

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

U.S. Environmental Protection Agency Clerk of the Board, Environmental Appeals Board Colorado Building 1341 G Street, N.W., Suite 600 Washington, D.C. 20005

Re:

Beeland Group, LLC

Beeland Disposal Well # 1; Permit Number: MI-009-1I-0001

Appeal Numbers: UIC 08-01, 08-02, and 08-03

Dear Ms. Durr:

Enclosed please find an original and 5 copies of the Response to Petitioner for Review on behalf of the U.S. Environmental Protection Agency, Region 5, regarding the appeal numbers UIC 08-01, 08-02, and 08-03, relating to the Beeland Group Disposal Well #1, permit number MI-009-1I-0001. Thank you for your attention to this matter.

Sincerel

Stuart P. Hersh

Associate Regional Counsel

Enclosures

cc w/ encl:

Susan Hlywa Topp

Topp Law PLC

P.O. Box 1977

Gaylord, Michigan 49734-5977

Charles H. Koop

Prosecuting Attorney for Antrim County

P.O. Box 280

Bellaire, Michigan 49615

Roger W. Patrick

Mayer Brown LLP

1909 K Street, N.W.

Washington, D.C. 20006-1101

Susan E. Brice & Gregory L. Berlowitz

Mayer Brown LLP

71 S. Wacker Drive

Chicago, Illinois 60606

Joseph E. Quandt

Gina A. Bozzer

Co-counsel for Permittee, Beeland Group

412 South Union Street

Traverse City, Michigan 49685

CERTIFICATE OF SERVICE

I hereby certify that I delivered a copy of the foregoing United States Environmental Protection Agency, Region 5, Response to Petition for Review to the persons designated below, on the date below, by postage prepaid, first class mail addressed to:

Susan Hlywa Topp

Topp Law PLC P.O. Box 1977

Gaylord, Michigan 49734-5977

Charles H. Koop

Prosecuting Attorney for Antrim County

P.O. Box 280

Bellaire, Michigan 49615

Roger W. Patrick

Mayer Brown LLP 1909 K Street, N.W.

Washington, D.C. 20006-1101

Susan E. Brice & Gregory L. Berlowitz

Mayer Brown LLP 71 S. Wacker Drive

Chicago, Illinois 60606

Joseph E. Quandt Gina A. Bozzer Co-counsel for Permittee, Beeland Group 412 South Union Street

Traverse City, Michigan 49685

I also certify that I filed the original and five copies of the foregoing United States Environmental Protection Agency, Region 5, Response to Petition for Review with the Clerk of the Environmental Appeals Board, on the date below by overnight Federal Express prepaid, addressed to:

U.S. Environmental Protection Agency Clerk of the Board Environmental Appeals Board Colorado Building 1341 G Street, N.W., Suite 600 Washington, D.C. 20005

Dated this 12th day of June, 2008.

Stuart P. Hersh

Associate Regional Counsel Office of Regional Counsel

U.S. Environmental Protection Agency, Region 5

77 W. Jackson Blvd. Chicago, Illinois 60604

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

IN RE:		
) Appeal Nos. UIC 08-0)1,
Beeland Group, LLC) 08-0	
•) 08-0)3
Underground Injection Control (UIC))	
Permit No. MI-009-1I-0001)	
)	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION 5'S RESPONSE TO PETITION FOR REVIEW

Stuart P. Hersh Associate Regional Counsel Office of Regional Counsel, C-14J U.S. EPA, Region 5 77 W. Jackson Blvd. Chicago, Illinois 60604 Phone: (312) 886-6235

FAX: (312) 886-0747

TABLE OF CONTENTS

Table	of Authorities
I.	Introduction
П.	Standard of Review
ш.	Statement of Facts
IV.	Response to Petition for Review
A.	The Permit is Protective of Drinking Water and Supported by the Record 13
	1. Data Supports Finding that the Bell Shale Is a Confining Layer 15
	Data on the Quality of the Injected Fluid, Existing Reservoir Conditions, and the Effect of Injectate on the Surrounding Material and Fluids is Sufficient
	3. Data Supports the Waste Characterization
В.	U.S. EPA Properly Analyzed the Environmental Consequences of the Beeland Well
C.	U.S. EPA' Response to Comments is Supported by the Record
D.	No Policy Considerations Warrant the Board's Discretion to Remand 26
	The Facts and Policy Considerations do not Support The Board's Exercise of Discretionary Remand for Further Evaluation of the Petitioners'Environmental Justice Claim
	2. The Regulations do not Provide for an Evidentiary Hearing
V.	Conclusion
Exhibi	its: Certified Index of the Administrative Record

TABLE OF AUTHORITIES

Western Nebraska Resources Council v. EPA, 943 F.2d 867 (8th Cir. 1991)25
EAB Cases In re Amerada Hess Corp., 12 E.A.D. 1 (EAB 2005)
In re Am. Soda, L.L.P., 9 E.A.D. 280, 286 (EAB 2000)24, 28
In re Dominion Energy Brayton Point, L.L.C., 12 E.A.D. 490, 509-10 (EAB 2006)7, 20
In re Environmental Disposal Systems, Inc., 12 E.A.D. 23, 2624, 28
In re Envotech, L.P., 6 E.A.D. 260, 265 (EAB 1996)
In re Federated Oil & Gas of Traverse City, Michigan, 9 E.A.D. 722, 725 (EAB 1997)7, 8
In re Knauf Fiberglass, BmbH, 8 E.A.D. 740, 743-44 (EAB 2000)
In re LCP Chemicals-New York, 4 E.A.D. 661 (EAB 1993)
In re NE Hub Partners, L.P., 7 E.A.D. 561, 567 (EAB 1998)8
In re New England Plating Co., 9 E.A.D. 726, 732 (EAB 2001)22
In re Rohm and Haas Co., 9 E.A.D. 499, 503-04 (EAB 2000)
In re Sierra Pacific Inds., 11 E.A.D. 1 (EAB 2003)20, 22
In re Sutter Power Plant, 8 E.A.D. 680, 685 (EAB 1999)
Statutes 42 U.S.C. §§ 300f-300j-26
42 U.S.C. §§ 300h-300h-85
42 U.S.C. §§ 4321 et seq

Federal Register	
45 Fed. Reg. 33,412 (May 19, 1980)	
Code of Federal Regulations	
40 C.F.R. § 124	
40 C.F.R. § 124.9	
40 C.F.R. § 124.10	
40 C.F.R. § 124.11	
40 C.F.R. § 124.12	
40 C.F.R. § 124.13	
40 C.F.R. § 124.19	
40 C.F.R. § 124.2	
40 C.F.R. § 144.1(e)	
40 C.F.R. § 144.3	
40 C.F.R. § 144.6	
40 C.F.R. § 144.52	26
40 C.F.R. § 144.54	
40 C.F.R. § 147.1151	
40 C.F.R. § 261	10 19 23
40 C.F.R. § 261.22	

RESPONSE TO PETITION FOR REVIEW

The United States Environmental Protection Agency ("U.S. EPA"), Region 5, ("Region 5") hereby responds to the Petition for Review filed by Ms. Susan Hlywa Topp, Esq. of Topp Law PLC and Mr. Charles H. Koop, Prosecuting Attorney for Antrim County, Michigan on behalf of Star Township, Antrim County, and Friends of the Jordan River in Appeal Number UIC-08-02 (collectively referred to as the "Petitioners").

Petitioners seek review pursuant to 40 C.F.R. § 124.19 of the federal permit issued by Region 5 on February 7, 2008, to Beeland Group, LLC ("Beeland"), of Jackson, Michigan, under the Safe Drinking Water Act ("SWDA"). For the reasons set forth below, Region 5 recommends that the Environmental Appeals Board ("EAB" or "the Board") deny the Petition for Review.

I. <u>INTRODUCTION</u>

Congress enacted the SDWA, 42 U.S.C. §§300f - 300j-26, in 1974 to ensure that the nation's sources of drinking water are protected against contamination. Part C of the SDWA, 42 U.S.C. §§300h - 300h-8, established a regulatory program "to prevent underground injection which endangers drinking water sources." 42 U.S.C. §300h(b). Among other things, the SDWA directed U.S. EPA to promulgate regulations containing minimum requirements for state underground injection control ("UIC") programs, 42 U.S.C. §300h, and required all states identified by U.S. EPA to submit UIC programs meeting those minimum requirements. 42 U.S.C. §300h-1; *see also*, 40 C.F.R. §144.1(e) (requiring all 50 states to submit UIC programs). In states where U.S. EPA has not approved a UIC program, U.S. EPA directly implements its

¹ U.S. EPA regulates five classes of wells pursuant to this mandate. *See* 40 C.F.R. § 144.6.

own regulations for the UIC program. The State of Michigan has not been approved to administer the UIC permit program; thus, U.S. EPA administers the UIC permit program within that State. 40 C.F.R. §147.1151.

The Petitioners' appeal challenges Region 5's decision to issue Beeland a permit² that authorizes Beeland to construct and operate a Class I non-commercial, UIC injection well. This permit authorizes Beeland to operate a well which would dispose of only non-hazardous wastewater consisting of surface runoff and leachate collected near cement kiln dust piles from one specified facility.

The EAB received three Petitions for Review of Region 5's Beeland Class I permit decision: a petition filed by Mr. Allen Freize and Ms. Trisha Freize in Appeal Number UIC-08-01; a petition filed by the Petitioners in Appeal Number UIC-08-02, and; a petition filed by Dr. John W. Richter, President, Friends of the Jordan River Watershed in Appeal Number UIC-08-03. On March 28, 2008, the EAB issued an Order consolidating these three petitions, granted Beeland's Motion for Leave to Intervene, granted Beeland's Motion for an Extension of Time, and issued a revised schedule for filing a Response Seeking Summary Disposition. By Orders dated May 23, 2008, the EAB granted in part Beeland's Motion for Summary Disposition by denying the Petitions for Review UIC-08-01 and UIC-08-03, deferring a determination on the Petitioners' Petition UIC-08-02, and setting a revised briefing schedule for filing Responses.

The EAB received a timely Petition for Review from the Petitioners on March 11, 2008, to which this document responds.

² A copy of Beeland's UIC Class I Non-Hazardous Waste Permit # MI-009-1I- 0001, is attached this Response to Petition at Exhibit 1, Tab 2.

II. STANDARD OF REVIEW

The Board's discretion to review permitting actions, "should only be sparingly exercised," and "most permit conditions should be finally determined at the Regional level." See, preamble to 40 C.F.R. §124.19(a); see also, 45 Fed. Reg. 33,412 (May 19, 1980); In re Rohm and Haas Company, 9 E.A.D. 499, 503-04 (EAB 2000); In re Federated Oil & Gas of Traverse City, Michigan, 6 E.A.D 722, 725 (EAB 1997). The petitioner carries the burden of proving that each issue raised by a petition for review satisfies the standards for review. In re Envotech, L.P., 6 E.A.D. 260, 265 (EAB 1996). To carry this burden, a petitioner must demonstrate compliance with the threshold procedural requirements of timeliness, standing, and preservation of the issue on appeal (see, In re Sutter Power Plant, 8 E.A.D. 680, 685 (EAB 1999); and then must show that the permit condition on appeal is based on a clearly erroneous finding of fact or conclusion of law, or the permit condition presents an exercise of discretion or important policy consideration which the EAB should, in its discretion, review. 40 C.F.R. §124.19(a).

To demonstrate compliance with the threshold procedural requirements, the petitioner must first demonstrate that the issue was raised during the comment period to preserve the issue for appeal to the Board, as required by 40 C.F.R. §124.13(a) and 124.19(a). See, In re Dominion Energy Brayton Point, LLC, 12 E.A.D. 490, 509-10 (EAB 2006). Whether or not a petitioner

³U.S. EPA's regulations apply both to the U.S. EPA and to states with approved UIC programs, and Parts 124 and 144 often use the generic term "Director" to describe the U.S. EPA Regional Administrator or the state agency director with specific UIC program oversight in any one state. See, 40 C.F.R. §§124.2, 144.3 ("Definitions" (Director)). Because the U.S. EPA retains UIC oversight in the State of Michigan, where appropriate the summary of the relevant regulatory text replaces the word "Director" with the term "Region." Moreover, the Regional Administrator's authority to deny, transfer, modify, revoke, reissue and terminate UIC permits has been duly delegated to the Director, Water Division, U.S. EPA Region 5 under Regional Delegation 9-24 (February 1987), as authorized by U.S. EPA Headquarters Delegation 9-24. (June 8, 1984).

raised an issue during the comment period is a threshold question that the Board considers prior to granting review. <u>Id.</u> at 509 n. 29.

The EAB interprets 40 C.F.R. §124.19(a) as requiring a petitioner to clearly identify the conditions in the permit at issue and the bases in the record for arguing clear error in the permit condition decision; or requiring the petitioner to clearly identify the Region's exercise of permit decision discretion or the policy considerations that warrant EAB discretion to grant review of the permit condition, and the bases for the EAB to exercise that discretion. *In re LCP Chemicals - New York*, 4 E.A.D. 661 (EAB 1993). Finally, the preamble to 40 C.F.R. § 124.19(a) states that the Board's discretion to review permitting actions, "should only be sparingly exercised" and that "most permit conditions should be finally determined at the Regional level." 45 Fed. Reg. 33,412 (May 19, 1980). The Board has repeatedly affirmed this interpretation of its discretion to review permit actions expressed in the preamble. *See, In re NE Hub Partners, L.P.*, 7 E.A.D. 561, 567 (EAB 1998), citing *In re Federated Oil & Gas of Traverse City*, 6 E.A.D. 722, 725 (EAB 1997).

III. STATEMENT OF FACTS

On October 6, 2006, Beeland Group, LLC, of Jackson, Michigan, applied to Region 5 for a permit to construct and operate a Class I non-hazardous UIC well in an unincorporated area near Alba, Michigan.⁴ Beeland's application and supporting documents state that this injection

⁴On January 5, 2007, Beeland also submitted a permit application for the well and the corresponding surface facilities to the Michigan Department of Environmental Quality (MDEQ), pursuant to Part 625 of Michigan's Natural Resources and Environmental Protection Act, P.A. 451 of 1994, as amended, MCLS § 625 et seq., (NREPA). Although this Michigan permit is not directly relevant to Region 5's injection well permit, a Region 5 permit condition requires the permittee to comply with all local and State laws and regulations. This condition effectively requires Beeland to obtain this State permit before it may construct and operate the well. On February 7, 2008, Michigan granted Beeland a Part 625 permit for the Alba facility, permitting

well would accept for disposal only one source of wastewater: wastewater consisting of surface runoff and leachate seeps collected near piles of cement kiln dust (CKD) at an on-going cleanup of a former cement facility located near Bay Harbor, Michigan along the Little Traverse Bay.

See, permit, Part III, Attachment F Approved Waste Analysis Plan, page F-1 of 5⁵; and permit application, Section 2.P Monitoring Program, page 2-58 (Oct. 6, 2006). Beeland's application and supporting documents also state that this injection well would accept an estimated average of 135,000 gallons per day (U.S. EPA Response to Comments, Geology/Watershed and other technical issues, Comment 44, page 38) and that the wastewater's pH level "is typically expected to range from 7.0 to 10.0". Permit application, Section 2.H Operating Data, page 2-40. See also, permit application, Section 2.H Operating Data, Table H-2, page 2-41, and letter providing supplemental information to the application, from Petrotek to U.S. EPA, dated January 24, 2007, Table 7B⁸. The permit precludes Beeland from injecting any hazardous waste into its well. See,

the injection well and associated surface facilities including the wastewater off-loading, wastewater storage, ancillary piping, secondary storage and spill response actions.

⁵The index to the permit incorrectly cited this as permit Part II.C.3, rather than permit Part III, Attachment F.

⁶To ensure safe operation of the well, the permit limits injection pressure to 150 pounds per square inch (psi) rather than specifying a maximum injection rate. *See*, permit, Part III, Attachment A, page A-1 of 3. *See also*, U.S. EPA Response to Comments, *Geology/Watershed and other technical issues*, Comments 15 and 35 at pages 30 and 34, respectively (the maximum calculated injection pressure that would not fracture the injection zone is 681 psi). The Bay Harbor wastewaters' pH and flow volumes vary depending on precipitation and other factors.

⁷Alkaline wastes at or above a pH level of 12.5 are hazardous wastes. See, 40 C.F.R. § 261.22; see also, U.S. EPA Response to Comments, Geology/Watershed and other technical issues, Comment 29, page 33. This permit condition prohibits Beeland from injecting any alkaline waste at or above pH 12.5, to the extent it may exist.

⁸Table 7B analytical results show that the pH level of the samples ranged from 7.5 to 8.2. A copy of Table 7B is attached to this Response to Petition at Exhibit 1, Tab 4.

permit at page 1.

Following receipt of Beeland's application and materials submitted in support of that application, Region 5 conducted a review, which included evaluating sampling results of the wastewater analysis to confirm that the wastewaters are not hazardous pursuant to 40 C.F.R. Part 261, evaluating the geology in the area of the proposed well, and evaluating Beeland's proposal for the injection well engineering, construction, operating, monitoring, testing and reporting conditions. Based on that review, Region 5 modified Beeland's application for a permit by requiring more frequent monitoring and reporting. See, U.S. EPA Response to Comments, Monitoring and legal issues, Comment 6, page 17. On April 12, 2007, U.S. EPA issued a draft UIC permit for Beeland's proposed injection well and concurrently initiated a 30-day public comment period consistent with the requirements of 40 C.F.R. §124.10. Based on public requests, Region 5 granted two extensions of time to the public comment period closing date, first to June 27, 2007, and then to July 28, 2007, providing a total comment period of 107 days. In addition, Region 5 granted a request for public meeting and public hearing, which was held on June 13, 2007. The public meeting and hearing, which was attended by approximately 190 people, provided the public with information regarding the proposed well, and allowed the public to comment on the draft permit.

On February 7, 2008, Region 5 issued a Response to Comments⁹, and granted Beeland a permit to construct and operate a Class I, non-hazardous, non-commercial injection well, permit number MI-009-11-0001, to be effective March 12, 2008, pursuant to the SDWA. The Region 5 Class I permit decision authorizes Beeland to inject only the specified Bay Harbor facility non-

⁹A copy of the Response to Comments is attached to this Response to Petition at Exhibit 1, Tab 3.

hazardous wastewaters into the Dundee Limestone formation at depths between 2,150 to 2,450 feet below the ground surface. *See*, permit at 1.

In reaching this permit decision, Region 5's technical evaluation determined that the base of the lowermost underground source of drinking water (USDW)10 in the Beeland well area exists in the Glacial Drift formation, at a depth of approximately 900 feet below the ground surface. See, U.S. EPA Response to Comments, page 2. Region 5 therefore determined that approximately 1,250 feet separate the lowest depth of the nearest USDW, the Glacial Drift, from the injection zone of the Dundee Limestone formation that would receive the Beeland well wastewaters. <u>Id.</u> In addition, Region 5 determined that the intervening 1,250 feet consist of varying thicknesses of various porous and nonporous formations between the Glacial Drift USDW formation and the Dundee Limestone formation. Id. Immediately overlying the Dundee Limestone formation is the Bell Shale, a formation approximately 100 feet thick in this area. <u>Id.</u>; see also, U.S. EPA Response to Comments, Monitoring and Legal Issues, Comment 15, page 19; Geology/Watershed and other technical issues, Comment 22, page 32. The Bell Shale is identified by other injection wells in Antrim County as a confining layer for wastes injected into the Dundee Limestone formation. Id.; see also, U.S. EPA Response to Comments, Monitoring and Legal Issues, Comment 25, page 22. Region 5 found no indication that injected waste had significantly migrated from the Dundee Limestone formation. Id.; see also, U.S. EPA Response to Comments, Issues Related to Bay Harbor, Comment 19, page 7; Geology/Watershed and other technical issues, Comments 9, 22, 40, on pages 28, 32, 36, respectively; see also, General

¹⁰An USDW is defined as an aquifer or portion thereof which contains less than 10,000 milligrams per liter of total dissolved solids and which is being or can be used as a source of drinking water. *See* 40 C.F.R. §144.3.

Issues, Comment 6, page 39.

The Region 5 geological investigation evaluated the capacity and compatibility of the Dundee Limestone formation as the injection zone for the Beeland wastewaters, and the various formations overlying it. Region 5's technical evaluation determined that the Beeland wastewaters would be compatible for injection into the Dundee Limestone formation in Antrim County. The Region recognized that Beeland's non-hazardous wastewater will have waste characteristics and chemical constituent concentrations similar to or less than brine, a by-product waste from the oil and gas extraction well industry operating in the area. U.S. EPA Response to Comments, *Geology/Watershed and other technical issues*, Comment 39, page 36; *see also, Pet.* 08-02 at 15. Antrim County has approximately 200 Class II wells that inject brine into various formations including a significant number into the Dundee Limestone formation. U.S. EPA Response to Comments, *Geology/Watershed and other technical issues*, Comment 40, page 36. The Beeland permit includes requirements that Beeland regularly sample, monitor, test and report information regarding the wastewater, the well, the Dundee Limestone and Bell Shale formations. *See, e.g.*, permit at 6, 7, 10, 13, 14, 15, 16, and 17.

IV. <u>RESPONSE TO PETITION FOR REVIEW</u> <u>APPEAL NO. UIC-08-02</u>

The Petitioners have demonstrated in their petition that they satisfy the standing requirements to petition the Board for review of the Region 5 final permit decision issued for the Beeland well on February 7, 2008. Any person who filed comments on the draft UIC permit within the public comment period or participated in the public hearing regarding the permits may petition the EAB to review any condition of the permit decision. 40 C.F.R. §124.19(a). The

Petitioners submitted written comments during the comment period.¹¹ The EAB received the Petitioners' written appeal on March 11, 2008, which was within the designated appeals deadline of March 12, 2008. Therefore, the Petitioners have standing to petition the EAB for review of the final permit decision.

The Petition, however, fails to establish that review of Region 5's permit decision is warranted. The Petitioners enumerate eight challenged "permit conditions," and then present arguments relating to each. Below we address each of the Petitioners' enumerated "permit condition" challenges in the order presented. None of the Petitioners' eight challenged "permit conditions" describe either a Region 5 permit decision finding of fact or conclusion of law that is clearly erroneous, or identifies a statement of policy or exercise of discretion made in this permit decision that the Board should exercise its discretion to review.

A. The Permit is Protective of Drinking Water and Supported by the Record

In alleging that the "permit conditions are not protective of the drinking water and is not supported by the record," the Petitioners claim that the "Permittee is required to provide sufficient data to demonstrate that the USDWs will be protected." *Pet.* 08-02 at 8. The entire remainder of this claim is dedicated to reciting a litany of "key areas of information" that the permittee must provide, citing to a Region 5 Response to Comment for this permit. Essentially, this permit condition challenge is framed as a criticism of the applicant, Beeland, and the content of its application.

This challenge fails to contain threshold information requisite to demonstrate that EAB review is warranted. The petitioner carries the burden of proving that each issue raised by a

¹¹A copy of Petitioners' written comments are attached to this Response to Petition at Exhibit 1, Tab 5.

petition for review satisfies the standards for review. *In re Envotech, L.P.*, 6 E.A.D. 260, 265 (EAB 1996); *see also, In re Knauf Fiberglass, BmbH*, 8 E.A.D. 740, 743-44 (EAB 2000) (denying review of a PSD permit). To carry this burden, "the petitioner must state both the objections to the permit that are being raised for review and explain why the permit decision maker's previous response to those objections is clearly erroneous or otherwise warrants review." *In re Amerada Hess Corp.*, 12 E.A.D. 1 (EAB 2005). For this "permit condition," the Petitioners' argument fails to describe or take issue with any Region 5 UIC permit condition, fails to take issue with a permit decision response, and fails to explain why the Region's permit decision response is erroneous.

The Region's responses in the Response to Comments provide a record supporting the conclusion that the Beeland non-hazardous injection well permit conditions are protective of the drinking water aquifer. For example, the U.S. EPA Response to Comments, *Issues Related to Bay Harbor*, Comment 19, page 7, responded to a commenter's concerns of a leak with a discussion of the UIC program, and the technical information considered, concluding: "Beyond the data from the existing near-by brine wells, the design, engineering, construction, operation, and maintenance requirements applicable to the Beeland Group permit application provide a very high level of confidence that a leak will not occur." This response continues: "If [a leak] should occur through the injection process, the leak will be detected very quickly and the injection well will cease operating These measures, and others required in the permit, all serve to ensure that operation of the well will not contaminate the USDW." *See also, Geology/Watershed and other technical issues*, Comments 9 and 16, pages 28 and 30, respectively.

A petition warranting EAB review on the merits must either challenge and demonstrate

that a permit decision finding of fact or conclusion of law is clearly erroneous, or identify a statement of policy or exercise of discretion made in this permit decision that warrants EAB review. *In re LCP Chemicals - New York*, 4 E.A.D. 661 (EAB 1993). The Petitioners fail to identify an error in a Region 5 finding of fact or conclusion of law regarding this challenge, and fail to present information supporting such a claim. For this reason, the EAB should deny review of this first "permit condition" challenge without further discussion of the merits of this claim.

The Petitioners present the following three related "permit condition" challenges. In these challenges, the Petitioners demand that the Board substitute the Petitioners' limited technical concerns for Region 5's careful review and analysis.

1. Data Supports Finding that the Bell Shale Is a Confining Layer

The Petitioners claim that the Region's permit decision is factually erroneous, because the Region "assumes" that the Bell Shale formation would be a confining layer without any supporting evidence. *Pet.* 08-02 at 9. The Petitioners also argue that not all shale formations are impermeable, and "that the permeability of the Bell Shale in the area of the Injection Site has not been definitely determined. . . ." Finally, the Petitioners claim that the Region's Response to Comments fails to address concerns about fracturing in the Bell Shale formation that may allow fluids to migrate from the Dundee Limestone formation.

Even taken on its face, the Petitioners' arguments fail to identify clear error warranting the Board's granting of a petition for review of Region 5's Beeland permit decision. Each petitioner carries this burden of proving that the issue raised by a petition for review satisfies the standards for review stated in 40 C.F.R. §124.19(a). *In re Envotech, L.P.*, 6 E.A.D. 260, 265 (EAB 1996). The Petitioners' argument is limited to an unsubstantiated claim that "there is no

evidence that the Bell Shale Formation will confine the injected waste to the Dundee Limestone" (*Pet.* 08-02 at 11) based on an extrapolation from a study of the higher (closer to the ground surface) Antrim Shale formation in the adjacent Otsego County, rather than demonstrating, as is their burden, that Region 5 clearly erred in determining that the Bell Shale formation and other formations between the USDW and the Dundee Limestone formation are sufficient confining layers at the Beeland well location. U.S. EPA, however, considered such concerns and addressed them in the Response to Comments, as discussed below.

The U.S. EPA Response to Comments demonstrates that the Region carefully considered and evaluated existing geological records for this area, data developed through the drilling and operation of existing wells in the area, and all of the comments and concerns expressed by the public. This review was not confined to only the Bell Shale formation located approximately 2,000 feet below the surface, but also considered the permeability of other formations that exist between the top of the Dundee Limestone formation at approximately 2,100 feet below the surface and the lowest underground source of drinking water located in the Glacial Drift formation, approximately 900 feet below the surface. See, U.S. EPA Response to Comments, Issues Related to Bay Harbor, Response to Comment 19 on page 7; Monitoring and Legal Issues, Response to Comments 15, 25, 26, and 31, on pages 19, 22 and 24, and; Geology/ Watershed and other technical issues, Response to Comments 9, 11, 14,16, 22, 36, 37, 40, on pages 28, 29, 30, 32, 35, and 36. For example, the Region responded to a comment that the record had not "ascertained the absence of permeable fracture in the Bell Shale" by discussing the approximately 100 foot thickness of the Bell Shale formation and the likelihood of pressures required to keep a fracture open for such a flow. See, U.S. EPA Response to Comments,

Geology/Watershed and other technical issues, Comment 22, on page 32.

While the Region's careful technical evaluation and scientific analysis has provided a very good technical judgment of the geology in the vicinity of the proposed well for the purpose of determining whether the Bell Shale is expected to be a good confining layer, the conditions of the Dundee Limestone formation, and other related concerns, the best geological information at the point of the proposed Beeland well location is available only by reviewing the drilling logs and core samples obtained from an actual well formation test at the Beeland well site. The test data will demonstrate whether the actual geological conditions at this well location comply with the permit operating conditions for this well. For this reason, the permit prohibits Beeland from injecting any wastewater into the well until the Region has reviewed and approved of the data generated through the well formation testing and logging program. *See*, permit at I.J.1., page 12. In addition to a careful evaluation of the existing information, and a permit condition prohibiting any injection until the well formation test data is approved, Beeland's permit provides continuing requirements to protect the USDW by including conditions and restrictions for operating, monitoring, testing, and reporting.

The record demonstrates that the Region conducted a careful evaluation of existing data, records, and comments in reaching the conclusion that the Bell Shale will likely be an effective confining layer at the Beeland injection well site; the permit requires additional data to confirm the geological conditions of the Bell Shale formation as a confining layer at the well location before any injection is authorized; and, the permit contains on-going operating, monitoring, testing and reporting conditions to ensure that Bell Shale formation remains a good confining layer for Beeland's non-hazardous wastewater injections at this location. The Petitioners'

argument fails to demonstrate clear factual error in the Region's conclusion that the Bell Shale formation is a confining formation for the Dundee Limestone formation in the Beeland injection well area.¹² Region 5, therefore, respectfully requests that the Board deny review of this issue.

2. Data on the Quality of the Injected Fluid, Existing Reservoir Conditions, and the Effect of Injectate on the Surrounding Material and Fluids is Sufficient

The Petitioners argue that the Region's permit decision is unsupported and factually erroneous. The Petitioners base this claim on Beeland's alleged failure to provide "sufficient data" relating to the injectate, the Dundee Limestone formation and the effects of the injectate on the Dundee Limestone formation; and then enumerate 18 additional items that the Petitioners would like to see; and quibble with a few estimated values. Pet. 08-02 at 11-14. This claim takes a "buckshot" approach of throwing technical questions and concerns about the data, engineering, assumptions and calculations in the hope that something might hit its target. The Petitioners effort to poke holes in the technical merits of the Beeland well application and the

¹²Petitioners' own expert, cited as the basis for Petitioners' challenge of this permit condition, actually supports the Region's findings. Dr. James McClurg, while claiming to have no knowledge of the Bell Shale formation characteristics (see Pet. Exhibit I, paragraph 12), recognizes that "... most shales are impermeable, which allows for them to be the cap rock [a confining layer] ... in many parts of the world." See, Pet. Exhibit H, at page 4, paragraph 1, line 8 (emphasis in original) (bracket added); See also, Pet. Exhibit I, at paragraph 13.

Notwithstanding their own expert's statements on this issue, the Petitioners argue a stridently contrary position that "[a]ll shales are porous" See Pet. 08-02 at 11. Moreover, Dr. McClurg, recognizes the fallacy of using the Antrim Shale formation as an indicator of the Bell Shale: "[t]he Michigan Antrim Shale Formation is considered an 'unconventional play' and is a non-typical shale. It is brittle and as a result, is highly fractured increasing the porosity and ... permeability." Pet. Exhibit H, page 1, paragraph 2.

¹³The Petitioners argue that the Beeland permit application estimates the "depth to the base of the USDW . . . at 900 feet" at the specific point of the proposed Beeland well while stating that "a well about .4 miles away, shows the depth . . . to be 907 feet." (see, Pet. 08-02 at 13); arguing that calculated injection pressure may not be precisely accurate (see, Pet. 08-02 at 13-14), and; stating that "information . . . indicates a not insignificant chance Beeland will drill through salt." (see, Pet. 08-02 at 14).

corresponding Region 5 review, is without merit.

This entire challenge only claims deficiencies in the application for the permit, as opposed to a permit condition issued by the Region. The content of a permit application, alone, is not relevant to a petition for review since the application is a beginning, not an end in the process. To warrant review, the petition must go beyond the application to the Region's bases for the permit decision. *See, In re Envotech*, 6 E.A.D. 260, at 283-285 (EAB 1996). For this reason alone, this argument fails to comply with the criteria for a challenge and should be denied.

Furthermore, the record demonstrates that the Petitioners' main arguments regarding "insufficient data" relating to injectate fluid, the Dundee Limestone formation, and the reaction of the fluid in the formation are without merit. The record contains analytical data of the Beeland wastewater, and this analytical data demonstrates that the wastewater does not meet the definition of a hazardous waste pursuant to 40 C.F.R. Part 261. See, Table 7B of letter, from Petrotek to U.S. EPA, dated January 24, 2007. The permit authorizes Beeland to inject only nonhazardous wastewater, and requires Beeland to sample the wastewater regularly prior to injection. Permit at page 1, and permit at Part II.D.10. The geology of the Dundee Limestone formation is well known through geological records and data from other wells in the area. In addition, the record demonstrates that the Region found that the constituents in the Beeland wastewater compare favorably with brine wastes, a waste that is being injected into the Dundee Limestone formation with no known adverse reactions. U.S. EPA Response to Comments, Issues Related to Bay Harbor, comment 19 at page 7; U.S. EPA Response to Comments, Geology/Watershed and other technical issues, comment 26 at page 33. Indeed, the Petitioners characterize the Beeland wastewaters as a "saturated brine". Pet.08-02 at 15.

We note that the Region's technical judgments for this permit are based on a relative wealth of existing geological information generally applicable to the area and on the application of reasonable models to this location. The record demonstrates that Region 5 conducted a careful evaluation of the data and records, and considered the public comments. The record contains analytical data regarding the injectate, discusses the Dundee Limestone formation and discusses the injectate's compatibility with the Dundee Limestone formation. See, U.S. EPA Response to Comments, Monitoring and Legal Issues, Comments 8, 18 and 31, pages 17, 18, 20, 23 and 24; Geology/Watershed and other technical issues, Comments 5, 6, 15, 19, 21, 22, 35, 36, 39 and 41 at pages 27, 30, 31, 32, 34, 35, and 36. The Petitioners' arguments fail to demonstrate a clear error in a permit condition relating to these issues, and therefore do not warrant Board review.

The Petitioners also submitted a list of 18 items they claim the Beeland permit application fails to address or provide, but they did not provide any explanation, discussion or argument connecting this list to a basis that would merit EAB review of the permit condition. *Pet.* 08-02 at 12-13.

The Board should deny these challenges. These Petitioners failed to comment during the comment period concerning any of the 18 items listed in this argument. U.S. EPA did not receive a comment from anyone on 9 of these items, listed as items c; e; f; g; j; n; o; p; and q in the Petition for Review on pages 12 and 13. The Petitioners must demonstrate that they raised the issue during the comment period to preserve the issue for appeal. 40 C.F.R. §§124.13(a) and 124.19(a); see also, In re Dominion Energy Brayton Point, LLC, 12 E.A.D. 490, 509-510 (EAB 2006). The Petitioners bear the burden of demonstrating compliance with this threshold procedural requirement. In re Sutter Power Plant, 8 E.A.D. (EAB 1996); In re Sierra Pacific

Industries, 11 E.A.D. 1 (EAB 2003) (dismissing petition for petitioner's failure to raise issues during comment period). Petitioner therefore lacks standing to challenge all 18 items.

Notwithstanding the petitioners' lack of standing on these issues, the Region received comments from other individuals that may have some connection to nine of the Petitioners' items. The Region addressed each of these nine comments in the Response to Comments. The Petitioners fail to discuss, much less identify, clear error in these responses. Below we cite to the nine comments and the Region's replies:

- Item a: U.S. EPA Response to Comments, Geology/Watershed and other technical issues,

 Comment 30 at page 32, and General Issues, Comment 33 at page 44.
- Item b: U.S. EPA Response to Comments, *Geology/Watershed and other technical issues*,

 Comments 15, 30, and 39 on pages 30, 33, and 38, respectively; U.S. EPA Response to

 Comments, *Monitoring and Legal Issues*, Comment 38 on page 26.
- Item d: U.S. EPA Response to Comments, General Issues, Comment 19 on page 42.
- Item h: U.S. EPA Response to Comments, Geology/Watershed and other technical issues,

 Comment 22, on page 32.
- Item i: U.S. EPA Response to Comments, Geology/Watershed and other technical issues,

 Comment 39, on page 36.
- Item k: U.S. EPA Response to Comments, Geology/Watershed and other technical issues,

 Comment 35, on page 34.
- Item 1: U.S. EPA Response to Comments, Geology/Watershed and other technical issues,

 Comment 9, on page 28.
- Item m: U.S. EPA Response to Comments, Geology/Watershed and other technical issues,

Comment 35, 38, and 41, on pages 34, 36, and 37, respectively.

Item r: U.S. EPA Response to Comments, General Issues, Comment 19 on page 42.

Whether preserved or not, none of these claims establish clear factual error that warrants Board review. The EAB interprets 40 C.F.R. §124.19(a) as requiring a petitioner to clearly identify either the conditions in the permit at issue and the bases in the record for arguing clear error in the permit condition; or the Region's exercise of permit decision discretion or the policy considerations that warrant the EAB's discretion to review the permit condition and the bases for the EAB to exercise that discretion. *In re Sierra Pacific Industries*, 11 E.A.D. 1 (EAB 2003) (dismissing petition based on petitioner's failure to raise issues during comment period, and failure to provide comments with specificity); *see also, In re New England Plating Co.*, 9 E.A.D. 726, 732 (EAB 2001).

The Petitioners' arguments fail to demonstrate a clear factual error in a permit condition relating to any of these issues. Nor did Petitioners identify an exercise of discretion or an important policy consideration that the EAB should review in its discretion. For these reasons, the EAB should deny review of this "permit condition" challenge.

3. Data Supports the Waste Characterization

The Petitioners claim that the Region clearly erred by concluding that the Beeland wastewaters are non-hazardous, and by failing to fully characterize how the wastewater will interact with materials in the Dundee Limestone formation.

These challenges are a permutation of the challenge discussed above, and are fully addressed in the response above. The Board should deny review of these challenges as failing to demonstrate a clear factual error in a permit condition. The only permit condition relating to

these challenges is the permit condition that prohibits Beeland from injecting into the well any hazardous fluid, as defined in 40 C.F.R. Part 261. That permit condition is stated on page 1 of the permit. The permit also contains sampling and other relevant conditions to continuously determine whether the Beeland well is operating in a manner that is protective of the USDW.

In a number of responses to comments, the Region stated that "we are not aware of any basis to characterize this wastestream as anything other than non-hazardous." U.S. EPA Response to Comments, *Geology/Watershed and other technical issues*, Comments 19 at page 31; *see also*, U.S. EPA Response to Comments, *Monitoring and Legal Issues*, Comment 30 on page 23; U.S. EPA Response to Comments, *Geology/Watershed and other technical issues*, Comments 5, 15, 19, 20, 23, 25, 29, and 30, on pages 27, 30, 31, 32, 33, and 34. The Petitioners do not identify any clear error in the Region's responses; they simply restate their complaint. A petitioner must state both the objections to the permit that are being raised for review and explain why the permit decision maker's previous response to those objections is clearly erroneous or otherwise warrants review. *In re Amerada Hess Corp.*, 12 E.A.D. 1 (EAB 2005). The Board should deny review since the Petitioners fail to carry their burden of demonstrating clear error.

B. <u>U.S. EPA Properly Analyzed the Environmental Consequences of the Beeland Well</u>

The Petitioners claim that the Region exercised inappropriate discretion in the Beeland permit decision that violates the SDWA and the National Environmental Policy Act (NEPA).

Pet. 08-02 at 17. In particular, Petitioners claim that the Region failed to provide the public with relevant information regarding the environmental consequences of the Beeland well, including a failure to analyze: the environmental consequences of the wastewater on the Dundee Limestone formation, the adequacy of the Bell Shale formation to act as a confining zone, and the formation

pressures and cone of influence. *Pet.* 08-02 at 17. In support of this claim, the Petitioners argue that "there is no documentation to support the lack of permeability of the Bell Shale and the effects of the leachate on the surrounding materials." <u>Id</u>.

This claim by the Petitioners does not relate to a permit condition and therefore does not warrant Board review. The Board requires a petitioner to challenge a permit condition in order to successfully appeal a UIC permit. *In re Environmental Disposal Systems, Inc.*, 12 E.A.D. 23, 26, *citing In re Am. Soda, L.L.P.*, 9 E.A.D. 280, 286 (EAB 2000) ("the SDWA and the UIC regulations authorize the Board to review UIC permitting decisions only as they affect a well's compliance with the SDWA and applicable UIC regulations.") In addition, the Petitioners fail to identify a clear error of fact in the Region's responses to Petitioners' claim of a lack of documentation regarding the Bell Shale's permeability. Therefore, this claim does not warrant review by the Board.

NEPA requires the federal government to prepare a detailed statement of environmental impact for each major federal action which may significantly affect the quality of the human environment. 42 U.S.C. §§ 4321, et seq. Certain federal actions are not subject to a NEPA review, including the UIC program under the SDWA. U.S. EPA regulations provide that "... UIC . . . permits are not subject to the environmental impact statement provisions of section 102(2)(C) of the National Environmental Policy Act, 42 U.S.C. 4321." 40 C.F.R. §124.9(b)(6). Consequently, U.S. EPA is not required to develop an environmental impact statement under NEPA to inform our UIC permitting decisions under the SDWA. The SDWA permitting process is functionally equivalent to the environmental impact review process under NEPA because the SDWA permitting process requires: 1) an analysis of the environmental consequences of the

proposed permit action; and 2) a public disclosure and comment process. Western Nebraska Resources Council v. EPA, 943 F.2d 867 (8th Cir. 1991).

As documented above and in the record for this matter, there is an ample record supporting the technical conclusion that the Bell Shale has acted and will act as a confining layer for injections into the Dundee Limestone formation, and that the Beeland wastewater likely will have no significant effect on the Dundee Limestone formation. These records include a review of Antrim County brine injection wells, geologic data, analytical results of the Beeland wastewaters, and the Petitioners' admission that the Beeland wastewaters are a "saturated brine".

This issue is not related to a permit condition and therefore does not warrant review by the Board. In addition, The Petitioners have failed to demonstrate that this challenge is based on a clearly erroneous finding of fact or conclusion of law, or that the permit condition presents an exercise of discretion that warrants the Board's review.

C. U.S. EPA' Response to Comments is Supported by the Record

The Petitioners claim¹⁴ that certain U.S. EPA responses in the Response to Comments are erroneous, based only on the vague argument of "reasons set forth in Section B of this Brief, and as demonstrated by the attached Exhibits." The Petitioners then provide a list of sections within the Response to Comments along with numbers to comments and pages. The Petitioners fail to present any discussion that: identifies the claimed error; argues and explains the basis for the claim of error; and provides the factual basis that demonstrates the error.

We are unable to discern from this challenge what specific fact or facts the Petitioners claim as error within the comment, or any basis for such a claim. The petitioner bears the burden

¹⁴Petitioners present a discussion of administrative record requirements, but since they do not present a claim for review relating to the record, there is nothing warranting Board review.

to clearly identify the conditions in the permit at issue and the bases in the record for arguing clear error in the permit decision. 40 C.F.R. §124.19(a); see also, In re LCP Chemicals - New York, 4 E.A.D. 661 (EAB 1993). Each petitioner carries this burden of proving that the issue raised by a petition for review satisfies the standards for review stated in 40 C.F.R. §124.19(a). In re Envotech, L.P., 6 E.A.D. 260, 265 (EAB 1996). In this challenge, the Petitioners fail to meet their burden of proof, or demonstrate that a permit condition warrants Board review.

D. No Policy Considerations Warrant the Board's Discretion to Remand

The Petitioners request that the Board remand the Beeland permit decision based on two alternative policy considerations: (1) a claim that the Region failed to properly "exercise its discretion for an environmental justice evaluation based on the discretionary authority found at 40 C.F.R. §144.52(a)(9), "to include an analysis focused particularly on the low-income community whose water is alleged to be threatened"; or (2) a claim that the Region failed to provide for an evidentiary hearing on the permit, with no basis cited that such authority even exists. *Pet.* 08-02 at 19. Each of these arguments is discussed below.

1. The Facts and Policy Considerations do not Support The Board's Exercise of Discretionary Remand for Further Evaluation of the Petitioners' Environmental Justice Claim

The Petitioners contend that the EAB should remand this permit to the Region, claiming that the U.S. EPA's exercise of discretion in conducting an environmental justice review did not particularly focus on the "low-income demographics" of the community. *Pet.* 08-02 at 18 (emphasis in original). The Petitioners argue that strong policy considerations warrant review "due to the undisputed fact that this leachate is being trucked from an extremely affluent subdivision to a poor rural community for disposal." <u>Id</u>.

Contrary to the Petitioners' argument, the Region found no basis to believe that operating the facility may have a disproportionate impact on a low-income community. Specifically, the Region conducted an environmental justice review based on U.S. EPA's Toolkit for Assessing Potential Allegations of Environmental Injustice, published the review as an appendix to the Response to Comments, and concluded that this community is not a low-income community based upon the environmental justice review criteria. See, U.S. EPA Response to Comments, Environmental Justice, comment 1, page 10; see also U.S. EPA Response to Comments

Appendix 1, Environmental Justice Screening Evaluation: Alba UIC Well, September 27, 2007, page 47. In particular, the screening evaluation collected socio-demographic data within study radii of .5 miles, 1 mile and 2 miles from the proposed well, and compared this data with the county and State populations. The study found that for "any of these radii, the percent of . . . people below the poverty level are at or below state-level percentages; and are comparable to county-level percentages." U.S. EPA Response to Comments, Appendix 1, Environmental Justice Screening Evaluation: Alba UIC Well, page 49.

The Petitioners fail to present any basis demonstrating that the Region clearly erred in any aspect of this review. The Petitioners' argument fails to provide any facts or basis to support its allegation that this community is poor; the only allegation that underpins their request for the EAB's exercise of discretion. They simply present this as a statement, and then argue that when the Region receives "a superficially plausible claim that a [proposed action] will disproportionately impact . . . a low-income community . . . , the Region should . . . include an

¹⁵To qualify as an environmental justice area based on poverty concerns, the percent of the population below the poverty level within the radii must exceed the percent of the state and county population below the poverty level.

analysis focused particularly on the low-income community." *Pet.* 08-02 at 19. However superficially plausible this claim may have been at one time prior to the environmental justice screening evaluation, it no longer exists. The Region conducted an environmental justice review that was appropriate for this site and consistent with Agency requirements and policies.

The Petitioners' claim fails to present any finding of fact or conclusion of law that is clearly erroneous, fails to present any important statement of policy that warrants the EAB's discretion to grant review of this challenge, and fails to identify the bases for the EAB to exercise that discretion. Region 5, therefore, respectfully requests that review be denied for the issue raised in this claim.

2. The Regulations Do Not Provide for an Evidentiary Hearing

The Petitioners argue for an evidentiary hearing, without citation, authority or other showing that the Region even possess the discretion to hold such a hearing. The Petitioners simply argue for a hearing based on an unexplained need to "insure that the assumptions are sound and the theories can find support." *Pet.* 08-02 at 19.

This claim does not contest any particular permit condition. The Board requires a petitioner to challenge a permit condition in order to successfully appeal a UIC permit. *In re Environmental Disposal Systems, Inc.*, 12 E.A.D. at 26, *citing In re Am. Soda, L.L.P.*, 9 E.A.D. 280, 286 (EAB 2000) ("SDWA and the UIC regulations authorize the Board to review UIC permitting decisions only as they affect a well's compliance with the SDWA and applicable UIC regulations.") For this basis alone, the Board should deny the Petitioners' challenge.

In addition, the UIC public comment period regulations do not authorize an evidentiary hearing. See, 40 C.F.R. §§124.11 and 124.12. All interested persons must raise "all reasonably

ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period (including any public hearing) under §124.10." See, 40 C.F.R. §124.13. There is simply no regulatory authority, much less procedure or identified hearing officer that would authorize the Region to conduct an evidentiary hearing under the UIC regulations. In addition, the comments submitted by the Petitioners demonstrate that the concerns identified in this claim have been presented without resort to an evidentiary hearing.

The Petitioners' claim does not relate to a permit condition and, therefore, does not warrant review. Region 5 respectfully requests that review be denied for the issue raised in this claim.

V. <u>CONCLUSION</u>

Appeal Number UIC 08-02 fails to present a finding of fact or conclusion of law which is clearly erroneous, or an exercise of discretion or an important policy consideration which the EAB should, in its discretion, review. Therefore, Region 5 respectfully requests that the Board deny the petition for review.

Respectfully submitted,

Stuart P. Hersh (Authorized to Receive Service)

Associate Regional Counsel

Office of Regional Counsel, C-14J

U.S. EPA, Region 5

77 W. Jackson Blvd.

Chicago, Illinois 60604

Phone: (312) 886-6235

FAX: (312) 886-0747

Dated: June 12, 2008

	·			
		·		