BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In the Matter of:	)	
West Bay Exploration Company of Traverse City, Michigan,	)	**Appeal No. UIC 14-66**
Haystead #9 SWD,	)	
Permit No. MI-075-2D-0010,	)	
Jackson County, Michigan.	)	

EPA REGION 5 RESPONSE TO PETITION FOR REVIEW

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This response brief complies with the 30-page limitation found at 40 C.F.R. § 124.19(d)(3). *See* 40 C.F.R. § 124.19(d)(1)(iv).

INTRODUCTION

Pursuant to 40 C.F.R. § 124.19(b), Region 5 of the U.S. Environmental Protection Agency ("the Region or Region 5") hereby responds to the May 8, 2014 Petition for Review ("Petition") filed with the Environmental Appeals Board ("EAB or the Board") by Mr. Peter Bormuth ("Petitioner") [Appeal No. UIC 14-66]. The Petition seeks review, pursuant to 40 C.F.R. § 124.19, of an April 9, 2014 permit issued by the Region, pursuant to the Underground Injection Control (UIC) Program, Part C of the Safe Water Drinking Act ("SDWA"), 42 U.S.C. §§ 300h – 300h-8, and the regulations found at 40 C.F.R. Parts 124 and 144 – 148, to the West Bay Exploration Company, Traverse City, Michigan ("Permittee") for a UIC Class II well to be located in Jackson County, Michigan and known as the "Haystead #9 SWD" well ("Haystead #9 well") [Permit No. MI-075-2D-0010] ("Permit"). Attached to this Response is a certified index of the administrative record for the Permit.

The Petitioner has met the standing requirements of 40 C.F.R. § 124.19(a)(2) in order to submit his Petition. Nevertheless, the Petition fails to meet the threshold procedural requirements found at 40 C.F.R. §§ 124.13 and 124.19(a)(4)(ii), and should be denied accordingly.

More specifically, the Petitioner fails to meet the procedural requirement to provide specific citations to the administrative record demonstrating that the two issues he raises in the Petition were raised during the public comment period, and to adequately explain why the Region's prior responses to comments on both of these issues were clearly erroneous or otherwise require EAB review, as required by 40 C.F.R. § 124.19(a)(4)(ii). In addition, the Petitioner relies on supporting materials that Petitioner did not cite or provide to EPA during the public comment period, as required by 40 C.F.R. § 124.13. *See* Sections 2.a and 2.b below. For these procedural reasons, his Petition should be denied.

Even if the Petitioner were to have met the required threshold procedures, the Board should deny the Petition on substantive grounds, for the reasons discussed in more detail below. Petitioner argues that the Region clearly erred in making the following findings of fact: 1) finding the geology of the well site suitable for the injection of brine; and 2) finding that activities at the site will not impact any federally listed species under the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531 et. seq. (2014). Neither of Petitioner's permit challenges have any merit.

For the reasons set forth in more detail below, the Petitioner failed to meet his burden to obtain review by the Board, and, therefore, his Petition should be denied, or, in the alternative, his substantive arguments should be rejected by the EAB.

STANDARD OF REVIEW

The standard of review for appeal of a permit (petition for review) issued under 40 C.F.R. Part 124 is governed by 40 C.F.R. § 124.19. The Board has the discretion either to grant or deny review of a permit decision. *See In re Avenal Power Ctr., LLC*, PSD Appeal Nos. 11-03 through 11-05, slip op. at 14-15 (EAB Aug. 18, 2011). In considering a petition for review filed under 40 C.F.R. § 124.19, the EAB must first evaluate whether the petitioner has met certain threshold requirements of the applicable regulations such as "timeliness, standing, issue preservation and specificity." 40 C.F.R. § 124.19(a)(2) – (4); s*ee also In re Seneca Resources Corp.*, UIC Appeal Nos. 14-01 through 14-03, slip op. at 2 (EAB May 29, 2014), 16 E.A.D. ____ (citing *In re Indeck-Elwood, LLC*, 13 E.A.D. 126, 143 (EAB 2006)).

While the Board may relax some of the more technical pleading standards for *pro se* petitioners who are unrepresented by legal counsel, as is the case in this matter, even under this more liberal standard, a petitioner must still identify the elements at issue in the permit and articulate how the Region erred or how it exercised its discretion in a manner that warrants Board

review. 40 C.F.R. § 124.19. *See In re West Bay Exploration Co.,* UIC Appeal No. 14-67, at 2-3 (EAB July 3, 2014) (Order Denying Review); *Seneca Resources Corp.*, slip op. at 2-3; *In re Envtl. Disposal Sys., Inc.*, 12 E.A.D. 254, 292 n.26 (EAB 2005); *In re Beckman Prod. Servs.*, 5 E.A.D. 10, 19 (EAB 1994); *In re Presidium Energy, LC*, UIC Appeal No. 09-01, slip op. at 4-5 (EAB July 27, 2009) (citing *In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 127 & n.72 (EAB 1999); *See In re Sutter Power Plant,* 8 E.A.D. 680, 687 (EAB 1999); *In re Envotech, L.P.*, 6 E.A.D. 260, 267-69 (EAB 1996).

The Petitioner has the burden of demonstrating that review by the Board is warranted. *In re City of Palmdale,* PSD Appeal No. 11-07, slip op. at 9 (EAB Sept. 17, 2012). 15 E.A.D.____. To satisfy this burden, petitioners must meet their threshold pleading requirements. *See In re West Bay Exploration Co.,* slip op. at 2-3; *Seneca Resources Corp.*, slip op. at 2-3; *In re Cherry Berry B1-25 SWD,* UIC Appeal No. 09-02, slip op. at 2 (EAB Aug. 13, 2010) (quoting *In re Beeland Group, LLC*, UIC Appeal Nos. 8-01 through 8-03, slip op. at 8 (EAB Oct. 3, 2008), 14 E.A.D. ___. If the EAB finds that a petitioner has failed to meet a threshold pleading requirement, the Board "typically denies or dismisses the petition for review." *Seneca Res. Corp.*, slip op. at 2 (citations omitted). The EAB "has frequently dismissed petitions that failed to meet these standards." *Cherry Berry*, UIC Appeal No. 09-02 at 2 (citations omitted).

Should the EAB determine that a petitioner has met its threshold pleading obligations, then the Board determines the appropriate standard of review and decides whether the issues raised in the subject petition have any merit. *See Seneca Res. Corp.*, slip op. at 2. Typically, the EAB declines to review a UIC permit decision unless the petitioner demonstrates that the permit decision is either: 1) based upon a "clearly erroneous" finding of fact or conclusion of law; or 2) involves an "important policy consideration" or "exercise of discretion" that warrants review

by the Board. 40 C.F.R. § 124.19(a)(4); *see also In re Envtl. Disposal Sys.*, 12 E.A.D. at 263 (citations omitted). The Petitioner must demonstrate that either of the above-listed conditions of 40 C.F.R. § 124.19(a)(4) have been met by: identifying the permit conditions at issue and to be reviewed; showing that the Petitioner commented on the subject condition and the issue was raised during the public comment period; and addressing the Region's response to Petitioner's comments and explaining why such response was inadequate. *In re Presidium Energy*, slip op. at 3-4.

The EAB has in the past also looked to the preamble to 40 C.F.R. Part 124, which says that the Board's review should only be exercised "sparingly" and that "most permit conditions should be finally determined" by the Regions. Consolidated Permit Regulations, 45 Fed. Reg. 33,290, 33,412 (May 19, 1980); *accord In re Scituate Wastewater Treatment Plant*, 12 E.A.D. 707, 717 (EAB 2006); and *In re City of Moscow*, 10 E.A.D. 135, 140-41 (EAB 2001).

STATUTORY AND REGULATORY BACKGROUND

Congress enacted the Safe Drinking Water Act, 42 U.S.C. §§ 300f – 300j-26, as amended ("SDWA"), to safeguard the public's drinking water. Part C of the SDWA provides for the protection of underground drinking water sources through underground injection control ("UIC") programs that regulate the injection of fluids underground. 42 U.S.C. §§ 300h – 300h-8. EPA was directed to promulgate regulations establishing minimum requirements for UIC programs. *Id.* § 300h(b). One such requirement is that any person who intends to operate an underground injection well must obtain a permit. *Id.* § 300h(b)(1)(A). EPA Region 5 has responsibility for administering the UIC permit program in the State of Michigan.[1] 40 C.F.R. § 147.1151.

[1] The SDWA directed EPA to promulgate regulations establishing minimum requirements for states to administer their own UIC programs, subject to EPA approval. 42 U.S.C. §§ 300h(a), 300h-1(b). If a state did not apply for approval to administer its own UIC program, or applied but did not receive EPA approval, then EPA was required to implement UIC regulations for that state. Id. § 300h-1(c); 40 C.F.R. § 144.1(e).

Any interested person may submit comments on a proposed UIC permit during a public comment period—including a re-opened public comment period or a public hearing—that occurs before EPA issues the final permit decision. *See* 40 C.F.R. §§ 124.11, 124.12, 124.14. Any person who timely provides such comments may then challenge the final UIC permit decision by filing a petition for review with the Board within the 30 day period after the Regional Administrator serves notice of the issuance of the final UIC permit decision.[2] *Id.* § 124.19(a)(1), (a)(3).

FACTUAL AND PROCEDURAL BACKGROUND

On April 27, 2011, the Permittee submitted an application to the Region for the construction and operation of a new Class II well, the Haystead #9 well, to be located in Jackson County, Michigan. Ex. B-1. The Permittee subsequently re-submitted an amended application for the Haystead #9 well on January 26, 2012. Ex. B-2. Region 5 reviewed the application, and, on February 10, 2012, requested additional information from the Permittee regarding the proposed disposal well. Ex. B-3. The Permittee provided the Region with the requested information on March 19, April 9, and May 21, 2012. Ex. B-4, B-5 and B-6. The Region then developed a statement of basis and a draft permit for the issuance of the subject UIC permit. Ex. B-7 and B-9.

On March 27, 2013, the Region issued a public notice of its preparation of the draft permit and public comment period in accordance with 40 C.F.R. § 124.10(a)(1) and (b)(1). Ex. B-8. The Region also announced that it had scheduled a public hearing, to be held on April 30, 2013, on the proposed permit action pursuant to 40 C.F.R. § 124.10(b)(2). Region 5 published the public notice in the Jackson Citizen Patriot, a local newspaper, and mailed it to: (1) interested parties who had

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The State of Michigan has not been approved to administer its own UIC permit program. Thus, EPA Region 5 administers Michigan's UIC program. *See* 40 C.F.R. § 147.1151.

[2]The Administrator delegated her authority to review UIC and other permit decisions to the Board. *See* 40 C.F.R. § 124.2(a); *Greenpeace, Inc. v. EPA*, 43 F.3d 701, 705 n.8 (D.C. Cir. 1995).

contacted the Region to be placed on the mailing list; (2) people who had made comments during a previous public comment period in 2012 for a nearby proposed well, the West Bay #22 (EPA Number MI-075-2D-0009); and (3) residents within a ¼ mile radius of the proposed Haystead #9 well. EPA also provided a draft of the Permit to the Jackson Public Library for public viewing.

The public comment period lasted for 47 days, beginning on March 29, 2013 and ending on May 14, 2013. On April 30, 2013, Region 5 held an informational session and public hearing at Columbia Central High School in Brooklyn, Michigan. On August 6, 2014, Region 5 separately notified the U.S. Department of Interior's Fish and Wildlife Service ("USFWS") in writing of the Region's proposed decision to issue a permit for the Haystead #9 well and provided 30 days for the USFWS to comment on the draft permit. Ex. B-18. On September 4, 2014, USFWS concurred in writing with the Region's determination that the issuance of the subject permit would not impact any federally listed species under the ESA, 16 U.S.C. §§ 1531 et. seq. Ex. B-20. Subsequently, Region 5 reviewed all of the comments made by the public and USFWS, gathered additional documentation necessary to clarify certain issues raised, and developed a Response to Public Comments document ("RTC"), responding to each comment made in the matter. Ex. B-23.

On April 9, 2014, Region 5 issued a final permit to Permittee for the Haystead #9 well. Ex. B-24 and B-25. The Region also issued the RTC summarizing the Agency's responses to all of the public comments received on the proposed permit action. Region 5 mailed the notice of the final permit and RTC to all persons who provided the Region with comments or participated in the public hearing, and to other State and federal officials, including the Petitioner. *See* 40 C.F.R. § 124.15(a). The Region's notice of the final permit and RTC included detailed information regarding how persons who filed comments on the draft permit or participated in the public hearing may petition the EAB to review any condition of the final permit decision. Ex. B-22.

On May 8, 2014, the Petitioner filed the subject Petition with the EAB, seeking review of the Permit [EAB Appeal No. UIC 14-66]. UIC 14-66, 67, Filing #1. On May 14, 2014, Sandra K. Yerman (Petitioner Yerman) filed a separate Petition seeking review of the Permit [EAB Appeal No. UIC 14-67]. On May 22, 2014, the Region filed a motion for an extension of time to file a response to Petitioner Bormuth's Petition. UIC 14-66, 67, Filing #7. On May 28, 2014, Petitioner Bormuth filed a motion opposing the Region's motion for an extension of time to file a response to Petitioner Bormuth's Petition. UIC 14-66, 67, Filing #9. On June 2, 2014, the Board issued an Order granting the extension of time, until July 11, 2014, for the Region to file a response to Petitioner Bormuth's Petition. UIC 14-66, 67, Filing #12. On June 12, 2014, the Region filed its Response to Petitioner Yerman's Petition. UIC 14-66, 67, Filing #16. On July 3, 2014, the Board issued an Order denying review of Petitioner Yerman's Petition. UIC 14-66, 67, Filing #23.

In reaching its final permit decision, the Region determined that the draft permit met all federal UIC requirements and due to the geologic siting, engineering and construction, and operating and monitoring requirements of the permit for the Haystead #9 well, there would be no impact to underground sources of drinking water ("USDW") as a result of injection into the Haystead #9 well and that the subject permit would not impact any federally listed species under the ESA. The Region also determined that the public comments submitted did not demonstrate a deficiency in the application based on UIC Program regulatory requirements for approval, nor were any issues raised that altered EPA's technical determination that it was appropriate to issue to the West Bay Exploration Company a permit for the proposed injection well.

ARGUMENT

1. **The Petitioner has satisfied the standing requirements for obtaining review under 40 C.F.R. § 124.19(a)(2).**

The Region acknowledges that Petitioner meets the standing requirements for the filing of a petition for review of the subject UIC permit with the EAB under 40 C.F.R. § 124.19(a). Any person who filed comments on the draft UIC permit at issue during the public comment period or who participated in the public hearing is entitled to submit such a petition to the Board pursuant to 40 C.F.R. § 124.19(a)(2). *See Beeland,* UIC Appeal Nos. 08-01 et al, slip op. at 3-5. Petitioner submitted written comments on the draft permit to the Region on April 16, April 30 and May 2, 2013, and he participated in the April 30, 2014 public hearing. Ex. B-10, B-11, B-12, and B-21.

2. The Petitioner has not satisfied the procedural requirements for obtaining review under 40 C.F.R. §§ 124.13 and 124.19(a)(4)(ii).

Petitioner has not met the procedural requirements found at 40 C.F.R. §§ 124.13 and 124.19(a)(4)(ii), needed to obtain review by the Board. More specifically, the Petition does not meet the issue specificity requirements of 40 C.F.R. § 124.19(a)(4)(ii) because the Petition does not cite to the administrative record demonstrating when and where the two issues he raises in the Petition were raised during the public comment period. In addition, the Petitioner has not adequately explained why the Region's prior response to comments on this issue was clearly erroneous or otherwise requires review. *See In re West Bay Exploration Co.,* slip op. at 2. Also, the Petitioner relies on information and cites to supporting materials in the Petition that he did not provide to EPA during the public comment period as required by 40 C.F.R. § 124.13.

a. Geologic siting.

The Petitioner's first challenge to the Permit is that the Region clearly erred in permitting the injection of brine at the Haystead #9 well site because the geologic formation under the site is not suitable for the injection of brine. *See* Petition at Pgs. 1-9. Despite raising this argument during the public comment period, the Petitioner nevertheless fails to cite to the administrative

record demonstrating to the Board that the issue was raised during the public comment period. As described at pages 11 and 12, both the Board and the Region are disadvantaged by this omission.

In addition, in making his argument, the Petitioner does not adequately explain why the Region's prior response to comments on this issue was clearly erroneous or otherwise requires review. The Region addressed the issue of geologic siting (*see* discussion at Section 3.a below) in the RTC. *See* Ex. B-23, RTC, Response #28, Pg. 65-68. Instead of addressing the Region's detailed response on this issue, the Petitioner strings together multiple theories as to why the injectate will dissolve a rock layer (i.e. the Salina A-2 Evaporite) within the approximately 460 foot thick Salina Group confining zone and thereby contaminate a USDW. However, [as explained in the RTC, Ex. B-23, Response #28, Pg. 67-68] he fails to properly consider any site specific conditions, i.e. the actual geologic formation characteristics (e.g. depth, pressure, formation thickness, or specific rock type), found at the site, and he ignores the Region's prior responses, continuing to extrapolate various arguments from different unrelated publications to loosely frame an argument based on conjecture.

The Petitioner continues to point to an article concerning an anhydrite zone failure beneath a town in Germany; a reference EPA addressed in its RTC. Ex. B-23, RTC, Response #28, Pg. 65-68. The paper cited by the Petitioner attributes the 2007 event to the drilling of geothermal heat exchange boreholes into an anhydrite layer approximately 195 feet below the surface. However, as explained in the RTC, the situation described in this publication is not analogous to the subject permit decision. First, the geology beneath the two sites are very different. Second, the geothermal heat exchange technology used at the German site is not being used at the Haystead #9 well site. In addition, many of the Petitioner's other references are not even relevant to the siting of the Haystead #9 well as they mainly concern geochemical processes involved in the

deposition and formation of rock structures in aqueous environments, which are situations that are not applicable to deep underground injection of Class II fluids. *See* Section 3.a below, Pg. 23-25.

The Petitioner also consistently misrepresents relevant facts by ignoring and manipulating statements made in the RTC. For example, on page 2 of UIC-14-66, the Petitioner removed the term "shale" layer from Region 5's description of the Salina Group to better suit his argument that the Group is not protective of USDWs. The shale rock layers in the Salina Group are describe in the *Michigan Hydrogeologic Atlas* (1981)[3] as excellent confining characteristics. Ex. B-17, Pg. II-51, II-55. *See* analysis below in Section 3.a, Pg. 17-18. In addition, the Petitioner's arguments fail to consider the standard practices of underground injection of Class II fluids. At no point in the Petition does the Petitioner demonstrate how the Salina Group confining zone is inadequate; that the geologic siting of the well is inappropriate; or that the Region made any erroneous findings of fact in issuing a Class II permit for the Haystead #9 well. Accordingly, the Petitioner fails to explain why the Region's prior responses in RTC on this issue were clearly erroneous or otherwise warrants review and has not met his burden in this regard.

Lastly, the Petitioner relies on information and cites to numerous publications that he did not cite or provide to the Region during the public comment period as required by 40 C.F.R. § 124.13. For example, the Petitioner only cited the publications found as Attachments Nos. 12 and 16 to his Petition, UIC 14-66, Filing #1.12 and #1.16, during the public comment period. Otherwise, he previously failed to provide the Region with any of the other sources he now references on appeal.[4] The Petitioner's failure to provide the Region with these documents and

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[3] AR Item #28, Pg. II-38 – II-40, and II-42 – II-68 (Dennis L. Curran et al., Department of Geology, W. Mich. Univ., *Hydrogeologic Atlas of Michigan* (1981).

[4] The Region is familiar with a number of the articles referenced by the Petitioner and attached to his Petition due to the fact that he referenced some of these publications during a prior and related

information during the comment period does not satisfy the procedures of 40 C.F.R. § 124.13.

Even though the Petitioner is *pro se*, he must still follow the proper procedures and properly support his argument as to why the Region erred in finding that the geologic siting of the Haystead #9 well was suitable. *See In re West Bay Exploration Co.,* order at 2-3. He is also required show how the Region's prior explanation of the suitability of injection and confining zones is clearly erroneous. *See Seneca*, slip op. at 2-3; *Envtl. Disposal Sys.*, at 292; *Beckman* at 19; *Presidium*, slip op. at 4-5; *Envotech* at 267-69. A petitioner is not only required to follow the proper procedures in appealing a permit, but he or she must also explain why the permit issuer's previous response to comments is clearly erroneous or otherwise warrants review. *City of Palmdale*, PSD Appeal No. 11-07 at 10; s*ee In re Core Energy, LLC*, UIC Appeal No. 07-02, slip op. at 2 (EAB Jan. 15, 2008).

The EAB has frequently denied review of petitions that are "merely 'based on numerous general concerns, without a single citation to a permit term or condition' – a general expression of concern is simply not sufficient to show clear error in the Region's permitting decision." *Presidium*, slip op. at 4 (quoting *Beeland* at 11 (Order Denying Review)). *See also Cherry Berry*, UIC Appeal No. 09-02 at 3-4 (citations omitted). Remarking that "it is not incumbent upon the Board to scour the record to determine whether an issue was properly raised," the Board imposes a burden on the petitioner to demonstrate in the petition that the issues raised therein were first raised during the public comment period on the draft permit. *Presidium*, slip op. at 2, n.4 (quoting *In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 250 n.10 (EAB 1999)). The Board has stated:

> The requirement that the petitioner must show that an issue was raised during the public comment period in order to preserve it for review on appeal is not an arbitrary hurdle placed

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UIC appeal before the Board [Appeal No. UIC 13-01], nevertheless, a majority of the publications now referenced by the Petitioner are being brought to the Region's attention for the first time.

> in the path of potential petitioners. Rather, the requirement serves an important function related to the efficiency and integrity of the overall administrative permitting scheme. The rule's intent is to ensure that the permitting authority has the first opportunity to address objections, and to give some finality to the permitting process. [*Presidium Energy*, UIC Appeal No. 09-01 at 2 n.3 (citations omitted)]

A petitioner may not simply repeat objections made during the comment period but "must demonstrate why the [permit issuer's] response to these objections (the [permit issuer's] basis for its decision) is clearly erroneous or otherwise warrants review." *In re Newmont Nev. Energy Inv., LLC*, 12 E.A.D. 429, 472 (EAB 2005) (quoting *In re Steel Dynamics Inc.*, 9 E.A.D. 740, 744 (EAB 2001)). Petitioner must comply with the minimal pleading standards and articulate some supportable reason why the [permit issuer] erred in its permit decision in order for the petitioner's concerns to be meaningfully addressed by the Board." *Envtl. Disposal Sys.*, at 292 n. 26 (quoting *In re Beckman Prod. Servs.*, 5 E.A.D. 10, 19 (EAB 1994)).

In sum, while the issue of the geologic siting of the Haystead # 9 well was previously raised by the Petitioner, nevertheless: 1) he does not properly cite to the administrative record; 2) he does not show how the prior response by the Region in the RTC was in error; and he relies on information and publications not previously provided to EPA. Accordingly, for this challenge and for these reasons, he has not met the required procedural standard and his Petition should be denied.

b. Endangered species.

The Petitioner's second challenge to the Permit is that the Region clearly erred in determining that the activities at Haystead #9 well site will not impact two federally listed or proposed species, the Indiana bat and Eastern Massasauga rattlesnake. *See* Petition at Pgs. 9-11. Despite raising this argument during the public comment period, the Petitioner fails to cite to the administrative record demonstrating to the Board that the issue was raised during the public comment period, as required by 124.19(a)(4)(ii).

In addition, in making his argument, the Petitioner does not adequately explain why the Region's prior response to comments on this issue was clearly erroneous or otherwise requires review. The Region addressed the issue of endangered species (*see* discussion at Section 3.b below) in the RTC. *See* Ex. B-20; and Ex. B-23, RTC, Responses #15, #20, #28, Pg. 42-44, Pg. 49-51, Pg. 68. The Petitioner's endangered species challenge is not only vague, he also fails to demonstrate how the construction, operation, or any permit condition for, the Haystead #9 well will adversely impact endangered species. Rather, the Petitioner makes an unsupported assertion that the Indiana bat and the Eastern Massasauga rattlesnake will be found at the site and that these species will be adversely impacted by activities at the site as a matter of course, without providing any data to support this assertion.

The Board often will not consider the merits of a permit challenge that is unacceptably vague or that is not supported by the requisite facts and law; s*ee In re Sunoco Partners Mktg. & Terminals, LP*, UIC Appeal No. 05-01 (EAB June 1, 2006), at 11-12; *In re Prairie State Generating Co.*, 13 E.A.D. 1, 61, 74, 77 (EAB 2006). The EAB frequently declines to review permits unless a petition for review clearly identifies the conditions of the permit at issue and argues why such conditions warrant review, including an explanation showing why the Region's responses to comments did not address the petitioner's concerns. *See* 40 C.F.R. § 124.19(a)(4); *see also In re West Bay Exploration Co.,* slip op. at 2; *Beeland*, UIC Appeal Nos. 08-01 et al, slip op. at 9; *Presidium*, UIC Appeal No. 09-01 at 3 n.4; *Palmdale*, PSD Appeal No. 11-07 at 10. "On appeal, it is not sufficient to repeat objections made during the public comment period; rather, a petitioner must also demonstrate why the permit issuer's response to those objections (i.e., the permit issuer's basis for its decision) is clearly erroneous." *In re Dominion Energy Brayton Point, LLC* , 12 E.A.D 490, 509 (EAB 2006).

In *Cherry Berry*, UIC Appeal No. 09-02, slip op. at 5, the Board rejected a petition consisting of a three page letter asserting that the subject well would not be protective of drinking water sources. The EAB declined to review the petition because it did not reference any specific permit conditions and did not explain how the regional responses in the RTC were clearly erroneous. When a petition for review lacks the requisite specificity, the Board does not consider its merits. *In re Chevron Michigan, LLC*, UIC Appeal No. 12-01, slip op. at 14-16 (March 5, 2013), 15 E.A.D. ____. While the EAB does not require *pro se* petitioners to present sophisticated technical or legal arguments, nevertheless, the Board still requires all petitions to be explicit enough to apprise the EAB of the issues being raised. *See In re West Bay Exploration Co.*, slip op. at 2; *In re Sutter Power Plant,* at 687.

Lastly, the Petitioner relies on information and cites to several publications that he did not cite or provide to the Region during the public comment period as required by 40 C.F.R. § 124.13. For example, Petitioner only briefly referenced the *United States Forest Service*, and *Kurta and Murray* as authors supporting his argument during the public comment period. Ex. B-23, RTC, Pg. 64-65. These publications or citations were not provided to EPA, but are now found as Att. Nos. 5, 6, and 15 to his Petition, UIC 14-66, Filing #1.05, #1.06, and #1.15. Additionally, Att. No. 9 to the Petition, UIC 14-66, Filing #1.09, is now being referenced for the first time, and was not previously provided to EPA or addressed in the RTC. Accordingly, for this challenge and for these reasons, he has not met the required procedural standards and this portion of his Petition should be denied.

3. The Petitioner's substantive permit challenges have no merit.

After it decides that a petitioner followed the required procedures to raise an alleged ground for review, the Board then determines the standard of review. The preamble to 40 C.F.R. Part 124

states that the Board's power of review "should only be sparingly exercised," and that "most permit conditions should be finally determined at the Regional level." 45 Fed. Reg. at 33,412; *see Envtl. Disposal Sys.*, 12 E.A.D. at 263-64; *In re Puna Geothermal Venture*, 9 E.A.D. 243, 246 (EAB 2000); *see also Presidium,* at 2, n.4. The Board has repeatedly confirmed this interpretation of its discretionary authority to grant review of permit actions. *See, e.g., In re NE Hub Partners, L.P.*, 7 E.A.D. at 567 (citing *In re Federated Oil & Gas of Traverse City, Mich.*, 6 E.A.D. 722, 725-26 (EAB 1997)); *Cherry Berry*, at 1 n.2; *Palmdale*, at 8. "On matters that are fundamentally technical or scientific in nature, the Board will typically defer to a permit issuer's technical expertise and experience, as long as the permit issuer adequately explains its rationale and supports its reasoning in the administrative record." *Palmdale*, at 9 (citing *Dominion*, 12 E.A.D. at 510).

In this case, should the Board decline to issue an order denying review of the Petition for the reasons set forth above, the Region argues, in the alternative, that neither of Petitioner's two substantive arguments has any merit and the EAB should defer to the Regions determinations in this matter. The Petitioner's two challenges to the Permit, described briefly above, are as follows.

a. Geologic siting.

The Petitioner's first challenge is that the Region erred by not properly evaluating the geologic conditions of the Haystead #9 well site. During the public comment period the Petitioner made the following general arguments: 1) the injectate will contaminate a USDW, because the confining zone is composed of a material that will dissolve upon contact with the injectate. Ex. B-21, Public Hearing Transcript. pp. 35-41; and 2) the confining zone will dissolve upon contact with the injectate more rapidly than otherwise, because the injectate contains salts which will increase the reaction. Ex. B-21, hearing transcript. pp 39-41.

The Region fully addressed these and other comments regarding injectate migration in the RTC. Relevant portions of the Agency's responses in the RTC may be found at Responses #28, Pg. 65-68, and Pg. 2. Region 5 excerpts portions of those responses as relevant below.

> The injection zone is topped by the Salina Group, an approximately 430 foot thick sequence of carbonate, anhydrite, shale, and salt, which will act as a confining layer to prevent flow out of the injection zone. This sequence of rock blocks the passage of water and is considered a confining unit, due to poor water transmitting rates, as described in the Michigan Hydrogeologic Atlas (1981). Furthermore, many of the rock layers between the confining zone and the base of the USDW are impermeable shales and evaporites which will prevent injection fluid from moving upward to enter the USDW. These shale layers include the Antrim Formation, Bedford Shale, Bell Shale, Sunbury Shale, and Coldwater Shale. Formation and drilling records for nearby wells, including wells MDEQ #60076 and #60078, indicate that the Coldwater Shale is nearly 1000 feet thick, and is present below the lowest USDW (i.e. Marshall Sandstone) from approximately 217 to 1,200 feet below ground surface.
>
> The commenter also argues that anhydrite layers of rock in the confining zone (i.e. Salina Group) are not adequate confining layers. Specifically the commenter states that anhydrite will dissolve when in contact with the injected fluid, or transform into less competent minerals, and otherwise let injected fluid out of the injection zone, and into contact with ground and possibly surface water. The commenter references laboratory experiments for [sic] the basis of his argument. EPA contests the commenter's statements regarding the confining zone of the Haystead #9 SWD well and anhydrite. Generally massive anhydrite, including layers such as the Salina A-2 Evaporite (a common formation in the Salina Group), is impermeable. In geology, the term *massive* means homogeneous and crystalline. Anhydrite layers, such as the Salina A-2 Evaporite, are well-documented in the Michigan Hydrogeologic Atlas (1981) as geologic barriers to fluid flow. Specifically the Michigan Hydrogeologic Atlas (1981) describes the Salina Group as "essentially an aquiclude", or structure preventing the passage of water. Additionally, the Salina A-2 Evaporite is described to often be found as a cap rock or salt dome, trapping oil or natural gas in subsurface reservoirs. EPA Region 5 has permitted many wells across Michigan with the same injection and confining zone as the Haystead #9 SWD. The behavior of a rock layer depends on many factors, such as its thickness, flexibility, and chemical composition, as well as the pressure it is under. Individual factors are not a sole determining factor of a rock group's suitability as a confining zone. Based on technical studies of the geology of Michigan, such as the Hydrogeologic Atlas of Michigan, EPA has determined the Salina Group, including anhydrite layers (e.g. Salina A-2 Evaporite), is a suitable confining zone.

The UIC regulations define confining zone in 40 C.F.R. § 146.3 to mean "a geological formation, group of formations, or part of a formation that is capable of limiting fluid movement

above an injection zone." Region 5 determined that an appropriate confining zone for the Haystead #9 well is the Salina Group. As detailed above [and explained in our RTC, Ex. B-23, Pg. 2-3, and Responses #2, #3, #4, #5, #6, #7, #13.1, #13.4, #18, #24, and #28], the Salina Group is thick sequence of rock capable of blocking the passage of water and is considered a confining unit or "aquiclude", as described in the *Michigan Hydrogeologic Atlas* (1981). Ex. B-17, Pg. II-42. *The Michigan Hydrogeologic Atlas* (1981) describes numerous formations within this Group as "essentially impermeable" and describe its characteristics as a confining zone as "an excellent confining zone. Ex. B-17, Pg. II-42 through II-68. Specifically regarding the Salina A-2 Evaporite, the *Michigan Hydrogeologic Atlas* (1981) describes the formation to have extremely low porosity and permeability. Page II-46 of the *Michigan Hydrogeologic Atlas* (1981) further describes the confining characteristic of the Salina A-2 Evaporite as follows:

> "The A-2 Evaporite is an excellent confining layer. It is the seal over the pinnacle reefs that developed in the shelf facies of the Niagaran and has the properties necessary to confine fluids under pressure." Porosity is extremely low, and permeability is extremely low. Ex. B-17, Pg. II-46.

In contrast to the Petitioner's assertion, it is unlikely that the A-2 Evaporite formation will fracture and create migration pathways, rather, the formation has physical properties that allow it to swell and seal; making it an excellent confining layer. Several additional layers within the Salina Group also have excellent confining characteristics and are essentially impermeable, including; the A-1 Evaporite, the B layers, the C-Shale, the D-Unit, the E-Unit. Relevant portions of pages II-43 – II-58 describe the confining characteristics of these formations below:

> "The anhydrite beds and salt of the A-1 Evaporite are essentially impermeable and are excellent confining layers. Furthermore, they contain only a very small amount of formation water, and fractures in either lithology should 'heal' either by flowage or secondary mineral growth." Porosity is extremely low and the layer is essentially impermeable. Ex. B-17, Pg. II-43.

"The B-salt and the B-Unit are excellent confining layers. The thick salt section in the central part of the basin would be most effective, but the presence of either salt or anhydrite should indicate that the member is an aquiclude." Porosity is essentially impermeable and permeability is essentially zero. Ex. B-17, Pg. II-49.

"The C-Shale is a plastic shale and should not maintain open fractures at depth. Thus, it is considered to be an excellent confining layer". Porosity is essentially zero and the layer is essentially impermeable. Ex. B-17, Pg. II-51.

"In the basinal areas where the D-Unit salts are present the D-Unit is an aquiclude." Porosity is extremely slow, and permeability is extremely slow. Ex. B-17, Pg. II-51.

"Shales and anhydrite beds in the E-Unit should form a barrier to the migration of fluids. In the central portions of the basin the dolomite beds are most likely salt plugged and also form aquicludes." Effective porosity and permeability are low. Ex. B-17, Pg. II-55.

As also detailed in the RTC, the Permittee submitted 2D seismic data to further demonstrate the Salina Group is free of fractures and faults. The Region evaluated the Permittee's seismic data and confirmed that the Salina Group at the Haystead #9 well site appears to be free of fractures and faults. Furthermore, the Haystead #9 well will be constructed with three casing strings (steel pipe), set to 350, 930, and 2,780 feet respectively. All steel casing strings will be cemented over their entire length to preclude the movement of fluids into and between USDWs due to injection operations. The Haystead #9 well meets all applicable construction requirements for new Class II wells at 40 C.F.R. §§ 146.21 – 146.22. Further, the UIC regulations are designed to protect USDWs from contamination by: (1) identifying drinking water sources for protection; (2) making sure the geological siting is suitable for injection; and (3) applying standards for well construction, operation, and reporting. The permit and the conditions in the Permit are consistent with those regulations. Ex. B-25.

During EPA's review of the proposed Haystead #9 well application, the Region utilized drilling and formation records from the nearby Haystead #1-9 well (MDEQ Permit #60076) and Haystead #3-9 well (MDEQ Permit #60078). Ex. B-13 and B-14, Pg. 51-64 and Pg. 75-88. The

surface hole locations of these wells are less than 200 feet from the proposed surface location of the Haystead #9 SWD and currently provide the most accurate representation of the local geology. The Petitioner's statements regarding the geologic siting of the Haystead #9 well are inaccurate and are not based on site specific data or geologic records. As further developed in the Region's RTC, Response #28 explains:

> The commenter cited several sources for anhydrite information in the comment, but did not provide the cited materials. These comments do not support findings of evidence that the Salina Group is a poor confining zone or that operation of the Haystead #9 SWD well would dissolve anhydrite layers to create a pathway into a USDW. EPA believes the research cited by the commenter concerns mineral reactions in situations that are not analogous or relevant to the Salina Group below the Haystead #9 SWD well site. For example, the commenter mentions research experiments that investigate chemical reactions at surface conditions or evaluate anhydrite as it is used in cement and concrete. EPA believes the experiments referenced are concerned with investigating the formational origin of evaporite minerals, not their behavior at depth with respect to fluids. Such work is not relevant to gauging the behavior of the anhydrite layers at approximately 2,600 feet below the surface, where the pressure and temperature regime is much different and influences mineral reactions and rock behavior.

On appeal, Petitioner raises nearly the identical following arguments: 1) the injectate will contaminate a USDW, because the confining zone is composed of a material that will dissolve upon contact with the injectate, UIC-14-66, Pg. 2-6; and 2) the confining zone will dissolve upon contact with the injectate more rapidly than otherwise, because the injectate contains salts which will increase the reaction, UIC-14-66, Pg. 3-6; 3) the injectate will contaminate a USDW, because as the confining zone dissolves upon contact with the injectate it will swell and swelling will cause the confining zone to fracture, which will create additional avenues for upward injectate migration, UIC-14-66, Pg. 2; 4) the injectate will contaminate a USDW, because the injectate will migrate upward through "pre-existing fractures" in the rock strata, UIC-14-66, Pg. 7; 5) the injectate will contaminate a USDW, because Michigan groundwater naturally migrates upward and so the injectate will migrate upward, UIC-14-66, Pg. 2; and 6) the injectate will contaminate a USDW,

because it is being injected under pressure and that pressure will push the injectate upward, UIC-14-66, Pg. 2, 8.

As specifically detailed in Response #5 of the RTC, the Region used several sources of geologic and seismic data during its evaluation of the Permit application, and determined that the geologic siting of the well is suitable for underground injection. Michigan geology has been well documented in the *Michigan Hydrogeologic Atlas* (1981), and the proposed injection zone for this well is not known to have fractures or other faults[5]. Further, on August 27, 2013, the Region, whose UIC program staff are experienced in reviewing seismic data, analyzed high quality seismic data[6] and geophysical profiles submitted by Permittee. These seismic data demonstrate that there are no known fractures or faults present in the Niagaran injection zone or Salina Group confining zone within the vicinity of the Haystead #9 well. As described in Response #2 of EPA's RTC:

> The injection zone where the waste will be disposed of is limited to the Niagaran formations at depths between 2,870 feet and 3,100 feet bgs. According to the Michigan Hydrogeologic Atlas (1981) this structure of rock is capable of receiving the injected fluid. The proposed injection zone is confined by the Salina Group. This group of rock is a thick sequence of carbonate, anhydrite, shale, and salt. Based on drilling and formation records of nearby wells, including the Haystead #1-9 (MDEQ Permit #60076) and Haystead #3-9 (MDEQ Permit #60078), the Salina Group has been observed at the interval between approximately 2,352 to 2,782 feet bgs. The Salina Group is considered a confining unit because it has poor water transmitting rates and blocks the passage of water. ...Because fluids cannot move easily through these formations, the confining layers will prevent the injected fluids from migrating upward out of the injection zone. If injected fluid were to exit the confining zone, it would migrate up into the next rock unit capable of accepting fluid. Aside from the confining zone, many of the formations between the injection zone and the USDW are layered with impermeable shale and other rock types which will prevent movement of the injected fluid into the USDW.

Again, as reinstated on page 12 of the RTC document in Response #5:

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[5] AR Items #28, #78-80.

[6] The seismic cross section entitled "Perspective Salt Water Disposal Wells, Napoleon Field, Jackson County, Michigan" is in the Haystead #9 well administrative record and geophysical profiles submitted by West Bay Exploration Company. Ex. B-19; AR Items #78, 79, and 80.

> The 2D seismic data submitted by West Bay Exploration Company referenced above sufficiently demonstrates that there are no fractures or faults within the injection zone (i.e. Niagaran) or confining zone (Salina Group) at the Haystead #9 SWD site. During the evaluation of the Haystead #9 SWD permit application, EPA reviewed driller's logs and formation records from nearby wells (see EPA Response 2)....

The Petitioner generally frames his arguments on appeal regarding injectate migration as attacks on the Region's evaluation of the geologic siting of the Haystead #9, but fails to address the Region's responses to Petitioner's specific comments or explain why those responses are inadequate regarding the specific comments. The Petitioner also argues that anhydrite converts to gypsum upon contact with water; the confining zone is anhydrite; gypsum is porous; and that therefore the injectate will convert the confining zone into gypsum, then dissolve or otherwise work its way through that confining layer. See Ex. B-21, transcript of public comments, Pg. 35-41. All of these arguments fail to establish that the Permit is based upon a clearly erroneous finding of fact or that the Region's prior response on the issues were clearly erroneous or warrant Board review. 40 C.F.R. §124.19(a). Therefore, even were the Board to evaluate these arguments, the Board should nevertheless reject them.

Even if the injectate somehow penetrated through approximately 460 feet of mostly impermeable rock in the Salina Group confining zone, that event would not necessarily endanger a USDW. The UIC regulations in general, and the UIC permitting process specifically, are designed to protect USDWs. In considering whether a Class II permitted injection will contaminate a USDW, the Agency must evaluate all of the formations overlying the injection zone, not just the formations comprising the confining zone. Michigan geology is well-documented and existing information is sufficient to make a permitting decision for this well. The Region uses technical studies of the geology of Michigan, such as the *Michigan Hydrogeologic Atlas* (1981), as well as site specific data when evaluating the geologic siting of a proposed injection well.

Based on formation records, seismic data, and information in the *Michigan Hydrogeologic Atlas* (1981), Region 5 determined that the injection cannot penetrate all of the formations overlying the injection zone to contaminate a USDW. Ex. B-13, B-14, B-17, and B-19. Many of the rock layers between the top of the confining zone and the base of the USDW are impermeable shales and evaporites which will prevent injection fluid from moving upward to enter the USDW. Again, these shale layers include the Antrim Formation, Bedford Shale, Bell Shale, Sunbury Shale, and Coldwater Shale. Formation and drilling records for nearby wells, including wells MDEQ #60076 and #60078, indicate that the Coldwater Shale is nearly 1000 feet thick, and is present below the lowest USDW (i.e. Marshall Sandstone) from approximately 217 to 1,200 feet below ground surface. Ex. B-13 and B-14. As Region 5 stated in its RTC, these impermeable formations constitute most of the 2,653 feet between the top of the injection zone and the bottom of the relevant USDW. Ex. B-23, Pg. 2-3.

All the information used to evaluate the geologic siting of the Haystead #9 well indicates the injection zone is capable of receiving injected brine and that the confining zone and overlying strata will effectively prevent injected fluid from contaminating USDWs. Ex. B-23, RTC, Pg. 2-3, and Responses #2, #4, #5, #6, #18, and #28; Ex. B-17, Pg. II-42 through II-68.

Injection siting evaluations are fundamentally technical and scientific in nature. On matters that are fundamentally technical or scientific in nature, the Board will typically defer to a permit issuer's technical expertise and experience, as long as the permit issuer adequately explains its rationale and supports its reasoning in the administrative record. *City of Palmdale,* slip op. at 9 (citing *Dominion I* 12 E.A.D. at 510). Region 5 applied its technical expertise to the injection siting in this matter; developed an administrative record on the subject; and in that record and the response to comments adequately explained its rationale and supported its reasoning. Ex. B-23,

RTC, e.g. Pg. 2-3, Response #5 and #28. Additionally the Board has held that its power of review "should only be sparingly exercised," and that "most permit conditions should be finally determined at the Regional level." 45 Fed. Reg. 33,290, 33,412 (1980); see *Envtl. Disposal Sys.*, 12 E.A.D. at 263-64; *Puna Geothermal Venture*, 9 E.A.D. at 246; see also *Presidium Energy*, UIC Appeal No. 09-01 at 2 n.4. Because the Region has applied its technical and scientific expertise to a technical and scientific matter; and because the Agency has adequately explained its rationale and supported its reasoning in the administrative record, the Board should reject Petitioner's argument even if the Board were to consider it on its merits. *In re Peabody W. Coal Co.*, 12 E.A.D. 22, 33 (EAB 2005).

The Petitioner's basic premise is not supported by fact. The articles that Petitioner cited during public comment neither contradict the Region's conclusion, nor support Petitioner's argument that the injectate could dissolve the entire Salina A-2 Evaporite. In certain circumstances at shallow depths and on the earth's surface, anhydrite immersed in water can convert to gypsum. However, none of Petitioner's public comments support his contention that, at the temperatures and pressures at more than 2,600 feet below ground surface, water could dissolve thick layers of dense crystalline anhydrite. Petitioner did not supply the Agency with any of the articles that he cited during the public comment period.

Despite the Region's familiarity with many of the articles referenced by Petitioner (he referenced them in a prior related UIC appeal of another well in the area) the papers he relies upon concern mineral reactions in situations that are not analogous or relevant to the Salina A-2 Evaporite below the well site. For example, several of the papers deal with experiments that investigate chemical reactions at surface conditions or evaluate anhydrite as it is used in cement and concrete. Other papers are concerned with investigating the formational origin of evaporite

minerals, not their behavior at depth with respect to fluids. Such information is not relevant to gauging the behavior of the Salina A-2 Evaporite layer at more than 2,600 feet below the surface, where the pressure and temperature regime is much different and influences mineral reactions and rock behavior.

In addition, Region 5 considered and addressed some of these publications in the RTC and, accordingly, the Region may now expand on inappositeness of Petitioner's cited articles to the actual facts of the subject UIC permit. Ex. B-23, RTC, Response #28. For example, the Petitioner relies upon *Conley and Bundy*, 1958, *Mechanism of Gypsum, Geochimica et Cosmochimica Acta*, V. 15, however, this article discusses how gypsum may have formed during the evaporation of ancient seas as anhydrite particles settled to the sea bottom to form ocean sediments. These processes have no bearing on interactions with dense geologic formations at great depth and nowhere does the article suggest that at a depth of over 2,600 feet water could dissolve 460 feet of dense crystalline anhydrite. UIC-14-66, Filing #1.10.

Additionally, the Petitioner relies on *Hardie*, 1967, *The Gypsum Anhydrite Equilibrium at One Atmosphere Pressure, The American Mineralogist,* Vol. 52, January-February, to support his argument, but this article focuses on the deposition of anhydrite and gypsum at surface pressures and temperatures, specifically to investigate whether gypsum in rock strata today was originally deposited at the surface as anhydrite or gypsum. UIC-14-66, Filing #1.11. Similarly, the Petitioner cites *Murray*, 1964, *Origin and Diagenesis of Gypsum and Anhydrite, Journal of Sedimentary Petrology*, Vol. 34, No.3, which discusses the diagenesis of gypsum and anhydrite. UIC-14-66 Filling #1.16. Diagenesis is a process that freshly deposited, loose grains of sediment go through at or near the surface, and includes the lithification process whereby such sediments become actual rock. These articles do not address mineral reactions at depth and pressure, and nowhere

suggest that that, at a depth of over 2,600 feet, water could dissolve dense crystalline anhydrite layers in the Salina Group during underground injection. Ex. B-23, RTC, Response #28, Pg. 67.

Throughout his Petition, the Petitioner constructs his arguments using partial facts from different articles to describe an unlikely scenario in which the 460 foot thick Salina Group confining zone under the Haystead # 9 well site will fail. Further, his analogies between scenarios in these articles and the consequences of UIC injection are misplaced and inaccurate. Lastly, the Region reviewed all of the attachments to the Petition, and none of the cited information or publications provides any legitimate basis for the Region to revisit its decision to issue the Permit to the Permittee.

Overall, Petitioner appears to have constructed his argument by misinterpreting basic scientific information about anhydrite conversion to gypsum at or near the Earth's surface. Injection siting evaluations are fundamentally technical and scientific in nature, and the Board will typically defer to a "permit issuer's technical expertise and experience, as long as the permit issuer adequately explains" its rationale and supports its reasoning in the administrative record. *See In re Peabody W. Coal Co.*, at 33; *City of Palmdale*, slip op. at 9 (*citing Dominion I*, 12 E.A.D. at 510). EPA applied its technical expertise to the injection siting in this matter; developed an administrative record on the subject; and in that record and the response to comments adequately explained its rationale and supported its reasoning. Ex. B-23.

The Board has also held that its power of review "should only be sparingly exercised," and that "most permit conditions should be finally determined at the Regional level;" 45 Fed. Reg. 33,290, 33,412 (1980); see *Envtl. Disposal Sys.*, 12 E.A.D. at 263-64; *Puna Geothermal Venture*, 9 E.A.D. at 246; *see also Presidium Energy*, VIC Appeal No. 09-01 at 2 n.4. Because the subject issue is a technical determination to which the Region has applied its technical expertise, and

because the Region has adequately explained its rationale and supported its reasoning in the administrative record, the Board should defer to the Region's scientific determination and reject Respondent's challenge on its merits. *City of Palmdale*, slip op. at 9 (citing *Dominion I*, 12 E.A.D. at 510 (EAB 2006)) 45 Fed. Reg. 33,290, 33,412 (1980); see *Envtl. Disposal Sys.*, 12 E.A.D. at 263-64; *Puna Geothermal Venture*, 9 B.A.D. at 246; see also *Presidium Energy*, UIC Appeal No. 09-01 at 2 n.4.

In sum, the Petitioner's assertion that the Region erred in evaluating the geologic siting of the subject well has no merit. In addition, the Petitioner has not adequately explained why Region's prior response on this issue was clearly erroneous or otherwise warrants Board review. 40 C.F.R. § 124.19(a)(4)(ii).

b. Endangered species.

The second issue raised by the Petitioner, that the Haystead #9 well will impact endangered species, is also not supported by the required fact or law. More specifically, the Petitioner states that the Indiana bat will be endangered by the injection activity at the Haystead #9 well site and within its known habitat. The Petitioner Bormuth also asserts that the Eastern Massasauga rattlesnake will be found at the Haystead #9 well site, and he implies it could also be impacted. Neither of these assertions has any merit.

Petitioner appears to argue that the Indiana bat may in fact use the injection site footprint as habitat and that it could be exposed to toxic chemicals via site chemical spills. Like Petitioner's comments during public comment regarding the Indiana bat, Petitioner's argument on appeal identifies no specific facts or data to support this assertion. On this ground alone, the Board should deny this challenge. *Cherry Berry*, UIC Appeal No. 09-02 at 3-4; *Presidium Energy*, UIC Appeal No. 09-01 at 4-5. Petitioner disputes the Region's contention that the injection site will not

adversely affect federally listed endangered species, such as the Indiana bat and candidate Eastern Massasauga rattlesnake. Petitioner failed to address Region 5's responses to Petitioner's specific comments or explain why those responses are inadequate.

Additionally, Petitioner's argument on appeal seeks review of issues outside the boundaries of the UIC permitting program. The only harm to the Indiana bat that Petitioner articulates on appeal is exposure to toxic chemicals at the injection site via site surface chemical spills. However, the UIC permitting program does not have authority over chemical spills at the surface. The UIC permitting program focuses instead on the protection of USDW. See UIC permitting criteria at 40 C.F.R. §§ 144.31, 146.24. As noted above, the Region stated in the RTC that concerns regarding surface activities at the injection site are outside the scope of permit review and that concerns over issues such as waste storage and surface runoff should be addressed to the Michigan Department of Environmental Quality, which regulates such activities. Ex. B-23, RTC, Response(s) #1, #6, #15, #20, #21, #28, #29, and #31 . The fact that Petitioner seeks review of certain issues outside the boundaries of the UIC permitting program, is another reason the Board should deny the Petition. *Presidium Energy*, UIC Appeal No. 09-01 at 4, n. 5.

When fulfilling its responsibilities under the ESA, 16 U.S.C. §§ 1531 et seq., in the context of a UIC permitting decision, the Region evaluates whether any EPA-authorized activity will impact endangered species in any way. In the course of performing its review, the Region evaluated whether the injection site footprint or action area would impact endangered or proposed endangered species, or critical habitat. ESA determinations are fundamentally technical and scientific in nature. The USFWS is the federal agency that implements the ESA. EPA consulted with USFWS information in making its determination. Ex. B-18 and B-20. On September 4, 2014, USFWS concurred with Region 5 in writing and agreed with the Region's determination

that the issuance of the subject permit would not impact any federally listed or proposed species under the Endangered Species Act. Ex. B-20.[7]

Additionally, the Agency has experience of its own in making ESA determinations, having permitted over a thousand UIC wells in Michigan alone over the past few decades. On matters that are fundamentally technical or scientific in nature, the Board will typically defer to the Agency's technical expertise and experience, as long as EPA adequately explains its rationale and supports its reasoning in the administrative record. *See Peabody W. Coal Co.*, at 33; *City of Palmdale*, slip op. at 9 (citing *Dominion I*, 12 E.A.D. at 510). EPA developed an administrative record on the subject of Indiana bat habitat; and in that record and the response to comments adequately explained the Agency's technical and scientific rationale and supplied its reasoning. Ex. B-23, RTC, Response(s) #15, #20, and #28. Relevant excerpts from Ex. B-23 are below:

> During the evaluation of the Haystead #9 SWD permit application, EPA identified two federally-designated threatened or endangered species and two candidate species (which are species that are not yet listed, but are proposed to be listed) that may potentially be found in Jackson County. Those species are, respectively: the Indiana bat, Mitchell's satyr butterfly, the Eastern massasauga (a rattlesnake), and the Poweshiek skipperling (a butterfly). Subsequently on October 2, 2013, the U.S. Fish and Wildlife Service proposed the Northern long-eared bat be listed as a federally-designated endangered species throughout its range, including Jackson County, Michigan.
>
> EPA determined that the immediate well area will not affect habitat for these species, including the Northern long-eared bat. Briefly, the well site or "action area" is located entirely within a plowed field [sic], upland, agricultural field (corn field) and will be a western extension of an existing well site. Specifically, the Haystead #9 SWD well will be constructed 90 feet away from the Haystead 1-9A HD1(MDEQ #60076) and Haystead 3-9 HD1 (MDEQ# 60078) existing well pad, and will only require minor clearing of agricultural fields. EPA further reviewed the historical land use of the Haystead # 9 SWD well through an examination of aerial images, and found the proposed site to be historically consistent with agricultural fields. Access roads to the Haystead #9 SWD well site also already exist, and further road construction is not required, thus minimizing any potential disruption to

[7] USFWS did note in the September 4, 2013 response to the Region that there are several sensitive and vulnerable wetland communities within Jackson County that could be impacted by the proposed project if injectate were to migrate upward to a USDW. Ex. B-20.

> endangered species. Pipeline installation, although not a UIC permit consideration, will use directional boring methods to avoid impacting any nearby wetlands. Furthermore, well construction is proposed to occur prior to the onset of summer days and prior to the migration of the Indiana bat. EPA also provided the U.S. Fish and Wildlife Service with an opportunity to review the Haystead #9 SWD project and draft decision. In a letter to EPA dated September 4, 2013, the U.S. Fish and Wildlife Service concurred with EPA, stating that, "We agree with your conclusion that there are no federally listed species in the action area that would be impacted from the proposed project."

The Board has held that its power of review "should only be sparingly exercised," and that "most permit conditions should be finally determined at the Regional level"; 45 Fed. Reg. 33,290, 33,412 (1980); see *Envtl. Disposal Sys.*, 12 E.A.D. at 263-64; *Puna Geothermal Venture*, 9 E.A.D. at 246; see also *Presidium Energy*, UIC Appeal No. 09-01 at 2 n.4. Because the issue of whether the activities at the site will impact any endangered species is a technical determination to which Region 5 and USFWS have applied their technical and scientific expertise and because the Region has adequately explained its rationale and supported its reasoning in the administrative record, the Board should defer to the Region's scientific determination and reject Respondent's challenge on its merits. *City of Palmdale*, slip op. at 9 (citing *Dominion I*, 12 E.A.D. at 510 (EAB 2006)) 45 Fed. Reg. 33,290, 33,412 (1980); see *Envtl. Disposal Sys.*, 12 E.A.D. at 263-64; *Puna Geothermal Venture*, 9 B.A.D. at 246; see also *Presidium Energy*, UIC Appeal No. 09-01 at 2 n.4.

In sum, the Petitioner's assertion that the Region erred in determining, in consultation with USFWS, that the permitted UIC activities at the site will not impact any endangered species has no merit. In addition, the Petitioner has not adequately explained why Region's prior response on this issue was clearly erroneous or otherwise warrants Board review. 40 C.F.R. § 124.19(a)(4).

Because Region 5 has applied its scientific expertise to the two subject technical matters; and because Region 5 adequately explained its rationale and supported its conclusions for the subject determinations in the administrative record, the Petitioner has not met his burden of

establishing that the permit is based upon a clearly erroneous finding of fact. 40 C.F.R. § 124.19(a)(4). Accordingly, neither of Petitioner's two substantive arguments have any merit; the EAB should defer to the Region's technical determinations in this matter; and reject the Petitioner's two substantive challenges on their merits.

CONCLUSION

The Petition makes two challenges to the Permit both of which either fail to meet the required threshold procedural standards of 40 C.F.R. §§ 124.13 and 124.19(a)(4)(ii) or, in the alternative, have no merit. The Region therefore respectfully requests that the Board deny the Petition for Review.

Respectfully submitted,

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Dated: July 10, 2014

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In the Matter of:	)	
West Bay Exploration Company of Traverse City, Michigan, Haystead #9 SWD, Permit No. MI-075-2D-0010, Jackson County, Michigan.	)	**Appeal No. UIC 14-66**

CERTIFICATE OF SERVICE

I hereby certify that the original of this **RESPONSE TO PETITION FOR REVIEW** in the matter **WEST BAY EXPLORATION COMPANY OF TRAVERSE CITY, MICHIGAN, HAYSTEAD #9 SWD, PERMIT NO. MI-075-2D-0010, JACKSON COUNTY, MICHIGAN, EAB Appeal No. UIC 14-66,** and all associated attachments, were filed electronically, via the Central Data Exchange, with the Board. In addition, certify that one identical paper copy of all of the attachments to the response were sent to the Board, via Express Mail, to the following address:

Clerk of the Board
U.S. Environmental Protection Agency
Environmental Appeals Board
1201 Constitution Avenue, NW
WJC East Building, Room 3332
Washington, DC 20004

Further, I hereby certify that one copy of the **RESPONSE TO PETITION FOR REVIEW** in the matter **WEST BAY EXPLORATION COMPANY OF TRAVERSE CITY, MICHIGAN, HAYSTEAD #9 SWD, PERMIT NO. MI-075-2D-0010, JACKSON COUNTY, MICHIGAN, EAB Appeal No. UIC 14-66**, and all associated exhibits, were sent to the Petitioner and Permit Applicant, via express mail, to the following addresses:

Peter Bormuth
142 West Pearl Street
Jackson, Michigan 49201

and

Timothy Brock
West Bay Exploration Company
13685 South West Bay Shore Drive, Suite 200
Traverse City, Michigan 49684

John P Steketee

July 10, 2014
Date