petition for Review of UIC Permit, UIC Permit NO. PAS3G934BTIO (“Petition for Review 97-4”).

<sup>4</sup> Petitioners’ Supplement to Petition for Review, UIC Appeal No. 97-3 (“Supp. to Petition for Review 97-3”); Petitioners’ Supplement to Petition for Review, UIC Appeal No. 97-4 (“Supp. to Petition for Review 97-4”).

<sup>5</sup> Petitioners’ Reply to Region III’s Response to Petition for Review of a UIC Permit and to a Supplement to the Petition for Review, UIC Appeal No. 97-3 (“Reply to Region’s Response 97-3”); Petitioners’ Reply to Region III’s Response to Petition for Review of a UIC Permit and to a Supplement to the Petition for Review, UIC Appeal No. 97-4 (“Reply to Region’s Response 97-4”).

struction or operation of the UIC wells. The procedural issues pertain to the adequacy of the Region's responses to Petitioners' comments and the circumstances for reopening a public comment period during the permitting process. Petition for Review 97-3 also raises an issue regarding EPA's jurisdiction to issue the brine disposal permit at all. Petitioners' arguments are summarized below in the order in which they are discussed in this decision.

Technical issues:

1) From the petition for review of the solution mining permit (Petition for Review 97-4):

- Permit conditions are inadequate to control loss of drilling mud during well construction and thus will not prevent migration of contaminants into Underground Sources of Drinking Water ("USDWs").
- Permit conditions governing the cementing of well casings are inadequate to prevent migration of contaminants into USDWs.

2) From the petition for review of the brine disposal permit (Petition for Review 97-3):

- The maximum injection pressure specified in the permit for operation of the disposal wells was calculated according to an inappropriate method and will lead to fractures in the injection zone in violation of the regulatory standard for Class I wells.
- The "area of review" specified in the permit, which establishes the geographic extent of the permittee's corrective action and monitoring obligations, is inadequate because it is too small.
- The corrective action plan submitted by NE Hub and incorporated into the permit does not satisfy regulatory standards.
- The permit conditions on monitoring are inadequate due to the unreliability of NE Hub's geologic modeling.

- The permit application was not complete because NE Hub did not submit sufficient chemical analyses of the fluids to be injected into the brine disposal wells.

Procedural issues from both petitions for review:

- The Region did not provide an adequate response to each comment submitted by the Petitioners during the public comment period.
- The Region failed to reopen the public comment period before the permits were originally issued in February 1997, or during the remand period, to permit public comment on new information.

Jurisdictional issue from the petition for review of the brine disposal permit (Petition for Review 97-3):

- The Region has no authority to issue the brine disposal permit if NE Hub does not currently intend to dispose of the produced brine through underground injection.

## II. DISCUSSION

### A. Statutory and Regulatory Framework

EPA implements the federal UIC program pursuant to Part C of the Safe Drinking Water Act ("SDWA"), 42 U.S.C. §§ 300h - 300h-7. The SDWA requires the EPA to promulgate regulations governing underground injection in order to prevent endangerment of drinking water sources. *Id.* at § 300h(b)(1). The SDWA also calls for a system of permits to authorize underground injection activities. *See id.*

EPA's UIC regulations establish general requirements for underground injection authorization, 40 C.F.R. part 144, and specific technical standards and criteria for each "class" of injection wells, 40 C.F.R. part 146. Injection wells are classified into one of five classes under the regulatory scheme. *See* 40 C.F.R. § 144.6. In this case, the solution mining wells are Class III wells because injection is performed "for the extraction of minerals including: \* \* \* (3) Solution mining of salts \* \* \*." 40 C.F.R. § 144.6(c). The brine disposal wells are Class I wells because they are "industrial \* \* \* disposal wells which inject fluids beneath

the lowermost formation containing, within one-quarter mile of the well bore, an underground source of drinking water.” 40 C.F.R. § 144.6(a)(2).

We have explained the scope of EPA’s jurisdiction under the SDWA and the UIC regulations in previous UIC permit cases. “[T]he Agency’s UIC regulations are oriented exclusively toward the statutory objective of protecting drinking water sources.” *In re Brine Disposal Well, Montmorency County, MI*, 4 E.A.D. 736, 742 (EAB 1993). The stated purpose of the UIC regulations is to prevent movement of fluids containing contaminants into USDWs if the presence of those contaminants might cause a violation of a primary drinking water regulation or otherwise adversely affect human health. 40 C.F.R. § 144.12(a). The UIC regulations also require that certain other federal laws must be adhered to in the UIC permit process. 40 C.F.R. § 144.4. Thus, “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, and in establishing the conditions under which deep well injection is authorized.” *In re Envotech, L.P.*, 6 E.A.D. 260, 264 (EAB 1996) (emphasis in original). The Board has denied petitions for review of UIC permits when the concerns raised were outside the scope of the UIC program as established by statute and regulation. See *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). Similarly, protection of interests outside of the UIC program are beyond our authority to review in the context of this case.

The Board’s authority to review Regional permit decisions is codified at 40 C.F.R. section 124.19. The Board has consistently noted that this authority is to be “sparingly exercised” and that “most permit conditions should be finally determined at the Regional level.” *Federated Oil & Gas*, 6 E.A.D. at 725 (quoting 45 Fed. Reg. 33,290, 33,412 (May 19, 1980)). The burden of demonstrating grounds for review rests upon the petitioner. *Id.* A petitioner must identify a clearly erroneous finding of fact or conclusion of law in the underlying permit decision or an important policy consideration or exercise of discretion that warrants Board review. 40 C.F.R. §§ 124.19(a)(1) & (2). Moreover, in permit appeals, “[t]he Board traditionally assigns a heavy burden to persons seeking review of issues that are quintessentially technical.” *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 403 (EAB 1997). When issues raised on appeal challenge a Region’s technical judgments, clear error or a reviewable exercise of discretion is not established simply because petitioners document a difference of opinion or an alternative theory regarding a technical matter. In cases where the views of the Region and the petitioner indicate bona fide differences

of expert opinion or judgment on a technical issue, the Board typically will defer to the Region. See *Envotech*, 6 E.A.D. at 284 (“absent compelling circumstances, the Board will defer to a Region’s determination of issues that depend heavily upon the Region’s technical expertise and experience”); *In re General Electric Co.*, 4 E.A.D. 358, 375 (EAB 1992) (same).

When, as here, we are presented with conflicting expert opinions, we look to see if the record demonstrates that the Region duly considered the issues raised in the comments and if the approach ultimately selected by the Region is rational in light of all of the information in the record, including the conflicting opinions. If we are satisfied that the Region gave due consideration to comments received and adopted an approach in the final permit decision that is logical and supportable, we typically will defer to the Region’s position.<sup>6</sup> Nonetheless, the Board takes a careful look at technical issues and will not hesitate to order a remand when a Region’s decision on a technical issue is illogical or inadequately supported by the record. See, e.g., *Ash Grove*, 7 E.A.D. at 417-419 (remand of permit limits for mercury and thallium at cement kiln; holding that “[t]he administrative record must reflect the ‘considered judgment’ necessary to support the Region’s permit determination.” (citations omitted)); *In re Austin Powder Co.*, 6 E.A.D. 713, 719-720 (EAB 1997) (remand of permit to reconsider whether to include action levels governing corrective action in light of concern regarding multiple-contaminant risks).

We consider Petitioners’ arguments in light of this framework. For the reasons set forth below, the petitions for review are denied.

### B. *Technical Issues*

Petitioners have linked each technical objection to one or more UIC regulations that they claim have not been or will not be satisfied

---

<sup>6</sup> We note that the standard we apply in the permit appeal process, requiring consideration of all facts in reaching a rational conclusion, is much the same as the standard of review applied by federal courts when reviewing agency rulemaking decisions involving significant technical or scientific issues. See, e.g., *Appalachian Power Co. v. EPA*, 135 F.3d 791, 801-802 (D.C. Cir. 1998) (“[o]ur analysis is guided by the deference traditionally given to agency expertise \* \* \*. [S]o long as EPA \* \* \* considered all of the relevant factors, and demonstrated a reasonable connection between the facts on the record and its decision, we will not interfere with its conclusion.” (citation omitted)); *National Oilseed Processors Ass’n v. Browner*, 924 F. Supp. 1193, 1201 (D.D.C. 1996) (agency actions based on evaluation of complex science are subject to a “high degree of deference” from the courts and a court’s review should not involve a comparative evaluation of the scientific evidence), *aff’d sub nom. Troy Corp. v. Browner*, 120 F.3d 277 (D.C. Cir. 1997). However, unlike the courts, the Board is not required to give deference to other components of the Agency. See *In re Mobil Oil Corp.*, 5 E.A.D. 490, 509 n.30 (EAB 1994).

by the existing permit conditions. In general, Petitioners base their arguments on the regulatory requirement that permits shall include conditions necessary to prevent migration of fluid into USDWs. *See* 40 C.F.R. § 144.52(a)(9); Petition for Review 97-4 at 9; Petition for Review 97-3 at 11. Although Petitioners maintain that they have demonstrated that the terms and conditions in these permits will allow migration of fluids and contaminants into USDWs, their “demonstrations” take the form of expert opinions, which largely conflict with the expert opinions of the Region and NE Hub. Thus, in this case, we are looking to see if the Region demonstrated that it considered Petitioners’ comments and ultimately adopted a rational approach on each issue.

1. *Technical Issues Pertaining to the Solution Mining Permit (UIC Permit No. PAS3G934BTIO)*

a. *Drilling Mud*

Petitioners contend that the solution mining permit should be reviewed because it lacks adequate conditions to protect against significant losses of drilling mud during well construction. Large drilling mud losses can increase the risk of a “blowout” in the well under construction and possibly lead to the migration of fluids or gas toward USDWs. Petitioners conclude that gas stored in their Tioga Storage Complex is “likely” to escape into shallow aquifers during NE Hub’s construction of the solution mining wells. Petition for Review 97-4 at 14.

The UIC regulations governing construction of Class III wells do not specifically address drilling mud or mud loss. *See* 40 C.F.R. § 146.32. However, the regulation does require use of construction methods that “prevent the migration of fluids into or between [USDWs].” *Id.* The Region included a permit condition that requires construction details contained in NE Hub’s permit application to be followed during construction of the solution mining wells. Permit No. PAS3G934BTIO Part III.A.2.

In the SRC, the Region specifically describes some of the construction techniques that will be used to prevent migration of fluids into USDWs during well construction. These techniques include: isolation of USDWs prior to drilling through the Oriskany Sandstone formation by installation of at least 600 feet of cemented surface casing; maintenance of adequate pressure during drilling; continuous mud monitoring; and use of blowout prevention equipment. SRC at 2-3. The Region concluded that “as long as the drilling program is followed as specified, protection of USDWs, as well as the Oriskany formation, will be achieved \* \* \*.” *Id.* at 3.

Petitioners believe that the Region's review of this issue was not sufficiently rigorous. Petition for Review 97-4 at 14. We do not think that the Region's response shows inadequate consideration of Petitioners' concerns. Rather, the petition for review and the Region's response are examples of genuine differences of expert opinion on a quintessentially technical issue. We do not find that the Region's position is clearly erroneous and neither do we find that the issue presented involves an important matter of policy or exercise of discretion that warrants Board review.

b. *Cementing Program*

The second technical issue pertaining to the solution mining permit involves the adequacy of the permit conditions for cementing the well casings to the surrounding rock formations. Cementing provides an important protection against contamination of USDWs because it is designed to isolate fluids in the geologic formations, thus preventing migration of fluids along the well hole.

The UIC regulations do not set forth specific, technical standards for cementing, but require that "[a]ll new Class III wells shall be cased and cemented to prevent the migration of fluids into or between [USDWs]." 40 C.F.R. § 146.32(a). NE Hub's solution mining permit reiterates the regulatory performance standard and further requires that construction be conducted in accordance with the details described in the permit application. Permit No. PAS3G934BTIO Part III.A.2.

Petitioners take issue with many aspects of NE Hub's cementing program for the solution mining wells, including: inadequate cement circulation, potential development of micro-annuli in the cement, and other factors that may negatively impact the integrity of the cement bond. Petition for Review 97-4 at 15-16. The SRC addresses these concerns by describing cement circulation technique and use of flow turbolizers to prevent development of micro-annuli that might serve as conduits for fluid or gas flow. SRC at 4.

Petitioners' principal objection to the cementing program, however, is the use of a particular tool for verifying the integrity of the cement bond. Petition for Review 97-4 at 16-17; Supp. to Petition for Review 97-4 at 3-5; Reply to Region's Response 97-4 at 2-4. The SRC describes use of an "UltraSonic Imager Log" to verify the cement bonds on the well's production casing. SRC at 5. The Region explains that this special tool will be used on the production casing because it is the deepest section of casing and it will be subject to pressure from the injection operation. Region III's Response to Petition for Review

97-4 at 12. During the remand period, the Region verified that the UltraSonic Imager Log was capable of testing the 16¼" production casing by obtaining a letter to that effect from Schlumberger, the company that will conduct the tests. *Id.* at 13 & Att. 7.

Despite the statements in the SRC regarding use of the UltraSonic Imager Log on the 16¼" production casing, Petitioners' argument focuses on the 24" sections of well casing. Petitioners point out that the letter from Schlumberger indicates that its capabilities to test 20" and 24" casings were under various stages of development and testing. Supp. to Petition for Review 97-4 at 4-5 & Ex. 1. Petitioners conclude that the Region improperly relied on the UltraSonic Imager Log for verification of cement integrity because in fact the technology is not currently available for 24" casings. Petition for Review 97-4 at 17; Supp. to Petition for Review 97-4 at 5. Although Petitioners present this issue in the manner of an exposé, the explanation turns out to be much more straightforward. The Region points out that the use of the UltraSonic Imager Log is only for the 16¼" production casing, and that cement bond verification for larger sections of casing will be confirmed through other techniques. Region III's Response to Petition for Review 97-4 at 13. For example, the UIC regulations provide that integrity can be demonstrated by reference to cementing records that show the presence of adequate cement. 40 C.F.R. § 146.8(c)(3).<sup>7</sup> The Region states that this method will be used to establish the integrity of the cement bond for the upper sections of casing. Region III's Response to Petition for Review 97-4 at 13.

The Region's response to comments regarding NE Hub's cementing program indicates consideration of the technical issues voiced by the Petitioners. The Region specifically confirmed the capabilities of the UltraSonic Imager Log and stated that the device would be used on the 16¼" production casing. The Region's overall approach to cementing is consistent with the regulatory requirements on cementing and incorporates special conditions specifically designed to prevent migration of fluids along the well bore. *See* Permit No. PAS3G934BTIO Part III.A.2. Petitioners' disagreement with the Region's technical analysis is not an indication of clear error or an important policy matter for the Board to review. Therefore, we decline to grant review of this issue.

---

<sup>7</sup> This technique may be used to verify the cement bond on a Class III well if the nature of the casing precludes use of temperature or noise logging techniques. 40 C.F.R. §§ 146.8(c)(1) & (3).

2. *Technical Issues Pertaining to the Brine Disposal Permit (UIC Permit No. PASIX933BTIO)*

a. *Maximum Injection Pressure*

Petitioners' principal technical objection to the brine disposal permit pertains to the maximum injection pressure ("MIP") specified in the permit. Petitioners claim that the MIP was calculated incorrectly and that the value is too high. Petitioners predict that injection of brine at the specified MIP will lead to fractures in the injection zone and ultimately result in contamination of USDWs. Petition for Review 97-3 at 14.

The UIC regulations contain a performance standard limiting injection pressure for Class I wells:

[P]ressure at the wellhead shall not exceed a maximum which shall be calculated so as to assure that the pressure in the injection zone during injection does not initiate new fractures or propagate existing fractures in the injection zone. In no case shall injection pressure initiate fractures in the confining zone \* \* \*.

40 C.F.R. § 146.13(a)(1). Pursuant to this standard, the Region incorporated injection pressure limits of 3300 pounds per square inch ("psi") (at the surface) and 5725 psi (bottom hole) in the permit for the disposal wells. Permit No. PAS1X933BTIO Part III.B.4. This permit condition also contains a textual prohibition against new fractures or propagation of existing fractures in the injection zone or the confining zone. *Id.* Finally, the permit provides that the Region may modify the permit if future test data submitted by NE Hub indicate a need to adjust the MIP. *Id.*

The parties disagree on the appropriate method for calculation of a MIP. The Region calculates MIPs according to a 1986 Region III guidance document regarding calculation of MIPs for geologic formations in Pennsylvania. PA Underground Injection Control Program Guidance 3, Injection Pressure Limitations (Nov. 1986) ("Region III Guidance"). The Region III Guidance derives the MIP from a value called the Instantaneous Shut-In Pressure ("ISIP"). In this case, NE Hub conducted injectivity tests to determine an ISIP for the Oriskany formation. Region III calculated the MIP for the final permit from the most conservative ISIP value measured by NE Hub. "It has always been [Region III's] policy to use the most conservative values when calculating a maximum injection pressure." RS at 6. The Region relied on

NE Hub's site-specific data in calculating the MIP and concluded that the calculated MIP "will prevent the initiation of new fractures or the propagation of existing fractures in the injection zone \* \* \*." SRC at 16.

Petitioners, however, maintain that guidance from EPA Region V should be used to calculate MIP for these wells. *See* U.S. EPA Region 5, Revised Regional Guidance #7 — Determination of Maximum Injection Pressure for Class I Wells (Dec. 1994) ("Region V Guidance"). The Region V Guidance recommends that MIP be derived from Closure Pressure ("CP") rather than ISIP. CP is less than ISIP, and Region V selected CP as a basis for calculating MIPs in part because it provides a "conservative safety factor" to protect against opening or propagation of fractures. Region V Guidance at 2. Petitioners claim that if MIP for NE Hub's brine disposal wells had been calculated in accordance with the Region V Guidance, the result would be approximately thirty percent lower than the MIP values in the permit. Petition for Review 97-3 at 20.

Petitioners make two points in objecting to the Region's use of its own guidance rather than Region V's guidance. First, Petitioners claim that adherence to the technical methodology in Region V's guidance is necessary to satisfy the regulatory standard for Class I wells. Petition for Review 97-3 at 19. Second, Petitioners are disturbed that Region III's Guidance was originally developed for Class II wells<sup>8</sup> rather than Class I wells. *Id.* at 20. For the reasons that follow, the Board finds that neither point warrants a grant of review on the MIP issue.

Petitioners make much of the difference in methodologies between the Region III Guidance and the Region V Guidance. However, a difference in methodology for MIP calculation, even if one approach is generally more conservative, is not necessarily an indication of error. The UIC program was intentionally established with room for variation in implementation of regulatory performance standards such as the MIP requirements. Selection of an appropriate MIP is highly dependent upon characteristics of the particular formation in which injection will take place.

In promulgating the UIC rules, EPA had to resolve the tension between use of performance standards and more specific technical requirements. 45 Fed. Reg. 42,472, 42,477 (June 24, 1980). The Agency noted the inherent difficulty in writing regulations on technical issues

---

<sup>8</sup> Class II wells are defined to include a variety of underground injection activities associated with natural gas, oil, and hydrocarbon storage and production. *See* 40 C.F.R. § 144.6(b).

that will be applicable nationwide. *Id.* Ultimately, the rules promulgated by EPA set forth technical requirements in the form of “good engineering practices,” with discretion on the part of the permitting authority to include additional requirements. *Id.* at 42,478. The MIP regulations are an example of codification of “good engineering practices” rather than a specific methodology that must apply nationwide, regardless of differences in local geology.

EPA specifically acknowledged the degree to which calculation of MIP is dependent on local geologic characteristics when it promulgated the first regulations for federally-implemented UIC programs (such as Pennsylvania’s). In responding to comments regarding proposed default values for calculation of MIP the Agency noted:

EPA agrees that factors which determine appropriate injection pressures are specific to the particular injection formation, rather than being uniform across an entire State. It was for this reason that we proposed to allow owners or operators to receive authorization to inject at higher pressures by applying for and receiving a permit.

49 Fed. Reg. 20,138, 20,152 (May 11, 1984).

Region III’s guidance was developed specifically for UIC wells in Pennsylvania and contains default values for certain geologic formations in Pennsylvania, although no default value is provided for the Oriskany Sandstone formation. Region III Guidance at 2. The Region recognized that the guidance did not contain specific values for all local formations and “developed a procedure by which the [UIC well] operator would have to submit site specific test data \* \* \* or prescribe to a very conservative formula for the calculation of the [MIP].” RS at 8.

Region V’s guidance also recognizes the importance of attention to regional and local geology in calculating MIPs. For example, the guidance references geologic considerations unique to the Region in explaining why it adopts a conservative approach to calculating MIPs:

In some regions of the United States, fracturing the injection or confining zones may be a very unlikely occurrence \* \* \*. [I]n most of Region 5, \* \* \* both the tectonic regime and the thickness and permeability of injection zones vary widely. Here [in Region 5] fracturing can be a more immediate concern.

Region V Guidance at 1-2. In addition, although Region V uses CP as its general approach to MIP calculation, the guidance notes that CP is not necessarily the maximum pressure that a formation can bear without fracturing. “Region 5 recognizes that operation at pressures above fracture closure pressure [CP] will not always lead to propagation of fractures \* \* \*.” *Id.* at 2. Finally, Region V, with its generally conservative approach to MIP calculation, also provides well operators an option for obtaining MIPs that exceed CP through use of site-specific data:

Under certain circumstances, operation at a given pressure above fracture closure pressure will not lead to propagation of fractures. Therefore, operators are given the option of providing historical operating data and intensive site studies to show that operation at a given pressure does not lead to propagation of fractures or waste migration out of the injection interval or zone.

*Id.* at 4.

In light of the UIC regulatory history and the flexibility of both the Region III and Region V guidances, we are not convinced that the Region V guidance must be applied in order to calculate a MIP that satisfies the Class I regulatory standard. Moreover, Petitioners have not persuaded us that the MIP selected by the Region for NE Hub’s wells, through application of the Region’s own guidance, is sufficiently unlikely to satisfy the regulatory standard such that we should grant review of this issue. Petitioners established that Region III and Region V use different guidance documents and different methodologies in calculating MIPs. Petitioners also demonstrated that application of the Region V guidance to this case yields a MIP that is different from the MIP calculated by Region III, at least in empirical terms. Those differences, however, do not establish that there is a material difference in whether Region III and Region V, using their respective approaches, can calculate MIPs that satisfy the regulatory standard in light of the particular characteristics of a given site. Similarly, those differences do not demonstrate that the MIP here does not satisfy the regulatory standard.

As illustrated above, selection of a satisfactory MIP very much depends upon local geology. Petitioners claim that “[t]he question whether underground formations in Region V differ from those in Region III is not relevant \* \* \*.” *Petition for Review 97-3 at 18.* We disagree. The Agency has acknowledged that factors affecting selection of an injection pressure are specific to particular formations and may not even be uniform across a single State, much less from Region to Region. *See 49 Fed. Reg. at 20,152.* Region V justified its use of CP in

calculating MIPs precisely because of the typical characteristics of formations in Region V as compared to formations elsewhere in the country. Region V Guidance at 1-2. Specific geologic conditions may impel a permitting authority to use a more or less conservative methodology to calculate MIP. This choice is well within the Region's discretion as the Agency's technical expert on underground injection for a particular locale. Further, such discretion is especially warranted where a Region has demonstrated the ability to satisfy the regulatory standard. Here, Region III notes that in over ten years of experience in applying its MIP guidance, it "is unaware of any event in the Region where the calculation of MIP using this formula has led to the fracturing of an intended injection zone." SRC at 14.

MIP calculation does not necessitate application of a single methodology, *i.e.*, in this case, Region V's Guidance. Different approaches to calculation of MIP are acceptable as long as the basis for the selected MIP is cogently explained and the MIP is reasonably designed to meet the appropriate regulatory standard. In light of these considerations, the Petitioners have not established that the Region's use of its own guidance in lieu of Region V's Guidance amounted to clear error or an important policy consideration that warrants Board review.

In the second prong of their argument, Petitioners claim that use of the Region III guidance in this case is an indication of clear error because the guidance was originally developed to apply to Class II wells authorized by rule. In contrast, NE Hub's brine disposal wells will be Class I wells authorized by permit. Over the years, however, the Region has used this guidance to calculate MIPs for wells authorized by permit, and uses the formula in the guidance for all classes of UIC wells, not just Class II wells. Region III's Response to Petition for Review 97-3 at 11. Neither the age of the guidance nor its original intended purpose are determinative of whether its use in this case is appropriate. The key parameter is the regulatory standard, and whether the MIP (however calculated) satisfies that standard.

It is true that the MIP regulatory standards are different for Class I and Class II wells. The Class I standard, quoted above, prohibits fracturing of the injection and confining zones, while the Class II standard only prohibits fracturing the confining zone:<sup>9</sup>

---

<sup>9</sup> The injection zone and confining zone are geological features defined by the UIC regulations as follows:

*Injection zone* means a geological "formation," group of formations, or part of a formation receiving fluids through a well.

Continued

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 zone \* \* \*.

40 C.F.R. § 146.23(a)(1) (MIP standard for Class II wells). The principal difference between the MIP standards for Class I and Class II wells is whether it is permissible to fracture the injection zone. Class I does not permit fracturing in the injection zone; Class II permits such fracturing. In both cases, the confining zone is not to be breached by the selected injection pressure. *See* 45 Fed. Reg. 42,472, 42,483 (June 24, 1980). The arguments here focus on the potential for fracturing the injection zone.

The Region recognizes that the standards for Class I and Class II wells are different. “MIP limits for Class I wells must be more restrictive than Class II well limits.” Region III’s Response to Petition for Review 97-3 at 11. Nonetheless, the Region maintains that its guidance can be used to satisfy the stricter Class I regulatory standard. The Region’s statements in the RS and SRC illustrate the Region’s awareness of the Class I standard. “When EPA Region 3 is \* \* \* calculating a maximum injection pressure it is concerned with the prevention of fracturing the intended injection zone, not with whether the well is rule authorized, permitted or of a particular designated class.” RS at 8. The Region also states that it knows of no examples where a MIP calculated pursuant to the Region III Guidance resulted in the fracturing of an injection zone. SRC at 14; Region III’s Response to Petition for Review 97-3 at 11.

We see no reason to necessarily preclude a permitting authority from using a guidance document designed to effectuate a Class II standard in the Class I context as long as the permitting authority is clear that the regulatory standard for Class I wells must be satisfied. Here, the Region has demonstrated that it is subjecting NE Hub’s brine disposal wells to the Class I standard. The Region has concluded that the calculated MIP is adequate to prevent initiation of new fractures or propagation of existing fractures in the injection zone. Further, the

---

*Confining zone* means a geological formation, group of formations, or part of a formation that is capable of limiting fluid movement above an injection zone.

40 C.F.R. § 146.3. The confining zone serves as “a relatively impermeable barrier” between the injection zone and USDWs. 45 Fed. Reg. 42,472, 42,483 (June 24, 1980).

Region included a textual prohibition in the permit against fracturing the injection zone. Petitioners claim that the textual prohibition is being used in lieu of an adequate MIP value. Petition for Review 97-3 at 16. We disagree. The Region's calculated MIP is intended to meet the Class I regulatory standard, and the textual prohibition supplements the numerical MIP by providing an additional level of protection. The textual prohibition can be enforced if fracturing occurs, even if the injection pressure is at or below the numerical MIP. *See* SRC at 12. On the whole, the record supports a conclusion that the Region has written a MIP permit condition that satisfies the regulatory standard for Class I wells, and therefore, we will not undertake a review of this permit condition simply because the Region's guidance was originally developed for Class II wells.

b. *Area of Review*

Petitioners' second technical objection to the brine disposal permit is with regard to the "area of review" calculated by the Region. The area of review establishes the geographic extent of the permittee's corrective action and monitoring obligations. Petitioners claim that the area of review selected by the Region is too small and that the Region did not adequately consider the regulatory factors that govern selection of an area of review. Petition for Review 97-3 at 24-28.

The process for establishing an area of review is governed by regulation. *See* 40 C.F.R. § 146.6. The regulation 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. *Id.* In this case, the Region rejected NE Hub's request for a fixed radius area of review of one-quarter mile around each well and calculated a zone of endangering influence pursuant to 40 C.F.R. section 146.6(a). Region III's Response to Petition to Review 97-3 at 17-18. The resulting area of review is one-quarter mile measured from the outer boundary of the entire disposal well facility (an area containing multiple disposal wells). *Id.* at 18; SRC at 20. The Region's approach means that the area of review now extends more than one mile from certain disposal wells, rather than only one-quarter mile from each individual well. SRC at 20.

Petitioners argue that the Region did not specifically address technical factors listed in the regulations and did not respond to alternative calculations and data submitted by the Petitioners. Petition for Review 97-3 at 27. The factors cited by Petitioners are found at 40 C.F.R. section 146.6(b), and are factors to be considered when setting an area of review according to the fixed radius method. Here, the

Region calculated a site-specific area of review using the zone of endangering influence method under 40 C.F.R. section 146.6(a). The factors identified by Petitioners are not part of the regulatory requirements for determining area of review under the zone of endangering influence method.

Petitioners also claim that data and modeling they submitted show that the area of review calculated by the Region is too small by approximately one order of magnitude. Data and modeling submitted by NE Hub, however, support the area of review as calculated by the Region. Although Petitioners urge that their technical information is superior, the calculation of the area of review is a matter soundly within the Region's technical expertise and discretion and we defer to it in this case. We therefore decline to grant review of this issue.

### *c. Corrective Action*

Petitioners argue that the corrective action program included in the brine disposal permit was not developed in accordance with regulatory standards. Specifically, Petitioners claim that information required by the regulations was neither submitted by NE Hub nor considered by the Region. Petition for Review 97-3 at 29-30.

Corrective action in the UIC context typically involves identification of old wells within the area of review and actions (*i.e.*, plugging and abandonment) to prevent those wells from serving as conduits for movement of fluids into USDWs. The regulations require permit applicants to submit a corrective action plan which identifies affected wells and sets forth a plan of action for those wells. 40 C.F.R. §§ 144.55 & 146.14(a)(14). The Region is to review the proposed corrective action plan and if the Region decides to issue a permit, it must either incorporate the plan into the permit as a condition or require revisions to the plan prior to incorporation. 40 C.F.R. § 144.55(a). Criteria and factors to be considered by the Region in assessing an applicant's corrective action plan are listed at 40 C.F.R. section 146.7.

The brine disposal permit requires NE Hub to permanently plug and abandon six wells. Permit No. PAS1X933BTIO Part III.A.5. This permit condition was based in part on NE Hub's proposed corrective action plan and the Region's modification of that plan during the permit review process. Well identification, plugging, and abandonment are the principal features of corrective action in the UIC context. Each of these features are reflected in the permit condition and the Region's explanation of the corrective action program on the record. RS at 12; SRC at 21. It appears that Petitioners would like a more detailed

accounting of how the Region applied each of the regulatory criteria from 40 C.F.R. section 146.7 in reviewing NE Hub's proposed corrective action plan. Notably, section 146.7 does not require a factor-by-factor assessment as requested by Petitioners. The Region's on the record explanation of how it made its corrective action determination is sufficient. Therefore, we decline to grant review of this issue.

#### d. *Monitoring Requirements*

Petitioners claim that the monitoring requirements in the brine disposal permit are inadequate and do not comply with regulatory requirements on monitoring. Petition for Review 97-3 at 31. Petitioners assert that hydrogeological information submitted by NE Hub was insufficient and therefore the Region did not undertake an appropriate assessment of monitoring needs for this project. *Id.* at 32. Petitioners also list fourteen specific "defects" in NE Hub's modeling that they claim demonstrate the inadequacy of the monitoring conditions in the permit. *Id.* at 33-34.

The regulations for Class I wells require a variety of monitoring procedures, including monitoring of the disposal wells themselves and ambient monitoring in order to detect movement of fluids away from the wells:

Monitoring requirements shall, at a minimum, include:

\* \* \* \* \*

(2) Installation and use of continuous recording devices to monitor injection pressure, flow rate and volume \* \* \*;

\* \* \* \* \*

(4) The type, number and location of wells within the area of review to be used to monitor any migration of fluids into and pressure in the underground sources of drinking water, the parameters to be measured and the frequency of monitoring.

40 C.F.R. § 146.13(b). Additional criteria regarding the type of ambient monitoring and factors to be considered in establishing an ambient monitoring system are found at 40 C.F.R. section 146.13(d).

The Region developed an ambient monitoring system for the brine disposal wells, specifically taking into account the Petitioners'

gas storage complex. In fact, the Region and NE Hub met with Petitioners on this issue during the permit development process, and the Region revised the draft permit to address Petitioners' concerns regarding location of the monitoring wells and pressure limitations. *See* RS at 3; Region III's Response to Petition for Review 97-3 at 21-22. The monitoring system is designed to protect the geologic fault which seals the brine disposal area from Petitioners' gas storage area. RS at 3. The permit conditions specify locations for monitoring wells and parameters to be monitored. Permit No. PAS1X933BTIO Part II.C.5 & C.6. At least two monitoring wells are to be constructed for each disposal well. NE Hub is required to monitor pressure and salinity in the monitoring wells quarterly. *Id.* at Part II.C.6. Data from the monitoring wells may lead the Region to decrease the injection rate in the disposal wells. *Id.*

Petitioners correctly note that the Region has not provided specific and individual responses to each of the alleged defects in NE Hub's technical information as presented by Petitioners. However, the Region is not required to respond to comments in precisely the form presented. *See infra* Section II.C.1. The responsiveness summary and supplemental response to comments contain succinct but adequate explanations of the Region's decision regarding monitoring, including technical rationales for the monitoring system described in the permit, much of which was developed in direct response to Petitioners' comments. *See* RS at 2-4; SRC at 22-23. The Region's treatment of this issue on the record and memorialized in the permit conditions does not amount to clear error or an important matter of policy warranting Board review.

*e. Analysis of Fluids to be Injected*

Petitioners' final technical argument pertaining to the brine disposal permit claims that the Region erred in failing to require NE Hub to submit various analyses of the fluid to be injected in the disposal wells. Petition for Review 97-3 at 35. Specifically, Petitioners maintain that the regulations require analyses of all contaminants for which primary drinking water standards (maximum contaminant levels — "MCLs") have been promulgated. Reply to Region's Response 97-3 at 10. Petitioners argue that NE Hub's permit application should be considered incomplete, and no permit can be issued until the deficiency is corrected. Petition for Review 97-3 at 37.

Although Petitioners suggest that injection fluids should be analyzed for all contaminants for which MCLs have been promulgated, such analyses are not expressly required by the text of the regulations.

We decline to establish such a requirement by interpretation. The UIC regulations for Class I wells require that the following information be considered by the permitting authority with regard to injection fluids:

Source and an analysis of the chemical, physical, radiological and biological characteristics of injection fluids \* \* \* [.]

40 C.F.R. § 146.14(a)(7)(iii). This regulation does not specify that analyses must be performed for each of the more than sixty contaminants for which there is an MCL. Rather, it is within the permitting authority's discretion to require analyses that are appropriate in light of the particulars of the activity for which a permit has been requested.

Here, NE Hub submitted an analysis of the fresh water that will be injected into the solution mining wells to dissolve the salt deposits and generate brine. NE Hub also submitted an analysis of the salt that will be dissolved. RS at 11. Together these analyses provide a preliminary snapshot of the likely characteristics of the brine.<sup>10</sup> The Region also requires NE Hub to analyze the actual brine prior to injection and every two years during the injection operation. Permit No. PAS1X933BTIO Part II.C.3. These analytical steps appear appropriate for a brine disposal project, and we do not find that the Region's failure to require additional analyses is clear error or an important policy matter deserving of Board review.

### C. *Procedural Issues*

#### 1. *Sufficiency of the Region's Response to Comments*

Petitioners argue that numerous comments they raised on both permits either were not addressed or were addressed in an "unresponsive" manner by the Region. Petition for Review 97-3 at 38-40; Petition for Review 97-4 at 18-19; Reply to Region's Response 97-3 at 10; Reply to Region's Response 97-4 at 5. Petitioners also state, "[t]he fact that the Region did not change *one single line* of the Permit indicates that the Region completely discounted every concern expressed by Petitioners." Petition for Review 97-4 at 19 (emphasis in original).

---

<sup>10</sup> The fresh water analysis presents data on standard water quality parameters, including, *inter alia*, pH, conductivity, dissolved oxygen, BOD<sub>5</sub>, nitrates, nitrites, phosphorus, hardness, solids, and certain metals. The salt analysis indicates the chemical composition of the salt deposits through measurements of calcium, magnesium, potassium, sodium, chloride, sulfate, and bromide. Region III's Response to Petition for Review 97-3 Att. 12.

The regulation governing response to comments in a permit proceeding requires that the Region “[b]riefly describe and respond to all significant comments \* \* \*.” 40 C.F.R. § 124.17(a)(2). This regulation does not require a Region to respond to each comment in an individualized manner. It does not require the Region’s response to be of the same length or level of detail as the comment. *See In re Hoechst Celanese Corp.*, 2 E.A.D. 735, 739 n.7 (Adm’r 1989) (“[o]nce the Agency has reached a reasonable and legally proper permit decision based on the administrative record, it need not provide detailed findings and conclusions, but instead must reply to all significant comments \* \* \* as required by 40 C.F.R. § 124.17.”). Finally, the regulation does not require the Region to make a permit change corresponding to any particular comment.

The response to comments document must demonstrate that all significant comments were considered, even if the Region ultimately disagrees with the substance of the comments. The Region’s obligation to respond to comments is no different even when faced with “hundreds of pages of written submissions and hours of oral comments” as were supplied by Petitioners in this case. *See* Petition for Review 97-4 at 18. The mere quantity of comments does not dictate the manner in which the Region must respond, nor does it indicate a need for changes in a draft permit. The fact that the Region adopted none of Petitioners’ comments on these permits is not in itself indicative of error, especially when the comments were primarily technical in nature and raised issues subject to genuine disagreement by experts.

We find that the Region satisfied its obligation under 40 C.F.R. section 124.17 to respond to all significant comments through the responsiveness summary and the supplemental response to comments. Although the Region’s response documents were short in comparison to Petitioners’ comment documents, and the response documents did not provide individual responses to each comment, the responsiveness summary and supplemental response to comments succinctly addressed the essence of each issue raised by Petitioners. This approach is acceptable, especially in light of the call for brevity in the regulation. Moreover, the Region’s decision to group related comments together and provide one unified response for each issue raised was an efficient technique, not an indication of unresponsiveness. The state of the response to comments documents in this case is not analogous to situations in other cases where a remand was ordered for failure to provide an adequate response to one or more comments. *Cf. In re Atochem N.A., Inc.*, 3 E.A.D. 498, 499 (Adm’r 1991) (remand ordered due to Region’s wholesale failure to respond to one set of comments submitted by

the petitioner); *In re McGowan*, 2 E.A.D. 604, 606 (Adm'r 1988) (remand ordered due to Region's "total lack of a response" to petitioner's comments; document containing conclusion without supportive reasoning is not adequate response). We find no clear error in the Region's response to comments documents nor do we think that the Region's approach presents an important policy matter requiring Board review.

## 2. *Reopening the Public Comment Period*

Petitioners contend that the public comment period for these permits should have been reopened prior to issuance of the permits and during the remand period. Petitioners believe that new information was received by the Region after the close of the public comment period and that additional comment should have been solicited on this information. Petitioners forward two sets of arguments on the reopening issue. The first set of arguments pertains to changes in NE Hub's solution mining activity and Petitioners' request that the public comment period be reopened to accept comment on those changes. The second set of arguments focuses on the Region's failure to reopen the public comment period during remand upon receipt of certain new information.

### a. *Reopening Due to Changes in Permitted Activity*

Prior to the original issuance of these UIC permits in February 1997, but after the close of the public comment period, Petitioners requested that the public comment period be reopened in order to provide input on certain changes to NE Hub's overall project plan. See Petition for Review 97-4 at 21. The Region effectively denied the request by issuing the permits without further procedures. Petitioners claim that the Region's failure to reopen the public comment period pursuant to 40 C.F.R. section 124.14(b) was clear error and also amounts to an important policy matter that the Board should review. *Id.* at 21 & 28.

A reopening of the public comment period under section 124.14(b) largely depends on the Region's discretion:

If any data information or arguments submitted during the public comment period, \* \* \* appear to raise *substantial new questions* concerning a permit, the Regional Administrator *may* take one or more [actions resulting in a reopening of the comment period].

40 C.F.R. § 124.14(b) (emphasis added).<sup>11</sup> The critical elements of this regulatory provision are that new questions must be “substantial” and that the Regional Administrator “may” take action. The Board has long acknowledged the deferential nature of this standard. *See, e.g., In re Amoco Oil Co.*, 4 E.A.D. 954, 980 (EAB 1993) (the determination of whether or not to reopen a public comment period “is generally left to the sound discretion of the Region”); *In re Old Dominion Elec. Coop.*, 3 E.A.D. 779, 797 (Adm’r 1992) (“[t]he decision by the permit issuer to reopen the public comment period is discretionary, as is clear from the plain terms of the regulation \* \* \*”).

Petitioners believe that a reopening of the public comment period is in order due to changes in the solution mining and brine disposal project as originally proposed by NE Hub. One of the changes at issue arose out of the FERC proceedings regarding this project. NE Hub revised its project plan such that the brine from the first two solution mining wells will be processed at a salt plant rather than disposed of via underground injection. Petition for Review 97-4 at 22; Region III’s Response to Petition for Review 97-4 at 18. Petitioners call for a reopening of the public comment period to receive and comment on information regarding the environmental impacts of the new brine management method, including storage, transportation and salt plant operation issues. Petition for Review 97-4 at 23.

The use of a salt plant to process brine produced from the solution mining wells may involve a host of environmental issues and various regulatory approvals. Those issues, however, are outside the scope of the UIC permit decisions before us. As discussed earlier, decisions on applications for UIC permits must be based solely on criteria specified in the UIC regulations. The Region explained the narrow focus of its decisionmaking in response to comments regarding the salt plant issue. RS at 7; SRC at 8-9. The potential use of a salt plant for brine evaporation is not a substantial new question concerning *this* permit decision because it is unlikely to impact drinking water sources. Therefore, we decline to grant review of the Region’s decision not to reopen the public comment period on the salt plant issue.

The second issue cited by Petitioners in their argument to reopen the comment period due to changed plans is a concern that NE Hub

---

<sup>11</sup> There is also a procedure for reopening the public comment period in cases when a reopening “could expedite the decisionmaking process.” 40 C.F.R. § 124.14(a). Petitioners claim that it was an abuse of discretion for the Region not to reopen the comment period on this basis, but they do not support their claim with any showings relevant to the section 124.14(a) standard. *See* Petition for Review 97-4 at 28.

has revised its design and construction plans for the solution mining wells. Petition for Review 97-4 at 25. The UIC regulations expressly provide for changes in well construction requirements with prior approval of the Region and a minimum of procedures. 40 C.F.R. § 144.52(a)(1); *see also* 45 Fed. Reg. 42,472, 42,478 (June 24, 1980). Construction requirements in a permit may be changed pursuant to the minor modifications regulation as long as the change complies with the UIC regulations in 40 C.F.R. parts 144 and 146. 40 C.F.R. § 144.41(f). Minor modifications are not subject to part 124 procedures, including public notice and opportunity for comment.<sup>12</sup> 40 C.F.R. § 144.41. These regulatory provisions permit the inference that information regarding potential changes in well construction will not generally be considered a substantial new question under 40 C.F.R. section 124.14(b).

*b. Reopening Due to Receipt of New  
Information During Remand*

The Petitioners also voice complaints about the Region's conduct during the remand of these permits. The Region prepared the supplemental response to comments during the remand but did not solicit additional public comment and did not make any changes to the permit. Petitioners claim that NE Hub supplied the Region with new information after the original issuance of the permits and therefore, that information should have been made available for public comment. Petition for Review 97-3 at 8; Petition for Review 97-4 at 7. We note at the outset that the standard for reopening the public comment period turns on whether a substantial new question has arisen and not the genesis of information that may be added to the record. Information does not necessarily give rise to a substantial new question simply because the information is supplied by a permittee.

There are two pieces of information received by the Region during the remand period that Petitioners believe justify a reopened public comment period. The first piece of information of concern to Petitioners is the letter and attached technical materials from

---

<sup>12</sup> If during the course of the Region's review of a proposed construction change pursuant to section 144.52(a)(1), the Region determines that a proposed change goes beyond the scope of the minor modification regulation, the Region may invoke the regular permit modification procedures. *See* 40 C.F.R. § 124.5; 40 C.F.R. § 144.39. Should the Region decide that permit modification is justified under the regular procedures, the permit conditions subject to modification are reopened and part 124 procedures including public notice and comment must be followed. *See* 40 C.F.R. § 144.39 (UIC permit modifications); § 124.5(c)(2) (reopening permit conditions to be modified); § 124.6(e) (summary of permit procedures).

Schlumberger regarding their UltraSonic Imager device.<sup>13</sup> *See* Supp. to Petition for Review 97-4 at 6. The record is clear that the information contained in the Schlumberger materials did not raise a new question, but rather related to a question that had long been part of this permit proceeding. In their comments on the draft permit, the Petitioners specifically questioned the capabilities of the Schlumberger device for use in testing the integrity of cement bonds for the solution mining wells. *See* Petition for Review 97-3&4 Ex. 12, Technical Support Document at 59. Thus, the question regarding how the Schlumberger device would be used to verify cement bond integrity was raised well before the remand period. The Schlumberger letter and the Region's discussion of cement bond integrity in the SRC were part of an appropriate response to the Petitioners' question.<sup>14</sup> *See* SRC at 5. The letter is not evidence of a substantial new question for which additional public comment should be required.

Similarly, Petitioners' arguments regarding an e-mail from Region V on the subject of MIP calculations do not demonstrate that there was a substantial new question raised during the remand process. Petitioners claim that the Region should have reopened the public comment period to examine the MIP issue upon receipt of an e-mail from Region V regarding MIP calculations.<sup>15</sup> Supp. to Petition for Review 97-3 at 3-5. Like the question regarding tools to be used in verifying cement bond integrity discussed above, the question of how to calculate an appropriate MIP for the brine disposal wells was raised by Petitioners very early in the permitting process. The e-mail

---

<sup>13</sup> The Region certified that it received the Schlumberger letter and attached materials on June 30, 1997. Index-NE Hub Partners, L.P. at 10 (Dec. 5, 1997). The Region subsequently identified a cover letter dated June 26, 1997, from NE Hub to the Region enclosing the Schlumberger letter and materials. Region III's Supplement to the Administrative Record (Dec. 24, 1997).

<sup>14</sup> We recognize that the Region provided no substantive response to the cementing issues raised by Petitioners at the time the original permits were issued in February 1997. The Region's request for a voluntary remand of these permits was probably due in part to a recognition that the response to comments documentation for the permits as issued in February 1997 was incomplete. It is not surprising that the Region used the remand period to prepare a full and accurate response to comments and referenced supplemental materials, such as the Schlumberger letter, that were relevant to issues raised during the public comment period. Petitioners' opportunity to express disagreement with the Region's final permit decision, including the Region's reliance on the Schlumberger letter, is not through a reopened public comment period, but by way of an appeal to the Board. Indeed, Petitioners did challenge the Region's decisions on cementing, and although we declined to grant review of this issue, *see supra* Section II.B.1.b., the appeal to the Board, rather than a reopened public comment period was the appropriate recourse in this situation.

<sup>15</sup> The Region certified that it received an e-mail from a Region V employee regarding the Region V Guidance on May 2, 1997. Index-NE Hub Partners, L.P. at 9 (Dec. 5, 1997).

received from Region V during the remand period confirmed a fact already in the record, that Region V uses a different approach to calculating MIP than the approach used by Region III. The e-mail does not raise a substantial new question that had not already been the subject of public comment.

In sum, we decline to grant review of the Region's decision not to reopen the public comment period with regard to the salt plant, possible changes in well construction, or receipt of additional information during the remand period. For each of these issues, the Region's decision not to reopen the comment period cannot be described as clearly erroneous or an important policy matter meriting the Board's review.

#### *D. EPA's Jurisdiction to Issue the Brine Disposal Permit*

Petitioners' final argument is that EPA is without jurisdiction to issue the brine disposal permit because NE Hub has committed to forego underground injection of the brine produced from the first two solution mining wells in favor of processing at a salt plant. Petitioners contend that NE Hub's change in plans obviates a need for a brine disposal permit, and that EPA therefore has no authority to issue this permit. Petition for Review 97-3 at 43.

Petitioners' description of NE Hub's brine disposal plans does not square with the account provided by the Region and NE Hub. Although NE Hub has indeed committed to *not* utilize underground injection for disposal of the brine produced from the first two solution mining wells, NE Hub has expressly reserved the right to pursue underground injection for disposal of brine from subsequent solution mining wells. See Region III's Response to Petition for Review 97-3 Att. 13 at 2. It is also true that NE Hub is only seeking FERC approval for operation of two solution mining wells at this time, however, NE Hub has indicated an intention to expand the project and possibly seek FERC authorization for the use of brine disposal wells in connection with that expansion. *Id.* The Region responded to a comment on this issue by stating, "[a]lthough the permittee may have found alternatives to the injection of brine, this does not mean that they will not need the injection well(s) for the disposal of brine in some capacity in the future." SRC at 24. The Region believes that there is a "strong probability [that] the Permittee will need to use the Class I wells for the disposal of brine." Region III's Response to Petition for Review 97-3 at 31.

The Region's assessment of the status of NE Hub's project is not irrational. NE Hub has not definitively withdrawn its plan to use

underground injection as a brine disposal method. From all indications, NE Hub still considers underground injection of produced brine to be a viable component of the overall project. The brine disposal permit is not the hypothetical permit that Petitioners would have us believe. Just because additional proceedings before FERC will be necessary before NE Hub may commence brine disposal via underground injection does not lessen the requirement for an EPA UIC permit. If all EPA requirements are satisfied, the Region may issue the permit, even if other regulatory approvals (*e.g.*, FERC) are outstanding.

The situation in this case is similar to the factual scenario in *In re Envotech, L.P.*, 6 E.A.D. 260 (EAB 1996). Petitioners in *Envotech* objected to a Region's decision to permit two disposal wells on the grounds that the second well was merely "excess capacity" that might be used in the future for disposal of different wastestreams than those approved by the permit. *Id.* at 297. In denying review of the excess capacity issue, the Board held:

[I]t is not the Agency's role to decide whether a facility will seek underground injection permits, \* \* \* or to determine the number of wells for which a facility will request permits. The Agency's role is limited to deciding whether the wells, as proposed in the permit applications, will comply with the SDWA and the UIC regulations. \* \* \* [T]he Region was not free to deny a permit based solely on allegations of "excess capacity," because there is no regulatory authority for such action.

*Id.* at 297-98. Similarly here, it is not for the Region to question how many of the permitted brine disposal wells will ultimately be utilized or when they will be put into operation. The Region's duty is to make a decision based upon whether the project as proposed in the permit application conforms to the statute and relevant regulations. The Region did not clearly err in issuing the brine disposal permit, despite NE Hub's commitment to alternative brine disposal plans for the initial phase of the project. We therefore deny review of this issue.

### III. CONCLUSION

The petitions for review are denied in their entirety. The technical issues raised by Petitioners appear to be matters in which there are bona fide differences of opinion among experts. In this type of case, the Board typically will defer to the Region's position as long as it is rational and supported by a record that demonstrates due consideration of comments received. The Region's permit decisions in this case

deserve our deference. With regard to the Petitioners' dissatisfaction with the Region's response to comments documents, we first recognize that Petitioners presented their comments in a detailed and sophisticated fashion. The Region's responses, in the form of the RS and SRC, are not as detailed as Petitioners' comments, but the responses do reflect adequate consideration of the issues raised by Petitioners. With regard to reopening the public comment period, we find that the issues identified by Petitioners do not amount to substantial new questions. Finally, we find that the Region's decision to issue the brine disposal permit under the circumstances presented here was not unauthorized and therefore, we reject Petitioners' jurisdictional challenge.

So ordered.