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

In re:	)	
	)	
Vulcan Construction Materials, LP	)	**PSD Appeal No. 10-11**
	)	
Permit No. 91806 AAB	)	

NOTICE

To:

Erica Durr, Clerk of the Board U.S. Environmental Protection Agency Environmental Appeals Board Colorado Building 1341 G Street, N.W., Suite 600 Washington, D.C. 20005	Douglas P. Scott, Director Illinois Environmental Protection Agency 1021 North Grand Avenue East P.O. Box 19276 Springfield, IL 63794-9276
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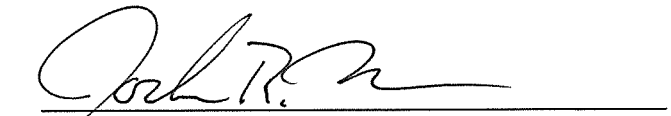
PLEASE TAKE NOTICE that I have today filed electronically with the Clerk of the Environmental Appeals Board, **RESPONSE TO THE PETITION** on behalf of Vulcan Construction Materials, LP, a copy of which is herewith served upon you.

Respectfully submitted,



Joshua More
On behalf of Vulcan Construction Materials, LP

Dated: June 14, 2010

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VULCAN CONSTRUCTION MATERIALS, LP'S RESPONSE TO THE PETITION

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INTRODUCTION

Vulcan Construction Materials, Inc., LP ("Vulcan") applied for a Prevention of Significant Deterioration ("PSD") permit in October 2003 for a lime kiln at its plant in Manteno, Kankakee County, Illinois (the "Plant" or the "Facility" or the "Project"), where it manufactures lime.[1] Vulcan seeks to operate one lime kiln at the plant to convert calcium carbonate ($CaCO_3$) into lime, or calcium oxide (CaO). Vulcan plans to use dolomitic limestone from an adjacent quarry to manufacture "general purpose" lime suitable for the metallurgic and environmental control markets. *See* Responsiveness Summary for the Public Comment Period on a Revision to the Construction Permit/PSD Approval for Vulcan Construction Materials, LP for its Lime Kiln in Manteno, Illinois, at 13 (April 2010) (hereinafter, "Responsiveness Summary").[2]

The Illinois Environmental Protection Agency ("IEPA"), acting as a delegate of the United States Environmental Protection Agency ("EPA"), published notification of the draft PSD permit ("Draft Permit") and summary of the proposed project and opened the public comment period on April 17, 2009. At that time, IEPA also issued notice of the June 4, 2009, public hearing,[3] which was requested by Vulcan in an effort to provide the community with substantial and diverse opportunities to learn about the Project and to provide comment to IEPA and Vulcan. In addition, Vulcan:

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[1] A copy of the final PSD permit issued April 9, 2010 is attached as Exhibit A.

[2] The Responsiveness Summary is attached as Exhibit B.

[3] The transcript of the June 4, 2009, public hearing on the draft permit will be cited to throughout this Response as "Tr. at __," attached hereto as Exh. B.

- With its outside technical experts, briefed its Manteno and Kankakee County stakeholders and elected officials (local, county, state, and federal) at a session on April 16, 2010 (Tr. at 15);
- Launched a dedicated website at < www.newplanformantenoline.com > to provide the community and interested parties with detailed information regarding the Project, how to contact IEPA, and how to provide feedback (Tr. at 22);
- Promoted a toll-free phone number to provide people without Internet access a means of asking questions about the Project (*Id.*);
- Prior to the June 4, 2009, hearing, mailed 4,800 First Class postage letters to directly reach every address in the Manteno 60950 ZIP Code; the letter informed the community of the IEPA notice of the proposed permit, the public hearing, the Vulcan Informational Open House (April 23, 2009), and other means of learning about the Project and providing feedback (Tr. at 22; *see* Exh. 5 of the hearing transcript);
- Hosted a Community Informational Open House (April 23, 2009), bringing in a team of more than 30 Vulcan and outside technical experts to explain the Project and to answer any questions; approximately 40 people attended the three-hour event, including job-seekers (*see* Tr. at 15);
- Briefed reporters, stakeholders, its local Community Advisory Group, and other interested parties on an on-going basis;
- Hosted representatives from the Illinois Attorney General's Office at a site visit with Vulcan's internal and external technical experts.

After Vulcan's sustained communications and outreach and IEPA's public communications during the public comment period, near conclusion of the public comment period, Petitioner requested an extension of the comment period. *See* Petitioner's request for an extension of the comment period attached as Exhibit D.[4] Vulcan, as a good citizen, agreed to the Petitioner's extension in order to ensure that any issues were aired. *See* Responsiveness Summary at 2-3. Petitioner first submitted comments at the conclusion of the extended comment period.[5] Petitioner was the only participant to file comments questioning the Draft Permit. Aside from Petitioner's comments, consistent with the Permit Record, feedback received by Vulcan was in support of the Project, including job inquiries by local residents.[6]

Thirteen members of the public spoke at hearing, eleven in favor of the project, two with general questions about the Vulcan site, and none opposed to the Project. Tr. at 23-40. Those that spoke in favor included a not-for-profit organization called "Save Our Golf Course, Inc.," which manages the neighboring Manteno Golf and Learning Center. On behalf of this group, Mr. O'Reilly commented, "I've been impressed since Vulcan moved to the area, their concern for the environment has been very impressive." Tr. at 30. Mr. Reilly also noted Vulcan's donations to the school district and need for local jobs. *Id.* Other oral comments included a statement on behalf of U.S. Representative Halvorson, of the 11th Congressional District,

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[4] The index of record has not yet been filed. In light of the filing deadline applicable to this Response, IEPA provided Vulcan with an advance copy of the IEPA record of materials for the revision to the Vulcan Construction Materials, LP Lime Kiln in Manteno, referred to in this response as "Record." For the purposes of this filing, Vulcan has attached relevant portions of the Record as Exhibits A through J.

[5] Sierra Club's July 22, 2009 written public comment is attached to the Petition as Exhibit 2.

[6] To date, Vulcan continues to field job inquiries.

expressing her support for the project as bringing investment and jobs to the community. Tr. at 32-33. Ms. Russert of the Manteno Community School District No. 5 stated, "I'm here to say that Vulcan Materials has been a good partner for education," noting field trips, school programs, and keeping local roads clean. Tr. at 34. Mr. Hinderliter of the Kankakee Regional Chamber of Commerce, Ms. Barber, member of the Kankakee County Board, and Mr. Russert, Principal of Manteno High School also expressed their support on the record. Tr. at 35-40. Several additional written comments were accepted at hearing.

Post-hearing, Sierra Club was the only member of the public to submit written comments. On April 9, 2010, IEPA issued the PSD permit (the "Permit") authorizing Vulcan to upgrade and restart its lime kiln located at 6051 North Route 50 in Manteno, Illinois. On May 9, 2010, the Sierra Club ("Petitioner") filed its Petition for Review and Request for Oral Argument in this matter (the "Petition").

Vulcan has not operated the lime kiln since May 2003. Over the period of the past seven years since Vulcan submitted its application, Vulcan has been working diligently with IEPA to refine the permit application and implement the most state-of-the-art equipment and technologies for reducing emissions. Vulcan's goal is to develop a socially and environmentally responsible Project that would reduce emissions while serving as a positive economic engine for the local and regional economy. Over the course of the planning and design period for the proposed construction, updated modeling shows that emissions are significantly reduced compared to the initial construction plans. Vulcan updated the application in 2006 and 2008.[7] Exh. E at 2. IEPA very thoughtfully considered all comments and investigated all pertinent issues raised.

[7] IEPA's Calculation Sheet evaluating updates to Vulcan's permit application is attached as Exhibit E.

Subsequently, the Permit was issued about nine months later, on April 9, 2010. The Permit authorizes upgrades to the lime kiln which include the construction and operation of a spray dryer absorber system to control sulfur dioxide ("SO_2") emissions from the kiln. Permit at 3. The Permit also authorizes Vulcan's voluntary plan to add a preheater tower to the kiln, shortening the length of the kiln, to improve energy efficiency and reduce greenhouse gas emissions. *Id.* Under the Permit, Vulcan will also make changes to the way the Plant handles and ships lime, including state-of-the-art fugitive dust emission suppression technologies. *Id.* Beyond the equipment modifications authorized under the Permit, Vulcan is also improving operating practices to make the facility run more efficiently. Tr. at 18.

According to the Illinois Department of Employment Security, Economic Information & Analysis Division, the 2009 annual average unemployment rate in Kankakee county was 12.1%, compared to the state average of 10.1% and national average of 9.3% during the same period. Throughout its operating life, the Manteno Plant, local source of dolomitic lime for regional businesses and industry, will provide social and economic benefits to Kankakee County and Illinois generally by providing an estimated 50 additional jobs related to this project alone (Tr. at 21), paying taxes, and through the purchase of equipment and services. Responsiveness Summary at 32. The Project is expected to create 24 new jobs at the Facility and an additional six new jobs at the adjacent quarry. Tr. at 21. According to Dr. Don Daake, Professor of Business and Director of the Donald H. Weber Leadership Center at Olivet Nazarene University, these new jobs would create an additional 18 permanent jobs for the Kankakee County area. Tr. at 40. Vulcan estimates an initial Project investment greater than $30 million (Tr. at 15), which includes an estimated $2 million in local construction spending. Dr. Daake estimates this

construction spending will generate a total impact of $3.4 million for the Kankakee County area. Tr. at 17.

IEPA conducted a thorough and exhaustive review of Vulcan's construction application and has issued a permit that allows Vulcan to update and restart their lime kiln in accordance with all applicable standards. After a review of the arguments and the evidence of record, Vulcan believes the Environmental Appeals Board ("EAB" or "Board") will find that IEPA's decisions regarding the Permit did not amount to clear error and the Petitioner has not raised any argument that merits review on appeal. Furthermore, none of the issues Petitioner raises warrant a remand of the permit to IEPA for further revision or analysis. As evidenced by inclusion of the request that the EAB require the inclusion of limitations on emissions of carbon dioxide ("CO_2"), Petitioner's objective is to delay the effectiveness of the Permit in the baseless hope that such delay will result in the imposition of requirements that do not apply under the law. These claims are meritless.

STANDARD OF REVIEW

The standard of review in a matter before the Board is well-settled. Petitioner must establish that a condition in the Permit is based on "a finding of fact or conclusion of law which is clearly erroneous" or represents "an exercise of discretion or an important policy consideration which the [Board] should, in its discretion, review." 40 C.F.R. § 124.19(a). The "power of review should only be sparingly exercised," and "most permit conditions should be finally determined [by the permitting authority]." 45 Fed. Reg. 33290, 33412 (May 19, 1980), *quoted in* The Environmental Appeals Board Practice Manual at 39-40 (EPA June 2004); *see also In re Jett Black, Inc.*, 8 E.A.D. 353, 358 (EAB 1999); *In re Maui Elec. Co.*, 8 E.A.D. 1, 7 (EAB 1998). The test is not whether the Board agrees with every aspect of IEPA's decisions, but whether those decisions were rational in light of all the information in the record.

Review on technical issues is granted even more sparingly and a petitioner bears a "heavy burden" on those issues:

> The Board traditionally assigns a heavy burden to petitioners seeking review of issues that are essentially technical in nature. *Moscow*, 10 E.A.D. at 142; *see also In re Town of Ashland Wastewater Treatment Facility*, 9 E.A.D. 661, 667 (EAB 2001). When the Board is presented with technical issues, we look to determine whether the record demonstrates that the Region duly considered the issues raised in the comments and whether the approach ultimately adopted by the Region is rational in light of all the information in the record. *D.C. MS4*, 10 E.A.D. at 334.

In re Teck Cominco Alaska Inc., Red Dog Mine, 11 E.A.D. 457, 473 (EAB 2004). On technical issues, Petitioner must do more than merely present an alternative theory to IEPA's approach:

> Of course, a petitioner cannot gain review of a permit merely by presenting an alternative theory regarding a technical matter. If the Board is presented with conflicting expert opinions, as is the case here, we will "look to see if the record *demonstrates* that the [permitting authority] duly considered the issues raised in the comments and if the approach ultimately selected * * * is rational in light of all the information in the record, including the conflicting opinions." *In re NE Hub Partners*, L.P., 7 E.A.D. 561, 568 (EAB 1998), *review denied sub nom. Penn Fuel Gas, Inc. v. U.S. EPA*, 185 F.3d 862 (3d Cir. 1999).

In re Steel Dynamics, Inc., 9 E.A.D. 165, 180 n. 16 (EAB 2000).

Petitioners must also do more than simply repeat their objections raised during the public comment period; they must demonstrate that the permitting authority's response is deficient:

> Further, in complying with the above requirements, a petitioner must include specific information supporting its allegations. *In re Sutter Power Plant*, 8 E.A.D. 680, 688 (EAB 1999). As the Board has stated on numerous occasions, it is not enough simply to repeat objections made during the comment period. Rather, in addition to stating its objections to the permit, a petitioner must explain why the permit issuing entity's response to those objection is clearly erroneous or otherwise warrants review. *Knauf Fiber Glass*, 8 E.A.D. 127 ("One way that the Board implements the standard of review in 40 C.F.R. § 124.19 is to require petitioners to state their objections to a permit and to explain why the permitting authority's response to those objections (for example, in a response

> to comments document) is clearly erroneous or otherwise warrants review."); *In re Hawaii Elec. Light Co.*, ("*HELCO*"), 8 E.A.D. 66, 71-72 (EAB 1998): *In re Kawaihae Cogeneration Project*, 7 E.A.D. 107, 114 (EAB 1997); *In re Puerto Rico Elec. Power Auth.*, 6 E.A.D. 253, 255 (EAB 1995); *In re LCP Chems.*, 4 E.A.D. 661, 664 ((EAB 1993). Failure to do so, will result in a denial of review. *See e.g.*, *HELCO*, 8 E.A.D. at 91; *In re Maui Elec. Co.*, 8 E.A.D. 1, 19-20 (EAB 1998).

In re Zion Energy, L.L.C., 9 E.A.D. 701, 705 (EAB 2001). The fact that Petitioner might not be satisfied with IEPA's response is not sufficient. Petitioner must present a compelling case that a deficient response led to a **clearly erroneous** permit decision:

> For a remand, there must be a compelling reason to believe that the omissions led to an erroneous permit determination – in other words, that they materially affected the quality of the permit determination.

In re Mecklenburg Cogeneration Ltd. P'ship., 3 E.A.D. 492, 494 n. 3 (Adm'r 1990), *quoted in Steel Dynamics*, 9 E.A.D. at 191.

Based on these standards, the Board should deny review of IEPA's decision to issue the Permit. IEPA's determinations were clearly articulated and based on ample evidence in the Record. The Permit was the product of reasonable judgments, and while Petitioner may wish to argue policy or philosophy, the decisions made in issuing the Permit reflect the proper implementation of regulatory language.

Petitioner offers no alternative best available control technology ("BACT") analysis or air quality modeling data. Petitioner's case boils down to this: Petitioner simply disagrees with the decisions reached by the IEPA. Petitioner merely raises questions about certain issues and, in some cases, points to information in support of their positions, but it offers nothing leading to the conclusion that IEPA's actions were clearly erroneous. The lack of a substantive basis for Petitioner's argument is further evidence of Petitioner's underlying motive of delay. Petitioner is obfuscating its actual objective in the guise of four meritless issues. IEPA addressed all of

Petitioner's relevant concerns in the Responsiveness Summary in a rational manner demonstrating that the Permit was the product of reasonable judgment. While IEPA's decisions may not be to Petitioner's liking, they are not clearly erroneous, and they implicate no new or important policy issues that warrant granting review.

Petitioners have failed to meet the standard of review. For these reasons and those set forth in detail below, Vulcan respectfully requests that the Board deny review.

SUMMARY OF ARGUMENTS

Petitioner raises four issues in this appeal: (1) that IEPA failed to include specific BACT limits for PM2.5[8] and to demonstrate compliance with the national ambient air quality standards ("NAAQS"), presumably for PM2.5; (2) that IEPA did not require proper preconstruction monitoring and did not justify its reliance on its own regional monitoring data; (3) that IEPA failed to establish acceptable BACT limits for carbon monoxide ("CO") and nitrogen oxides ("NOx"); and (4) that IEPA failed to ensure that the Project would not result in violations of the new 1-hour "NOx" NAAQS[9] effective **after** the issuance date of the Permit. Additionally, Petitioner requests that the Board order IEPA to include CO_2 limits if the Permit is not "final" until after January 2, 2011.

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[8] "PM" is particulate matter and includes both PM10 and PM2.5. "PM10" is particulate matter with an aerodynamic diameter of 10 micrometers or less. "PM2.5" is particulate matter with an aerodynamic diameter of 2.5 micrometers or less. Currently, there are NAAQS for both PM10 and PM2.5. *See* discussion *infra* Section I.A.1.

[9] Technically, there is no NAAQS for NOx. Although the heading for the new NAAQS establishing 1-hour standards for nitrogen dioxide ("NO_2") is labeled "NOx," the standard actually applies to NO_2. As the Board knows, the headings of regulations are not dispositive. *See, e.g., Geo-Seis Helicopters, Inc. v. U.S.*, 77 Fed. Cl. 633, 642 n. 21 (noting the "longstanding rule of statutory construction that equally applies to the interpretation of regulations- *viz.*, that headings and titles are not controlling" (*citing Brotherhood of R.R. Trainmen v. Baltimore & Ohio R. Co.*, 331 U.S. 519, 528-29 (1947)).

Petitioner's claims are meritless. First, IEPA did, indeed, address PM2.5 in the permit and expressly in response to Petitioner's comments. IEPA determined that the Project would not cause violations of any NAAQS, including PM2.5. Second, IEPA's reliance on its own monitoring data produced a more robust analysis than the type strictly required by the PSD regulations. Third, the BACT limits for NOx and CO that IEPA established in the Permit are appropriate, and the margins of safety are within reason. Further, IEPA included a requirement for the NOx limitations to become more stringent should data gathered post-construction indicate that Vulcan's operation can support the more stringent limits. Fourth, IEPA was not obligated to include, nor Vulcan to comply with, BACT limits for the new 1-hour NO_2 NAAQS. The 1-hour NO_2 NAAQS was not effective on the date of issuance, which is the determining factor as to whether a requirement applies. IEPA, as the entity with technical expertise and with delegated authority under both the Illinois Environmental Protection Act, 415 ILCS 5/1 *et seq.*, and the Clean Air Act ("CAA") to evaluate PSD applications and issue PSD permits must be granted deference in these technical issues.

Finally, Petitioner's request that the Board require CO_2 limits is not properly raised for appeal and, moreover, is based upon mere speculation. It actually demonstrates what Petitioner's actual goal is through this appeal, *i.e.*, that somehow delay in the effective date of the Permit will cause Vulcan to be required to apply BACT for CO_2. In fact, the Permit does include various energy efficiency provisions that Vulcan has agreed be included, though there is no legal requirement for their inclusion. IEPA responded at great length to Petitioner's comments regarding CO_2, yet Petitioner still clings to the hope that its CO_2 wishes will be granted.

ARGUMENTS

I. IEPA'S PM2.5 ANALYSIS WAS PROPER.

Petitioner argues that the IEPA erred by not including a specific PM2.5 emission limit in the Permit. In support of this argument, Petitioner claims (1) that IEPA erroneously used PM10 as a surrogate for PM2.5 which, according to Petitioner, could cause or contribute to a violation of a National Ambient Air Quality Standard ("NAAQS"); (2) that the Permit should be remanded because IEPA did not reopen the Permit for public comment on its PM2.5 BACT and air quality analyses; and (3) that the PM2.5 BACT and air quality analyses were incomplete.

Because BACT determinations are generally technical in nature, *In re Desert Rock Energy Co.*, PSD Appeal Nos. 08-03, 08-04, 08-05, and 08-06, slip op. at *50 (EAB Sept. 29, 2009), Petitioner bears a "heavy burden" on this issue. *In re Peabody Western Coal Co.*, 12 E.A.D. 22, 33 (EAB 2005) (*citing In re Carlota Copper Co.*, 11 E.A.D. 692, 708 (EAB 2004) ("a petitioner seeking review of issues that are technical in nature bears a heavy burden because the Board generally defers to the Region on questions of technical judgment"); *Teck Cominco*, 11 E.A.D. at 473; *City of Moscow*, 10 E.A.D. 135, 142 (EAB 2001)). To succeed, Petitioner must establish that the IEPA's determination does not "reflect 'considered judgment.'" *Desert Rock* at *50 (*citing In re Knauf Fiber Glass, GMBH*, 8 E.A.D. 121, 132 (EAB 1999); *In re Masonite Corp.*, 5 E.A.D. 551, 566-69 (EAB 1994)).

When establishing BACT, the permitting authority is given discretion. After the permit applicant submits its analysis to the permitting authority, the permitting authority then evaluates the analysis and establishes in the permit the BACT emission limit that is "achievable." What is "achievable" is not defined by federal or state statutes or regulations. *See* 42 U.S.C. § 7479(3) (definition of BACT). Rather, it is a determination left to the permitting authority because the permitting authority has the technical expertise and experience to make that determination for a

particular source for the lifetime of that source. *See Desert Rock* at *50. That determination should also allow for operational difficulties. *See, e.g., In re Newmont Nevada Energy Investment, LLC, TS Power Plant,* 12 E.A.D. 429, 441-42 (EAB 2005); *Masonite Corp.*, 5 E.A.D. at 560-62; *In re Pennsauken County, New Jersey Resource Recovery Facility*, PSD Appeal No. 88-8, at *5 (Adm'r Apr. 20, 1989).

Petitioner's allegations of error by the IEPA have no merit. Rather than acknowledging the actions that must occur before implementing the PM2.5 air quality standard, Petitioner asserts that IEPA should implement the PM2.5 standard without regard to the fact that the relevant increments, significant impact levels, and the significant monitoring concentration (all necessary components to the implementation of NAAQS) have not been promulgated by EPA. Furthermore, Petitioner ignores the relevant modeling performed and IEPA's review of the potential impacts of the proposed plant. As review "should be only sparingly exercised" by the Board and "most permit conditions should be finally determined at the [permitting authority] level," the EAB should appropriately decline consideration of this issue. *See Knauf*, 8 E.A.D. at 127, *citing*, 45 Fed. Reg. 33,290, 33,412 (May 19, 1980).

A. Petitioner Fails to Demonstrate Any Error in the IEPA's Decision to Set PM2.5 Emission Limits in Terms of PM.

Contrary to Petitioner's suggestion, the NAAQS do not dictate control requirements that are to become directly applicable to a source in the manner insinuated by the Petitioner. In promulgating the PM2.5 standard, the EPA stated:

> As EPA explained in the proposal, the NAAQS rules establish air quality standards that States are primarily responsible for meeting. Under Section 110 and Part D of Title I of the Act, every State develops a State Implementation Plan (SIP) containing the control measures that will achieve a newly promulgated NAAQS. States have broad discretion in the choice of control measures.

National Ambient Air Quality Standards for Particulate Matter, 62 Fed. Reg. 38,652, 38,702 (July 18, 1997); *see also*, Revisions to the National Ambient Air Quality Standards for Particulate Matter, 52 Fed. Reg. 24,634, 24,654 (July 1, 1987) (NAAQS "themselves do not contain emission limits or other pollution controls[;] . . . such controls are contained in state implementation plans"). Likewise, when EPA adopts a NAAQS, it does not dictate what control measures or emission limitations are appropriate for inclusion in all PSD permits.[10] There was nothing in the development of the PM2.5 NAAQS that established guidance regarding appropriate control measures for new projects. Permitting authorities have the discretion to determine the control measures and/or emission limitations appropriate for a project based upon many factors. *See In re Prairie State Generating Co.*, PSD Appeal No. 05-05, slip op. at 30 (Aug, 24, 2006) ("the permit issuer must be mindful that BACT, in most cases, should not be applied to regulate the applicant's objective or purpose for the proposed facility, and therefore, the permit issuer must discern which design elements are inherent to that purpose, articulated for reasons independent of air quality permitting, and which design elements may be changed to achieve pollutant emissions reductions without disrupting the applicant's basic business purpose for the proposed facility"), *aff'd sub. nom. Sierra Club v. U.S. EPA*, 499 F.3d 653 (7th Cir. 2007). Thus, within the boundaries of ensuring that a project will not cause a violation of the NAAQS, IEPA has broad discretion in the choice of control measures.

In this instance, IEPA determined, through its analysis of the emissions projected to result from the Project performed in accordance with the PM10 surrogate policy and the general principles and practices with respect to reliance on surrogate pollutants, that the limits included

[10] A purpose of the PSD program is to ensure economic growth in areas that attain the NAAQS while protecting the area against significant deterioration of air quality.

in the Permit appropriately control PM2.5 emissions expressed as PM.[11] Petitioner cites to no authority for its assertion that the use of the PM10 surrogate policy is unlawful or that IEPA's determination to set PM2.5 emission limits expressed in terms of PM was unreasonable.

PM2.5 became a regulated air pollutant in 1997 with the promulgation of the annual and 1-hour PM2.5 NAAQS. As a regulated pollutant under the CAA, EPA is required to impose New Source Review ("NSR") permitting requirements for PM2.5 that apply to major modifications or major new sources. These NSR requirements include programs that address areas that are in attainment with the NAAQS (referred to as the Prevention of Significant Deterioration or PSD Program) and areas that are not in attainment (referred to as the nonattainment NSR or NNSR program).[12] Since NSR requirements that specifically addressed PM2.5 did not exist at the time the PM2.5 NAAQS was promulgated in 1997, EPA issued a guidance memorandum outlining how PM2.5 was to be addressed as part of construction permit applications. *See* John S. Seitz, Director, EPA Office of Air Quality Planning and Standards, Memorandum, "Interim Implementation of New Source Review Requirements for PM2.5" (October 23, 1997), *available at* < http://www.epa.gov/region07/air/nsr/nsrmemos/pm25.pdf >. In particular, this memorandum recommended that PM10 be used as a surrogate for PM2.5. *Id.* at 2. In other words, quantifying PM10 emissions and addressing other NSR requirements (including PSD program requirements, *e.g.*, air quality modeling and pollution control

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[11] "Lastly, USEPA's formal PM_{10} surrogate policy is an embodiment of a broader technical approach to control of emissions that allow control requirements for particular pollutant(s) to be adopted and set in terms of a surrogate pollutant that reasonably stands in place of the pollutant(s) of particular concern." Responsiveness Summary at 39.

[12] Kankakee County is attainment for all NAAQS. *See* EPA's online Green Book at < http://www.epa.gov/oar/oaqps/greenbk/anay_il.html >. Therefore, PSD is the program that applies to new projects in Kankakee County.

requirements) would be sufficient to satisfy any concerns that EPA may have related to PM2.5. The Seitz memorandum provided that the basis for EPA's position that PM10 was an appropriate surrogate for PM2.5 was the "significant technical difficulties" that existed regarding PM2.5 monitoring, emission estimates, and modeling. On April 5, 2005, EPA affirmed this PM10 surrogate policy in another memorandum. *See* Stephen D. Page, Director, EPA Office of Air Quality Planning & Standards, Memorandum, "Implementation of New Source Review Requirements in PM-2.5 Nonattainment Areas" (April 5, 2005), *available at* < *http://www.epa.gov/region07/air/nsr/nsrmemos/pm25guid.pdf* >. The PM10 surrogate policy is premised on the understanding that PM2.5 is a subset of PM10 and as such control technologies and modeling air quality impacts for PM10 is an effective means of fulfilling the statutory requirements for PM2.5. *See* Letter from Stephen L. Johnson, Administrator, EPA, to Paul R. Cort, EarthJustice, at 2 (Jan. 14, 2009), *available at* < http://www.epa.gov/nsr/documents/20090115cort.pdf >.

On May 16, 2008, EPA promulgated a rule intended to begin the implementation of the PSD program for PM2.5. Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), 73 Fed. Reg. 28,321 (May 16, 2008). However, in the rule and preamble, EPA delayed that implementation process and affirmed the continued use of the PM10 surrogate policy in attainment areas (PSD program). *See id.* at 28,324-28,325. The continued use of the surrogate policy in attainment areas, however, is dependant on the state in which the facility is located. In states like Illinois that are delegated to directly implement the federal PSD program, the PM2.5 rules ostensibly became effective on July 15, 2008, except for those sources subject to the "grandfathering" provision (40 C.F.R. §

52.21(i)(1)(xi)). EPA explained the effect of the "grandfathering" provision in delegated states on the continued use of PM10 as a surrogate for PM2.5:

> Consistent with 40 CFR 52.21(i)(1)(x), wherein EPA grandfathered sources or modifications with pending permit applications based on PM from the PM10 requirements established in 1987, EPA will allow sources or modifications who previously submitted applications in accordance with the PM10 surrogate policy to remain subject to that policy for purposes of permitting if EPA or its delegate reviewing authority subsequently determines the application was complete as submitted. This is contingent upon the completed permit application being consistent with the requirements pursuant to the EPA memorandum entitled ''Interim Implementation of New Source Review Requirements for PM2.5 '' (Oct. 23, 1997) recommending the use of PM10 as a surrogate for PM2.5. Accordingly, we have added 40 CFR 52.21(i)(1)(xi) to reflect this grandfathering provision.

See id. at 28,340. The "grandfathering" provision in effect allowed delegated states to continue to utilize the PM10 surrogate policy for those sources that had submitted completed applications by July 15, 2008. IEPA implemented the PM10 surrogate policy because Vulcan's permit application was submitted prior to July 15, 2008. *See id.* at 28,349 (Section 52.21(i)(1)(xi) authorizing use of the PM10 surrogate policy for sources that submitted complete permit applications prior to July 15, 2008); *see also* Responsiveness Summary at 38-40.

However, after the Permit was issued for public comment, the applicability of the "grandfathering" provision was stayed by EPA from April 24, 2009, through June 22, 2010. *See* Final Rule To Stay the Grandfathering Provision for PM2.5, 74 Fed. Reg. 48,153 (Sept. 22, 2009). Although EPA stayed the applicability of the "grandfathering" provision after the permit was issued for public comment, it has not officially withdrawn all guidance and application of the PM10 surrogate policy.[13] In EPA's May 16, 2008, proposed rulemaking concerning PM2.5,

[13] EPA also has not developed rules reversing its historic policy and practice with respect to the use of surrogate pollutants in permitting.

the EPA stated that the PM2.5 PSD program will no longer use PM10 as a surrogate **once** the proposed rule on increments, significant impact levels, and the significant monitoring concentration is finalized. *See* 73 Fed. Reg. at 28,323. To date, the proposed rule on increments, significant impact levels, and the significant monitoring concentration has not been finalized.

Furthermore, EPA recently interpreted the PM10 surrogate policy and its application in an order issued in response to a PSD permit issued to Louisville Gas and Electric. *See In Re Louisville Gas and Electric Co., Trimble County*, Petition No. IV -2008-03, Order (August 12, 2009) (setting forth guidance for the application of the PM10 surrogate policy: 1) establish a relationship between PM10 and PM2.5 and 2) establish that BACT for PM10 constitutes BACT for PM2.5).

IEPA's determination to set PM2.5 emission limits expressed in terms of PM was appropriate and consistent with EPA's policies and guidance. IEPA assessed whether a relationship exists between PM10 and PM2.5 and determined that the PM10 BACT-selected control technology would be the same if a BACT evaluation would have been performed specifically for PM2.5. *See* Responsiveness Summary at 36-42.

1. A relationship between PM10 and PM2.5 emissions exists.

Particulate matter is "the generic term for a broad class of chemically and physically diverse substances that exist as discrete particles (liquid droplets or solids) over a wide range of sizes." *See* 62 Fed. Reg. at 38,653. PM10 consists of particulate matter with an aerodynamic diameter of ten micrometers or less. *Id.* at 38,653 n. 1. By definition, PM10 subsumes particulate matter with an aerodynamic particle diameter less than or equal to 2.5 micrometers. It follows that the modeling performed to verify compliance with the PM10 air quality standard necessarily considered PM2.5 emissions as well.

The Federal Appeals Court for the District of Columbia Circuit, EPA guidance, and the EAB have all found that there is a relationship between PM10 and PM2.5 emissions. *See e.g., American Farm Bureau v. EPA*, 559 F.3d 512, 534-35 (D.C. Cir. 2009) (finding reasonable EPA's decision in its 2006 revisions to PM NAAQS to tie the stringency of PM10 regulation to increases in the level of PM2.5 by utilizing a "standard that allows targeted variance in coarse PM levels in an inverse relationship to the amount of fine PM in the air"); National Ambient Air Quality Standards for Particulate Matter, Final Rule, 71 Fed. Reg. 61,144, 61,195 (Oct. 17, 2006) ("Because the PM10 indicator includes both coarse PM (PM10-2.5) and fine PM (PM2.5), the concentration of PM10-2.5 allowed by a PM10 standard set at a single level declines as the concentration of PM2.5 increases. Thus, the level of coarse particles allowed varies depending on the level of fine particles present."); *In re BP Cherry Point*, 12 E.A.D. 209, 221-25 (EAB 2005) (finding no clear error in permitting authority's decision to conservatively estimate all PM emissions "by assuming that all PM emissions would be PM_{10} and that all PM_{10} would be $PM_{2.5}$) evaluation of PM by petitioner objected to use of PM10 as a surrogate for PM2.5). Specific to the relationship between PM10 and PM2.5 for the facility in question, IEPA responded that:

> The proposed plant is an ideal situation in which to use PM as a surrogate for $PM_{2.5}$ in setting BACT requirements. $PM_{2.5}$ emissions are a subset of emission of PM, so that a direct correlation exists between emissions of $PM_{2.5}$ and PM. As BACT is set for and applies to individual units, the correlation is consistent, i.e., lower emissions of PM also mean lower emissions of $PM_{2.5}$.

Responsiveness Summary at 36-38.

2. The PM10 BACT-selected control technology constitutes BACT for PM2.5.

In addition to determining that a relationship between PM10 and PM2.5 exists, IEPA determined that the PM10 BACT-selected control technology constitutes BACT for PM2.5 for

this project. The control technologies available for all PM emissions (PM, PM10 and PM2.5) are very similar. *See, e.g.,* Responsiveness Summary at 37 n. 95, *citing* EC/R Inc., "Stationary Source Control Techniques for Fine Particulate Matter", prepared for USEPA, AQSSQ, October 1998, *available at* < http://www.epa.gov/ttncatc1/dir1/finepmtech.pdf >. As a result, the BACT analysis for these pollutants track, frequently resulting in the same BACT emission level and/or control requirement for PM2.5 as might have been applied to PM or PM10 emissions.[14]

In this case, Vulcan followed a top-down BACT methodology for PM10 when it submitted its PSD permit application.[15] *See* Exh. F. IEPA reviewed Vulcan's BACT analysis and determined that a baghouse equipped with filter material that has enhanced performance for collection of fine particulate matter (PM2.5), as compared to conventional woven or felt filter material, constituted BACT for PM, PM10, and PM2.5. Responsiveness Summary at 37-38. This technology is the most stringent particulate control available for controlling filterable particulate and meets the PM limits required by the Lime Industry NESHAP, limits which have been determined to be Maximum Available Control Technology (MACT) for PM. Responsiveness Summary at 37 n. 96. In addition, the only major source of secondary PM2.5 from this project is from acid gases formed by SO2 and NOx emissions. The permit requires installation of a dry scrubber as BACT for control of SO2 emissions and applies a five-step BACT analysis to determine NOx BACT. Responsiveness Summary at 37-38. As such, the permit includes limits and BACT control requirements for precursors of PM2.5, which also constitute BACT for PM2.5. Responsiveness Summary at 38. Furthermore, because the Facility

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[14] In fact, Petitioner does not challenge IEPA's PM2.5 BACT-selected control technology.

[15] Vulcan's November 14, 2008 BACT Analysis Update is attached as Exhibit F.

was subject to PSD before the EPA adopted a "moratorium" on including condensable particulate in PM2.5 and PM10 emissions, the BACT determination includes limits for condensable particulate, which is more stringent than what would be required if the Facility was subject to PSD during the "moratorium". Responsiveness Summary at 38. Therefore, the emission limits proposed by IEPA are more conservative than otherwise would be required and constitute BACT for PM2.5.

In sum, IEPA did not err in using a surrogate pollutant for analyzing PM2.5.

> The issue that is posed for emissions of $PM_{2.5}$ is a technical one, that is, what are the most appropriate terms in which to set emissions standards or limits to control emissions of $PM_{2.5}$ from particular sources or emission units. For the proposed plant, as discussed, the Illinois EPA has determined that such limits are most appropriately set in terms of PM.

Responsiveness Summary at 39. IEPA's decision was based on considered judgment that specifically considers direct and indirect emissions of PM2.5. Moreover, the EAB has recognized the use of surrogate pollutants in the environmental arena. In *BP Cherry Point*, the EAB reviewed a petition challenging the application of PM as a surrogate for PM10 and PM10 for PM2.5, finding the approach to be acceptable. *See BP Cherry Point*, 12 E.A.D. at 221-25; *see also Steel Dynamics*, 9 E.A.D. at 233-34 (upholding the use of parametric monitoring including the direct periodic measurement of opacity as a surrogate for more frequent direct monitoring); *see also, In re Broward County Florida*, 6 E.A.D. 535, 551 (EAB 1996) (the selection of suitable non-indigenous species may serve as an appropriate surrogate for toxicity testing.). Accordingly, the EAB should decline consideration of this issue because Petitioner fails to demonstrate clear error in the IEPA's response to comments.

B. IEPA's Additional PM2.5 BACT and Air Quality Analyses Were Proper, and the Inclusion of the Analyses in the Record After the Close of the Comment Period Does Not Warrant Review.

Although the use of PM10 as a surrogate is sufficient to demonstrate compliance with the PM2.5 NAAQS, IEPA went further. Contrary to Petitioner's suggestion that IEPA failed to address PM2.5, the record includes a detailed evaluation of the proposed facility's PM2.5 emissions impacts. *See* Responsiveness Summary at 39-40; *see also* Exh. G. With respect to PM2.5, the record includes an impact analysis of PM2.5 using the results from the analysis for PM10 impacts. *See* Responsiveness Summary at 39, 40 & n. 102; *see also* Exh. G. In particular, the ambient air quality analysis evaluates the impact of the proposed facility's PM2.5 emissions in combination with monitored background concentrations to determine whether the PM2.5 NAAQS will be exceeded. Through this analysis, IEPA confirmed its determination that controlling PM2.5 emissions in terms of PM will not result in a violation of the PM2.5 NAAQS. Thus, IEPA appropriately concluded that the proposed facility would not significantly impact PM2.5 levels. *See Hawaiian Electric Company, Inc. v. United States Environmental Protection Agency*, 723 F.2d 1440, 1446 (9th Cir. 1984) (need for agency discretion in applying the modeling results).

IEPA's analysis of PM2.5 emissions from fugitive sources reflect established factors for speciation of PM, PM10, and PM2.5, as contained in AP-42. PM2.5 is only a fraction of PM, and IEPA applied the conversions provided by AP-42. However, for the controlled sources of PM2.5, IEPA was particularly conservative because it made no adjustment for PM2.5 as a fraction of PM10; rather, the analysis reflects an assumption that all PM10 is PM2.5 after controls. Exh. G; *see also* Responsiveness Summary at 40, n. 102.

Petitioner acknowledges that IEPA's PM2.5 analysis constituted a PM2.5 BACT and air quality analysis (*see* Petition at 10) but argues that because it was included in the record after the

comment period had expired, the Permit should be reopened to allow parties to comment on the PM2.5 BACT and air quality analysis. Reopening of the Permit is not warranted.

The PSD appeal regulations provide that the permitting authority must respond to public comments. However, the permitting authority's responses to public comment are not subject to further public comment. Otherwise, the permitting process would never end. Contrary to Petitioner's assertion, however, the regulations specifically contemplate the permitting authority supplementing the record in response to comments: "If new points are raised or new material supplied during the public comment period, [the permitting authority] may document its response to those matters by adding new materials to the administrative record." 40 C.F.R. § 124.17(b); *see also* 40 C.F.R. § 124.41. In fact, the record is deemed complete not at the close of the public comment period as Petitioner effectively implies, but on the date the permit is issued. 40 C.F.R. § 124.18(c). Issuance of the permit indicates that the permitting authority has considered all public comments in arriving at its final decision to issue.

The EAB rejected a claim, similar to the one here, that the inclusion of information in the record relied upon by the permitting authority arriving after the public comment period closed denied the petitioner of its right to comment on the information's validity. *In re Caribe General Electric Products, Inc.*, 8 E.A.D. 696 (EAB 2000). In *Caribe*, the EAB determined that Part 124 did allow for information to be added to the administrative record after the public comment period and further found that the appeal process afforded petitioner the opportunity to question the validity of the document included after the comment period closed. *Id.* at 704-05 n. 19; *see also In re Ash Grove Cement Co.*, 7 E.A.D. 387, 431 (EAB 1997) ("The purpose of the response to comments and any supplementation of the administrative record at that time is to ensure that interested parties have full notice of the basis for final permit decisions and can address any

concerns regarding the final permit in an appeal to the Board pursuant to 40 C.F.R. § 124.19."). Here, the supplemental material was the very analysis that Petitioner requested be performed. IEPA responded to Petitioner's comment by performing that analysis. Petitioner has not been prejudiced by IEPA's response, as this case, in its mere filing, evidences.

As discussed above, IEPA's analysis of PM2.5 emissions was initially accomplished through its analysis of PM and PM10 emissions because PM2.5 emissions represent a subset of PM and PM10 emissions. In response to comments and EPA's stay of the "grandfathering" provision, IEPA performed a specific PM2.5 BACT and air quality analysis and included it in the record prior to issuing the Permit. Responsiveness Summary at 39-40. The inclusion of this information in the record was not a substantial addition, a fundamental change in methodology, or central to IEPA's decision to express PM2.5 emissions limits in terms of PM that warranted an extension or reopening of the comment period. Rather, it was an analysis performed in direct response to comments that confirmed IEPA's previous analyses. As the EAB found in *Ash Grove*, the inclusion of the data in the record after the close of the comment period does not prejudice the public because the data was not central to IEPA's decision, in that it did not change or alter the scope of IEPA's permitting decision, and the appeal process affords the public the opportunity to question the data. *See* 7 E.A.D. at 431. Accordingly, in keeping with prior EAB decisions, IEPA did not err in submitting the information without reopening the comment period and this decision cannot be described as clearly erroneous or an important policy matter meriting the Board's review.

C. IEPA's Modeling of PM2.5 Emissions Was Proper.

Petitioner contends that IEPA's analysis of PM2.5 ambient air impacts was insufficient because it allegedly failed to include an analysis of the contribution to ambient air impacts from nearby emission sources. Petition at 18. Once again, Petitioner's allegations of error by the

IEPA have no merit. Petitioner's suggestions that cumulative effects were not considered is not supported by the Record.

Indeed, IEPA modeled the proposed Facility's contribution to ambient levels of pollution and considered the impact of the Facility's emissions in light of background pollutant concentrations (originating from other sources of emissions) to derive a total cumulative maximum expected pollutant concentration. Responsiveness Summary at 39-40; *see also* Exh. G; IEPA Project Summary for an Application for Revised Construction Permit/PSD Approval from Vulcan Construction Materials for its Lime Plant in Manteno, Illinois, at Section VIII (hereinafter, "Project Summary").[16] Specifically, this analysis estimated the Facility's maximum contribution to ambient PM10 and PM2.5, as well as existing background levels of PM10 and PM2.5 (*i.e.*, existing contributions from all other sources).[17] In all cases, IEPA's modeling demonstrated total ambient concentrations of PM2.5 (Facility contributions plus background, which includes emissions from other sources) that were well below the applicable air quality standards. Contrary to Petitioner's insinuations, IEPA did examine the cumulative impact from multiple sources.

More specifically, the Record describes in great detail the numerous calculations that were performed and evaluated for PM2.5 for this Project. Exh. G. At page 40 of the Responsiveness Summary, IEPA provides a table, in footnote 102, that identifies the annual and 24-hour impacts of PM2.5 on air quality. These results are expressed in terms of micrograms per

[16] The Project Summary is attached as Exhibit H.

[17] It is important to note that IEPA was very conservative in its modeling inputs. To be conservative, IEPA used background concentration levels to represent sources in the vicinity of the Project and again as background concentration levels; *i.e.*, the monitored background concentration levels were values used twice in the modeling inputs. *See* Project Summary at § VIII.

cubic meter, the form of the PM2.5 standard. These results could not have been obtained had modeling not been performed. Petitioner admits that air quality modeling was performed. That Petitioner does not like or agree with the results does not equate to a failure on the part of IEPA to perform or require the appropriate analyses.

Petitioner ignores the PM2.5 analysis and otherwise provides no demonstration that the analysis is flawed. Accordingly, Petitioner has not carried its burden to demonstrate clear error on the part of IEPA, and the Board should deny review with regard to this issue.

II. IEPA'S RELIANCE ON REGIONAL MONITORING DATA AND DISPERSION MODELING TO DETERMINE THAT THE PROJECT WOULD NOT SIGNIFICANTLY CONTRIBUTE TO VIOLATIONS OF THE NAAQS WAS APPROPRIATE.

Petitioner argues that IEPA's reliance on regional monitoring data is unsupportable and that site-specific monitoring is required by the CAA and applicable regulations. Apparently, Petitioner concludes from its assertion regarding IEPA's acceptance of regional monitoring that the combination of IEPA's own monitoring data and Vulcan's modeling data for IEPA to determine the air quality impact of the project was inconsistent with EPA's guidelines for issuance of PSD permits. On the contrary, IEPA's analysis of the impact of emissions from the Manteno kiln followed EPA's guidelines. Petitioner's issue really is that IEPA's conclusion based upon its analysis of the data, consistent with EPA's guidelines, is not the conclusion that Petitioner would have preferred. IEPA's conclusion that emissions from the Facility would not significantly contribute to noncompliance with any NAAQS and were within the PSD increments applicable to the area were based upon data properly prepared and presented and were reasonable. Accordingly, the Board should deny review with regard to this issue.

A. Petitioner Ignored the Scope of Authority of the Permitting Agency Granted in the *NSR Manual.*

Petitioner quoted extensively from the *NSR Manual*[18] both in its comments to IEPA and in its Petition to this Board. *See, e.g.,* Petition at 19, 20, 24, 25. Despite setting forth the language of the *NSR Manual* in great detail, Petitioner ignored the meaning of that language. As a result, Petitioner arrived at impermissible conclusions regarding IEPA's reliance on regional monitoring that are not supported by the *NSR Manual.*

As Petitioner correctly quotes from the *NSR Manual*, "an applicant must 'agree[] to conduct such monitoring **as may be necessary** to determine the effect which emissions from any such facility may have, or is having, on air quality in any area which may be affected by emissions from such source.'" Petition at 19 (ellipsis in original; citation omitted; emphasis added). Petitioner ignores the critical phrase "as may be necessary." "As may be necessary" is critical to determining the scope of monitoring that is required for any given project. The entity with the expertise to determine what "may be necessary" in Illinois is the IEPA. IEPA more than adequately addressed this issue in its Responsiveness Summary at Items 91 through 100.[19] Responsiveness Summary at 70-77.

The entity that determines what "may be necessary" in terms of monitoring is the permitting authority. The decision as to whether additional monitoring "may be necessary" rests solely with IEPA, subject to appeal, as is the case here, on the basis of the permitting authority's reasonableness. *See In re Hibbing Taconite Co.*, 2 E.A.D. 838, 851 (EAB 1989) (noting that

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[18] U.S. EPA Office of Air Quality Planning & Standards, New Source Review Workshop Manual at C.3 (Oct. 1990) (Draft), *available at* < http://www.epa.gov/ttn/nsr/gen/wkshpman.pdf > (hereinafter, "*NSR Manual*").

[19] Including errantly placed Item 83 on p. 73.

monitoring guidelines are "very broad and leave much to the discretion of the permitting authority"). Also, the EAB has held that the choice of appropriate data sets for the air quality analysis is an issue largely left to the discretion of the permitting authority. *See Knauf*, 8 E.A.D. at 148, n. 39; *citing Hibbing Taconite*, 2 E.A.D. at 851. The permitting authority in Illinois is the IEPA. As the permitting authority, IEPA is entitled to deference in its technical decisions and the EAB may overturn a permitting authority's decision only by finding it was clearly erroneous. "When a petitioner seeks review of a permit based on issues that are fundamentally technical in nature, the Board assigns a particularly heavy burden to the petitioner." *See Peabody*, 12 E.A.D. at 33; *Carlota Copper*, 11 E.A.D. at 708; *Teck Cominco Alaska*, 11 E.A.D. at 473; *City of Moscow*, 10 E.A.D. at 142. As the EAB has itself expressed, this high standard ensures that the primary responsibility for important technical decisions rests primarily with the permitting authority, which has the relevant specialized expertise and experience. *Peabody*, 12 E.A.D. at 33; *citing In re NE Hub Partners, L.P.*, 7 E.A.D. 561, 567-68 (EAB 1998).

IEPA has long implemented the PSD program pursuant to the understanding that representative data may be substituted where circumstances warrant (*see, e.g., NSR Manual* at C.18-.19; U.S. EPA Office of Air Quality Planning and Standards, Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD), EPA-450/4-87-007, § 2.4, at 6-9 (May 1987), *available at* < http://www.epa.gov/ttnamti1/files/ambient/criteria/reldocs/4-87-007.pdf > (hereinafter "*Ambient Monitoring Guidelines*") and the EAB has long upheld EPA guidance to that effect. *See e.g. Knauf*, 8 E.A.D. at 145-48; *Haw. Elec.*, 8 E.A.D. at 97-105; *Hibbing Taconite*, 2 E.A.D. at 850-52. Petitioner cites *Hibbing Taconite* and *Northern Michigan University Ripley* as examples of the Board remanding the permit for a new consideration of the preconstruction monitoring data. *See* Petition at 21. In each of those cases, however, Sierra Club

made extensive and detailed comments during the public review period regarding the preconstruction monitoring data. In *Northern Michigan University Ripley*, the Sierra Club noted that the impacts of the new boiler at issue would be added to two existing coal-fired power plants and two mining companies. *See* PSD Appeal No. 08-02, slip op. at 57-58 (Feb. 18, 2009). In *Hibbing Taconite*, the Region V noted that there were eleven other sources located within 65 kilometers of the new source. Petitioner did not argue that there are other sources near the Facility to establish that it is located in an area of multisource emissions in support of its argument against the use of regional monitoring data. Further EAB caselaw provides that general comments warrant general responses by the permitting authority. *See, e.g., In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 251 n. 12 (EAB 1999), (where "an issue is raised only generally during the public comment period, the permit issuer is not required to provide more than a generic justification for its decision, and the petitioners cannot raise more specific concerns for the first time on appeal"); *Knauf*, 8 E.A.D. at 147 (issues raised in general manner warrant general justifications from permit issuer).

The EAB recognizes that the *Ambient Monitoring Guidelines* are only recommendations and the examples they provide are a non-exhaustive list and are meant to illustrate overall intent. *See, e.g., Knauf,* 8 E.A.D. at 147 ("Guidance documents on representativeness of data identify important factors to consider in evaluating the need for on-site data collection, but do not dictate exactly when onsite data must be used rather than data from nearby locations . . .. We will be inclined to support a permitting authority's technical judgment on this issue, provided that its decision is adequately justified in the record."). In *Hibbing Taconite*, where the EAB found that the permitting authority did not commit a clear legal error in applying the guidelines, the permitting authority determined that the permittee was not a "multisource" despite the fact there

were eleven other SO_2 sources within 65 kilometers of the site. 2 E.A.D. 838 at *7. The EAB also found that by not contesting the factual assertions made by the permittee in support of using regional air monitoring data, the petitioner was "far from demonstrating" clear error in relying on the regional data. *Id.* The EAB should find no different here. Petitioner has provided no information sufficient to overcome IEPA's technical expertise in this area.

IEPA has deployed and operated a comprehensive state-wide air quality monitoring system for many years, at least since adoption of the CAA in 1970. The parameters of the state's monitoring system, including how data is captured, collected, quality assured, and reported, are part of the state implementation plan ("SIP") and conform with federal requirements. *See* IEPA, Illinois Annual Air Quality Report 2008, at 29 (November 2009), *available at* < http://www.epa.state.il.us/air/air-quality-report/2008/index.html > (hereinafter "*2008 AAQR*"). The monitoring system is designed to measure ambient air quality in all regions of the state. *Id.* The air monitoring plan is updated, revised, and submitted to EPA annually. *Id.* In approving Illinois' monitoring SIP, EPA has determined that the Illinois monitoring network satisfies federal requirements and provides adequate and accurate data for determining compliance with the NAAQS. Therefore, IEPA's reliance on its own monitoring data in its analysis and evaluation of the PSD application for the Vulcan project, where the purpose of the program requirements for permits is to protect against deterioration of the NAAQS, was reasonable.

IEPA's conclusion that it was not necessary for Vulcan to conduct additional monitoring was reasonable. IEPA's monitoring data was current at the time of IEPA's evaluation of the permit application and continues to be current; IEPA knows and tracks the air quality trends in the Manteno area both generally historically and over the period that the Vulcan PSD permit has been pending. IEPA collects and quality assures its monitoring data pursuant to the monitoring

plan submitted to and approved by EPA annually consistent with the monitoring SIP. *See 2008 AAQR* at 29. Additionally, as IEPA pointed out in the Responsiveness Summary, the PSD requirement for site-specific preconstruction monitoring is for only a twelve-month period, and the averaging periods for determining compliance with the NAAQS are longer than a twelve-month period for at least some of the standards. *See* Responsiveness Summary at 70-71. IEPA states the benefit of collecting data from fixed locations such as its monitoring stations over a period of many years is to track trends in air quality. *See* Responsiveness Summary at 71 & n. 202. Accordingly Petitioner has not shown that IEPA's use of its own monitoring data was clearly erroneous, particularly given the broad discretion afforded the permitting authority in selecting appropriate data for use in the air quality analysis.

In comments, Petitioner argued that Vulcan should be required to comply with the Case II monitoring criteria. Petition at 22. However, IEPA determined that the Plant is "more appropriately addressed as if its situation is that addressed by Case I in the *Ambient Monitoring Guidelines*, not Case II, as assumed by [Petitioner]." Responsiveness Summary at 74. IEPA's determination that the site of the facility is a Case I situation was reasonable and appropriate to the location of the project. Manteno is not an urban area, the number of other sources in the area is limited and not of sufficient proximity as to interfere with an analysis of emissions from Vulcan or for Vulcan to interfere with an analysis of emissions from other sources, is "relatively remote," and does not have complex terrain. Responsiveness Summary at 74. IEPA further states:

> While there are some sources in the vicinity of the proposed project site, their impacts are more than adequately addressed by the combination of the selected background monitors and modeling of existing point sources. The proposed project is not located in an area in which the number and nature of the existing sources already in the area are such that existing, background air quality

> cannot be reasonably be determined with sufficient accuracy to be protective of the NAAQS without conducting project-specific ambient monitoring.

Responsiveness Summary at 74. IEPA explained that the selected monitoring locations are in areas either very similar to or more developed than Manteno, making data from these stations a conservative representation of background air quality. *See* Responsiveness Summary at 75. The EAB has reviewed regional monitoring data that represented a higher background concentration than would be found at the site on at least one other occasion. *Knauf*, 8 E.A.D. at 147, n. 39. In that case, the EAB agreed such conservative data would provide an additional margin of safety for the site. *Id.* Therefore, reliance on regional monitoring data was completely appropriate, and IEPA should be granted deference on this technical issue.

In comments submitted to IEPA, no commenter provided data to contradict IEPA's own monitoring data. Commenters made unsupported assertions apparently reflecting their assumptions regarding the locations of maximum impact without providing any data to support the assertions. *See* Responsiveness Summary at 75. Without specific factual assertions, the EAB cannot find that the permitting authority's decision was clearly erroneous. *See Hibbing Taconite Co.*, 2 E.A.D. at *7.

Air quality in the Manteno region is improving. IEPA maintains current data that demonstrates this fact. The importance of the information, however, is that it further informs IEPA's decision-making with respect to the Permit. IEPA described both the currentness of the data and what the data tells us in the Responsiveness Summary:

> The air quality analyses used appropriate background monitoring data that satisfies the applicable requirements of the EPA's *Ambient Monitoring Guidelines*.[214] The ambient monitoring data is representative of current background air quality in the Manteno area. Moreover, the general trend in Illinois is improving air quality over time. Ambient concentrations are decreasing as federal and state regulatory programs are put in place for existing

sources as part of emission control programs to bring urban areas into compliance with NAAQS and generally improve air quality in urban areas. For example, since 2002 when the initial application submittal was made, the relevant background concentrations for PM_{10} have gone down by about 10 percent.[215] Continuing improvements in ambient air quality should be expected given continued improvements in emission control on both existing stationary and mobile sources. Accordingly, the period of time from which ambient monitoring data was collected should not be a significant factor for the modeling conducted for the proposed plant.[216]

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[214] When addressing currentness of data, the *Ambient Monitoring Guideline* [SIC] provide that "the air quality monitoring data should be current. Generally, this would mean for the preconstruction phase that data must have been collected in the 3-year period pre ceding [SIC] the permit application, provide the data are still representative of current conditions." Ambient Monitoring Guidelines, Section 2.4.3, Currentness of Data.

[215] The background values for PM_{10} used in the ACT 2006 analysis (from 2001 through 2003) were 64 and 26 $\mu g/m^3$, for 24-hour and annual averages, respectively. If data from the most recent three year period available (2006 through 2008) were used instead, the background values would be 54 and 24 $\mu g/m^3$, for the 24-hour and annual averages, respectively.

[216] In addition, since 2002, the modeled air quality impacts of the proposed plant have also gone down, as Vulcan has made improvements to its plans for the plant. In particular, in 2006, the modeled maximum PM_{10} impacts from the proposed plant with the planned configuration at that time were 27.2 $\mu g/m^3$, 24 hour average, and 6.26 $\mu g/m^3$, annual average. With the changes to the plant configuration made in 2008, its maximum modeled impacts are now 21.9$\mu g/m^3$, 24 hour average, and 3.44 $\mu g/m^3$, annual average. (In this regard, the Project Summary incorrectly stated that there would be an increase in the emissions of material handling operations at the proposed plant.)

Responsiveness Summary at 76 & nn. 214-216. Given air quality trends in the Manteno region, it is clear that air quality is improving and that Vulcan's impact on that improving air quality is insignificant. Not only is IEPA entitled to deference on such a technical issue, but the trends support the decisions that IEPA made at the time that the application was submitted.

IEPA is entitled to deference on its decisions regarding the scope of monitoring necessary for this project where IEPA's decisions were reasonable, well-articulated, and not contrary to law. Because IEPA's decisions were reasonable, clear, and not contrary to law, the EAB should deny review and find that the decision to use regional data was not clearly erroneous.

B. IEPA Explained with Sufficient Detail Why Reliance on Regional Monitoring Was Appropriate for Its Decisions Regarding Issuance of the Vulcan PSD Permit.

Petitioner complains that IEPA did not provide sufficient support for its reliance on regional monitoring as opposed to site-specific monitoring of the Project. Petitioner cites to *In re Hawaii Electric Light Company, Inc.*, 8 E.A.D. 66, 103-05 (EAB 1998), for the proposition that IEPA has not formed a record sufficient to support its reliance on regional monitoring and that such reliance fell outside the scope of the permitting agency's authority to not require site-specific monitoring. Petition at 26. Petitioner points to the distance from Manteno of the regional monitoring stations in the area. Petitioner apparently assumes that the Class II criteria in the *Ambient Monitoring Guidelines*, should apply. However, as discussed above, Petitioner's assumption is incorrect, and IEPA has adequately supported its reliance on the Class I criteria. Contrary to Petitioner's assertions, IEPA provided ample explanation as to why the regional monitors located near Vulcan are sufficient.

In explaining why the Illinois ambient monitoring network provided data that is representative, of appropriate quality, and current, IEPA stated:

> Ambient monitoring stations are sited to provide representative data for air quality in Illinois, as needed to support air quality planning and management in Illinois. These stations are also operated in accordance with quality assurance procedures so as so collect accurate data that can properly be relied upon for these purposes.

Responsiveness Summary at 72. IEPA further explained that reliance on regional ambient monitoring data is appropriate given the topography of Illinois, which is generally flat. *See id.* at 72 n. 205. Moreover, EPA has, from time to time, adopted new NAAQS that apply on more than an annual basis. Therefore, the requirement for twelve months of project-specific monitoring data is no longer consistent with those standards. *See id.* at 72 n. 206. IEPA points to PM10 as an example, stating that measurements must be taken over a period of three years and Illinois' regional monitoring network is designed and operated to do just that. *See id.* at 72 n. 206. Reliance on IEPA's regional ambient monitoring data accommodates the forms of the NAAQS and provides much more robust data on which to base a complete analysis of the Project.

IEPA explained in great detail in the Responsiveness Summary why its reliance on regional monitoring was appropriate.

> [T]he ambient monitoring stations used to provide background concentrations meet the relevant location criteria of the *Ambient Monitoring Guidelines*. The fact that these monitors are some distance from Manteno does not preclude their use. Indeed, it is consistent with the fact that they are regional monitors, which were sited to collect monitoring data for northeastern Illinois, focusing on air quality in the Greater Chicago Metropolitan Area, where industry and population are concentrated.
>
> The acceptance of data from the selected monitoring stations as suitable for the air quality analyses for the proposed plant reflects the Illinois EPA's knowledge of air quality in Northeastern Illinois and the character of the particular areas surrounding each monitoring station. The Braidwood monitor is at a site that is very similar to Manteno, as it is an agricultural area i[n] which air quality is determined either by general background air quality, when the wind is toward the Chicago area, or urban transport, when the wind is coming from the Chicago Area. The

> Joliet monitor is at a site that is significantly more developed than the Manteno area, being in an industrial area on the edge of Joliet, an industrial-suburban city with a population of about 150,000 in the Greater Chicago Area. The Midlothian monitor is about 15 miles south of the Chicago loop, in an area that is significantly more developed than Manteno, in a community with a population of about 15,000. Given the character of Joliet and Midlothian, data from these monitoring stations in these communities are a conservative representation of background air quality in Manteno, which is likely significantly lower than measured at these stations.

Id. at 75.

Given the forms of the NAAQS of concern,[20] project-specific monitoring would not provide sufficient information to determine the impacts of the Project on air quality. IEPA explained why the land uses and population intensities surrounding the regional ambient air quality monitors at Braidwood, Joliet, and Midlothian were consistent with the information IEPA felt was necessary to arrive at reasoned conclusions regarding the Project. Clearly, IEPA has met the "requirement[s] of rationality," (*see In re Government of the D.C. Municipal Separate Sewer System*, 10 E.A.D. 323, 343 (EAB 2002)), and has "'articulate[d] with reasonable clarity the reasons for [its] conclusions and the significance of the crucial facts in reaching those conclusions'" (*see Ash Grove*, 7 E.A.D. at 417, *quoting In re Carolina Power & Light Co.*, 1. E.A.D. 448, 451 (Act'g Adm'r 1978) (citation omitted)). IEPA has, indeed, explained "*why*" site-specific monitoring was not necessary for the Vulcan project and "*why*" reliance on regional monitoring data was appropriate and within EPA's guidelines. *See* Petition at 27.

Interestingly, Petitioner cites to *Knauf* in support of its position as well. In that case, the EAB also reviewed whether the permitting authority's decision to use regional air monitoring

[20] Compliance with or attainment of the NAAQS of concern, such as PM10 and PM2.5, is based upon three-year averages of percentiles of the maximum monitored values of those pollutants.

and meteorological data, rather than site-specific data, in issuing a PSD permit. There the EAB found the regional data sufficient and did not include that issue as part of its remand order. *Knauf*, 8 E.A.D. at 175. These answers are not novel. IEPA has provided these explanations in response to Sierra Club's comments and, therefore, has "articulate[d] with reasonable clarity the reasons for [its] conclusions and the significance of the crucial facts in reaching those conclusions" regarding the monitoring, meteorological, and modeling aspects of this matter. *See Ash Grove*, 7 E.A.D. at 417, *quoting Carolina Power*, 1. E.A.D. at 451 (citation omitted). IEPA has provided "supportive reasoning." *See In re John W. McGowan*, 2 E.A.D. 604, 606-607 (Adm'r 1988) (discussing the importance that a permitting authority provide supportive reasoning in response to public comments). IEPA is entitled to deference on the question of the appropriateness of its reliance on regional monitoring, rather than project-specific monitoring, data in its evaluation of the Project.

In contrast to IEPA's exhaustive explanation of the basis of its decision that project-specific monitoring was not necessary and that the modeling inputs used in the air quality modeling for the Vulcan project were appropriate, Petitioner asserts, with no support, that the maximum concentrations from existing sources is located somewhere other than where the modeling indicated. Petitioner has not provided a basis for IEPA to conclude that the modeled analysis regarding the location of the maximum modeled concentration is incorrect. Again, without specific factual support, Petitioner's assertions should be denied review.

As for Petitioner's argument regarding the difference in data quality criteria between state or local air monitoring stations and PSD permitting monitors, Petitioner did not raise this specific issue in comments regarding air quality data. *See* Petition at 28. Therefore, review of this specific issue is not appropriate on appeal. EAB caselaw provides that general comments

warrant general responses by the permitting agency. *See, e.g., Encogen*, 8 E.A.D. at 251 n. 12; *Knauf*, 8 E.A.D. at 147. Even assuming that the EAB could review this issue, Vulcan puts forth the same argument as to why regional monitoring data satisfies the applicable requirements.[21]

C. IEPA's Determination That the Vulcan Project Would Not Significantly Impact Air Quality, Including the Determination That It Would Not Cause a Violation of Any NAAQS, Was Based on a Combination of the Information Gathered Through Regional Ambient Monitoring and Site-Specific Dispersion Modeling.

As IEPA discussed at length in the Responsiveness Summary, its determination that the Project would not significantly impact air quality "reflect[s] a conservative[22] evaluation of the impacts of the proposed plant, consistent with standard practices in modeling." Responsiveness Summary at 77. IEPA further explained that its decision was based upon the results of site-specific dispersion modeling[23] that incorporated the emissions data from the regional monitoring. *See* Responsiveness Summary at 77-84. The data from the regional monitoring provides information regarding the background air quality surrounding the Project. This background air quality includes emissions from other sources both upwind of Vulcan and within the vicinity of Vulcan. To be even more conservative, IEPA assumed the maximum modeled impacts of the Project and any other new sources in the area and that the emissions from existing sources were

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[21] In addition, as IEPA's regional monitoring stations have been operated for many years by experienced staff, the cited differences in quality criteria should not be considered significant.

[22] IEPA's conservative modeling analysis included the assumption that all plants would operate continuously, background concentrations at maximum monitored values, and immediate conversion of NOx to NO_2. Actual concentrations would be less because plants do not operate continuously, NAAQS are not determined from the maximum concentrations, and NOx does not immediately convert to NO_2. *See* Responsiveness Summary at 77.

[23] The dispersion modeling pointed out to IEPA an area where it has insufficient specific unit data to provide completely accurate inputs to a dispersion modeling platform. Nevertheless, IEPA was able to determine from the modeling outputs that whatever inventory issues there may appear to be in the vicinity, Vulcan does not cause or contribute to those issues.

additional amount equal to background. *See* Project Summary at Section VIII; *see also* Responsiveness Summary at 78-79. As there are no monitored violations of the NAAQS in the Manteno area, IEPA's assumptions effectively reflect a worst-case scenario. This analysis confirms or supports IEPA's other analyses that show that the Project will not have a significant impact on air quality. *See* Project Summary at Section VIII, Table 3B. In this analysis, IEPA added the maximum modeled impact to the background concentration (which includes additional values equal to the monitored background concentration to account for the worst-case scenario from existing source in the area) and compared the sum to the NAAQS. In every case, the projected overall concentration was below the NAAQS and in most cases was well below the NAAQS.

Likewise, IEPA examined the maximum modeled concentration of emissions from the project and compared them to the applicable PSD increments. In each case, the maximum concentrations were below the PSD increments. *See id.* at Section VIII, Table 2.

IEPA exercised an abundance of caution by examining potential air quality impacts of the project in several ways. IEPA's conclusion that the project would not cause or significantly contribute to any exceedances of the NAAQS is reasonable and supported by the analyses prepared by Vulcan and included in the Record. *See generally*, Record.

IEPA's conclusions that the project would not cause or contribute to a violation of the NAAQS were reasonable and supported issuance of the PSD Permit. For these reasons, the EAB should deny review and find that IEPA's conclusions were not clearly erroneous.

III. IEPA'S CONSIDERATION OF SAFETY FACTORS IN ESTABLISHING BACT WAS APPROPRIATE.

Petitioner quibbles with IEPA's consideration of safety factors for the BACT limits established for NOx and CO. Petitioner claims that lower emission rates should have been set

and that IEPA failed to "adequately" explain the basis for the emission limits. Petition at 30-35. For the foregoing reasons, the Board should deny Petitioner's request for review as it relates to establishing BACT for NOx and CO.

A. Petitioner's Argument Misstates Applicable Law Regarding IEPA's Consideration of Safety Factors in Its BACT Analysis.

Petitioner claims that the margins for safety for NOx and CO are excessive because they are 240% and 30% greater than the test results from a 1999 stack test conducted when the Facility was operating under a configuration that is different from the configuration of the proposed project. Petitioner does not support its argument with any relevant or technical facts. Petitioner merely points out the percentage difference between the emissions measured during a single 1999 stack test and the limits set forth in the Permit and asserts that IEPA erred in considering safety factors.

The plain terms of the CAA require that the "emission limitation" selected as BACT be based on "the maximum degree of reduction of each pollutant" that "is achievable for such facility" considering economics and technical availability. CAA § 169(3), 42 U.S.C. § 7479(3); *cf.* 40 C.F.R. § 52.21(b)(12). Petitioner is correct in arguing that statutory and regulatory terms, such as "maximum" and "achievable," constrain a permitting authority's discretion. *Alaska Dep't of Envtl. Conservation v. EPA*, 540 U.S. 461, 485-89 (2004). However, contrary to Petitioner's assertion, the permitting authority is not required to use the lowest emissions limit that has been demonstrated. *See In re Kendall New Century Dev.*, 11 E.A.D. 40, 53 (EAB 2003); *Steel Dynamics*, 9 E.A.D. at 188; *accord In re Three Mountain Power, L.L.C.*, 10 E.A.D. 39, 53 (EAB 2001); *Masonite Corp.*, 5 E.A.D. at 560-61; *see also In re Knauf Fiber Glass, GmbH*, 9 E.A.D. 1, 15 (EAB 2000) (hereinafter "*Knauf II*"). The Board has explained that "[t]he underlying principle of all of these cases is that PSD permit limits are not necessarily a direct

translation of the lowest emissions rate that has been achieved by a particular technology at another facility, but rather that those limits must also reflect consideration of any practical difficulties associated with using the control technology." *See In re Cardinal FG Co.*, 12 E.A.D. 153, 170 (EAB 2005); *see also Kendall,* at 53 (the permitting authority is not required to set the emissions limit at the most stringent emissions rate that has been demonstrated by a facility using similar emissions control technology). The permitting authority retains discretion to set BACT levels that "do not necessarily reflect the highest possible control efficiencies but, rather, will allow permittees to achieve compliance on a consistent basis." *See Steel Dynamics, Inc.*, 9 E.A.D. at 188 (EAB 2000); *accord Three Mountain Power,* 10 E.A.D. at 53.

Moreover, the Board has approved the use of so-called "safety factors" in the calculation of permit limits to take into account variability and fluctuation in expected performance of pollution control methods. *See, e.g., Knauf II*, 9 E.A.D. at 15 ("There is nothing inherently wrong with setting an emissions limitation that takes into account a reasonable safety factor.").

In essence, there is a distinction between, on the one hand, measured "emissions rates," which are necessarily data obtained from a particular facility at a specific time, and on the other hand, the "emissions limitation" determined to be BACT and set forth in the permit, which the facility is required to continuously meet throughout the facility's life. In other words, if there is uncontrollable fluctuation or variability in the measured emission rate, then the lowest measured emission rate will necessarily be more stringent than the "emissions limitation" that is "achievable" for that pollution control method over the life of the facility. Accordingly, because the "emissions limitation" is applicable for the facility's life, it was wholly appropriate for the permitting authority to consider, as part of the BACT analysis, the extent to which the available data demonstrate whether the emissions rate at issue will be achieved over a long term. Thus,

the permitting authority may take into account the absence of long-term data or the unproven long-term effectiveness of the technology in setting the emissions limitation that is BACT for the facility. *Masonite*, 5 E.A.D. at 560 (noting that the permit issuer must have flexibility when "the technology itself, or its application to the type of facility in question, may be relatively unproven").

The Petition is void of any proof or legal support for Petitioner's position that safety factors are not warranted and ignores IEPA's explanations for setting safety factors, as set forth in detail on pages 65-70, including footnotes, of the Responsiveness Summary and discussed below. Petitioner utterly fails to substantiate its arguments or show that the consideration of safety factors was clearly erroneous or warrants EAB review.

B. Petitioner Has Failed to Substantiate Its Argument or Demonstrate That IEPA's Use of Safety Factors Was Clearly Erroneous or Otherwise Merits Review.

The main thrust of Petitioner's argument is that IEPA failed to justify the use of safety factors in setting the BACT requirements for NOx and CO. Petitioner argues that the EAB should remand the Permit's NOx and CO limits on the grounds that IEPA did not document its use of safety factors in developing them. This argument is contrary to the record.

IEPA specifically discussed the need for including some margin of safety in setting the Permit's NOx and CO limits due to variability in performance under a variety of circumstances. *See* Responsiveness Summary at 65-70; *see also* Project Summary, Section VII, at 5-6. As discussed above, variability in the observed performance of a control technology is an appropriate circumstance for the permitting authority to use a safety factor in setting a permit's BACT limit. *See Masonite*, 5 E.A.D. at 560-61. Here, IEPA based its use of a safety factor on a detailed summary of variability in emissions data collected from other facilities. IEPA specifically identified emissions data from other facilities and appropriately distinguished the

operation of those facilities with respect to controlling NOx emissions and identified a range of CO emissions data. It is also worth noting that IEPA made the NOx BACT limit subject to downward adjustment (as low as 3.5 lbs/ton based on a 24-hour average) once the Facility commences operation.[24] *See* Permit, Condition 2.1.3-2.b.i.D, at 12. This demonstrates that IEPA seriously considered the safety factors and the need for such to account for various operating conditions. Moreover, should the safety factor prove to be excessive once the project develops an operating history, the permit provides that the margin of safety must be lowered to one determined at that time to be more appropriate.

In particular regarding Petitioner's assertion that emission limits in EPA's RACT/BACT LAER Clearinghouse demonstrate that a lower NOx limit should apply, IEPA responded as follows:

> This comment fails to consider the various factors that may affect the fuel consumption and heat rate of rotary lime kilns and thus lead to differences in achievable NOx emission rates. Because of these considerations, the achievable NOx rate [for] the proposed plant, even with a preheater, would be higher than the NOx rates set for the high-calcium lime kilns cited [by Petitioner]. In particular, the heat rate of rotary lime kilns can range from 4 to 8 million BTU/ton of stone feed to a kiln. As the proposed plant would produce dolomitic lime for use in the metallurgical industry, it would be using dolomitic limestone, which is commonly more friable than high-calcium limestone. It would also be producing larger "pebble" lime, with the preferred size not passing through a ¾ or 1 inch screen, as needed for lime that is to be directly charged to iron or steel furnaces. As such, even with use of a pre-heater, the heat rate of the proposed kiln should be expected to be higher than the kilns cited [by Petitioner]. Those kilns are processing

[24] According to IEPA, "[t]his is necessary because the full extent of the further reduction in NOx emissions that will be reliably achieved with the pre-heater tower and improved energy efficiency of the kiln is uncertain, given measures that are being allowed to improve combustion efficiency." *See* Project Summary, Section IV, at 6. If Vulcan fails to evaluate NOx emissions from the kiln after it commences operation, then the NOx emissions limit is lowered to 3.0 lbs/ton. *See* Permit, Condition 2.1.11.a.ii.B, at 26.

> high-calcium limestone, rather than dolomitic limestone, to produce lime to supply their local markets, which do not include the steel market in the Greater Chicago Area that are being targeted by Vulcan. Given these considerations, the limits set as BACT for NOx for the proposed plant should be expected to be higher than those of the cited plants.

Responsiveness Summary at 65-66 (footnotes omitted).

Petitioner also suggests that a memorandum written by IEPA in 2000 demonstrates that a lower NOx limit should be set. However, Petitioner fails to recognize that the information in that memorandum is an insufficient basis for a BACT emission limit. IEPA specifically addressed the utility of this memorandum by stating:

> This comment, which also addresses a predecisional memorandum prepared by a staff member of the Illinois EPA in 2000, does not provide a basis to set a lower NOx BACT limit for the kiln than set in the issued permit. The memorandum is a historic document associated with the previous issuance of a revised construction permit for Vulcan's Manteno lime plant in October 2002. With respect to NOx, the memorandum was prepared in response to Vulcan's initial proposal in 2000 for a revised NOx BACT limit for the kiln, i.e., 9.7 lbs/ton of stone feed. The memorandum does not recommend that a particular limit be set for NOx BACT, only arguing that the NOx limit then proposed by Vulcan, 9.7 lbs/ton, should not be accepted as BACT. It was not, as the permit eventually issued in 2002 set NOx BACT at 4.5 lbs/ton. At the same time, this memorandum lists test results from lime plants whose specific circumstances, *e.g.*, type of limestone feed and lime product, are not fully known. As such, the listed test results cannot be correlated to the NOx emissions of the proposed Vulcan lime kiln and cannot be used as a basis to set a NOx BACT limit for the proposed kiln.
>
> The test that is relevant to establishing NOx BACT limits for the proposed kiln is the one that was performed on the kiln itself, when it historically operated. The NOx emissions of the kiln measured by this test were 3.45 pounds per ton of stone feed. The various limits for NOx set as BACT all relate to this solid reference point for the NOx emissions of the proposed kiln. At least initially, a limit higher than the tested emission rate must be set to provide an operating margin to address normal variation in the operation of the kiln.

Responsiveness Summary at 66-67 (footnotes omitted). IEPA's rationale is not clearly erroneous.

With respect to CO, IEPA stated:

> There was a top-down BACT analysis for CO. (For example, refer to the Updated BACT Analyses, November 2008.) The analysis for CO considered various approaches to control of CO, including use of excess air, add-on thermal and catalytic oxidation, and good combustion practice. The BACT limit for CO emissions of the kiln is appropriately set following this top-down BACT analysis relying on good combustion practices. Options other than good combustion practices are rejected by the Illinois EPA. This was because of concerns about increases in emissions of other pollutants and the feasibility of actually achieving further reduction in CO emissions.
>
> In particular, the CO BACT limit for the proposed kiln considers the historic CO emissions of this kiln as measured in 1999, i.e., 4.76 pounds per ton of stone feed. As CO is controlled by good combustion practices, it is appropriate for the CO BACT limit to be set with a significant margin of compliance to address normal variability in operation. Accordingly, the BACT limit is set at 11.48 pounds per ton. No adjustment is made for the pre-heater tower. While the pre-heater tower would reduce the firing rate of the kiln, this may not act to lower CO emissions on a short-term, 24-hour average basis, as the size of the burner and intensity of combustion are reduced.
>
> The BACT limit was also set also considering the conflicting relationship between NOx and CO emissions during combustion processes and the BACT determination for NOx. In order to set a low BACT limit for NOx, it is necessary for the kiln to be able to operate at low levels of excess air, which may be accompanied by higher levels of CO than if NOx was not being minimized. (The NOx BACT limit only has a 30 percent margin of compliance from the measured NOx emissions of the kiln.) A limit of 11.48 pounds per ton of stone ensures that the BACT limit for CO will not interfere with effective control of NOx.
>
> Finally, the CO BACT limit is consistent with recent CO BACT determinations for certain new lime kilns. In particular, the equivalent CO emission factors represented by the BACT limits set for new two lime kilns proposed by Graymont (PA), Inc., at its plant in Bellefonte, Pennsylvania, are 13.25 and 19.0 pounds per ton.

Responsiveness Summary at 68-69 (footnotes omitted).

Petitioner has not provided a sufficiently compelling rebuttal of IEPA's analysis to overcome the deference the Board normally gives the permitting authority on a technical matter. *See Newmont*, 12 E.A.D. at 444-47 (despite not agreeing with some of the rationale articulated by the permitting authority, deferred to the technical expertise of permitting authority and found no clear error in emission limit); *see also Ash Grove* , 7 E.A.D. at 403. "[W]here an alternative control option has been evaluated and rejected, those favoring the option must show that the evidence 'for' the control option clearly outweighs the evidence 'against' its application." *Steel Dynamics*, 9 E.A.D. at 194 (quoting *In re Inter-Power of N.Y., Inc.*, 5 E.A.D. 130, 144 (EAB 1994) (quotation marks omitted). As demonstrated, IEPA specifically discussed the need for including some margin of safety in setting the Permit's NOx and CO emission limits to account for operational variation. It is Petitioner's burden, to demonstrate that the permit condition is based on clear error or on an important policy consideration that the Board should, in its discretion, review. Consistent with the technical deference the Board accords to a permitting authority, the Board should decline to review this issue.

IV. PETITIONER'S 1-HOUR NO_2 NAAQS WAS NOT PROPERLY PRESERVED FOR APPEAL AND SHOULD BE DISMISSED; IN THE ALTERNATIVE, IEPA DID NOT ACT CLEARLY ERRONEOUSLY BY NOT EVALUATING THE PROPOSED 1-HOUR NO_2 NAAQS AT THE TIME IT ISSUED VULCAN'S PSD PERMIT.

The scope of the Board's review of an issued PSD permit is generally limited to those issues properly raised during the public comment period on the draft permit. While limited exceptions exist that allow the Board to consider matters not preserved for appeal, those exceptions are inapplicable here. First, no person, including the Petitioner, submitted comments during the public comment period requesting that IEPA demonstrate compliance with the then proposed 1-hour NO_2 NAAQS. Contrary to Petitioner's assertions, information regarding the 1-

hour NO_2 NAAQS was reasonably ascertainable at the time of the public comment period because the proposed 1-hour NO_2 NAAQS was publicly available at that time. Second, IEPA's decision to not include the 1-hour NO_2 NAAQS in the Permit was not clearly erroneous. The 1-hour NO_2 NAAQS was not effective on the date IEPA issued the Permit, which constituted its final permit decision. Finally, notwithstanding the procedural bar and the reasonableness of IEPA's actions, remand is unnecessary and inappropriate because IEPA is permitted to use annual NO_2 NAAQS compliance as a surrogate for demonstrating compliance with 1-hour NO_2 NAAQS. *See* discussion *infra* Part IV.C. For the foregoing reasons, the Board should deny Petitioner's request for review as it relates to the 1-hour NO_2 NAAQS.

A. Petitioner's Allegation That IEPA Failed to Ensure Compliance with the 1-Hour NO_2 NAAQS, By Its Own Admission, Was Not Preserved for Appeal.

Federal regulations are unambiguous that raising an issue during the public comment period is a procedural prerequisite for raising the issue in a PSD permit appeal. *See* 40 C.F.R. §§ 124.13, 124.19. The Record and Responsiveness Summary reflect that neither the Petitioner nor any other person provided comments during the public comment period on the 1-hour NO_2 NAAQS.[25] The proposed 1-hour NO_2 NAAQS was publicly available during the public

[25] The Petitioner inconsistently refers to both a 1-hour NAAQS for oxides of nitrogen (NOx) and a 1-hour NAAQS for nitrogen dioxide (NO_2) throughout its Petition. *See* Petition at 1, 35-38 (referring to both the "1-hour NOx NAAQS" and the "effective date for the 1-hour NO_2 NAAQS"). At the time IEPA issued the Permit, applicable EPA regulations referred to annual NAAQS for NO_2. *See* 40 C.F.R. § 50.11 (July 2, 2009). In the amendments to NAAQS for NO_2, effective after IEPA issued the Permit, EPA amended the regulatory language to refer to the NAAQS for NO_2 as "National primary and secondary ambient air quality standards for oxides of nitrogen (with nitrogen dioxide as the indicator)." *See* 40 C.F.R. § 50.11 (Feb. 9, 2010). Public comments were not provided on either the 1-hour NO_2 NAAQS or the 1-hour NOx NAAQS. For purposes of this appeal, the distinction is inapposite for finding in favor of dismissing the Petitioner's claims for failure to preserve. For clarity and consistency, Vulcan will refer to the "1-hour NO_2 NAAQS" only.

comment period and thus reasonably ascertainable to have allowed the submission of comments. Accordingly, the Petitioner may not raise on appeal its claims regarding 1-hour NO_2 NAAQS.

1. Public comments must have been submitted on the proposed 1-hour NO_2 NAAQS to preserve the issue for appeal.

EPA's regulations governing PSD permit appeals require that the petition include "a demonstration that any issues being raised were raised during the public comment period (including any public hearing) to the extent required by these regulations." *See* 40 C.F.R. § 124.19(a). EPA regulations further clarify that "all reasonably ascertainable issues" and "all reasonably available arguments" are raised during the comment period. *See* 40 C.F.R. § 124.13. The only exception to the issue preservation requirement is when "changes from the draft to the final permit decision" have occurred. *See* 40 C.F.R. § 124.19(a).

The purpose of the issue preservation requirement is to ensure prompt resolution of permitting decisions, where possible, by the permitting authority.[26] The Board has long held that any reasonably ascertainable issue later raised on appeal must first be raised by some person during the public comment period. *See In re ConocoPhillips Co.*, PSD Appeal No. 07-02, slip op. at 45 (EAB June 2, 2008) (the "Board routinely denies review of issues raised on appeal that were reasonably ascertainable, but were not raised during the public comment period" (citing, *e.g.*, *In re Christian County Generation, LLC*, PSD Appeal No. 07-01 at 12 (EAB Jan. 28, 2008); *BP Cherry Point*, 12 E.A.D. at 218-20; *Encogen*, 8 E.A.D. at 249-50)); *see also Carlota Copper*

[26] The PSD permit appeal process was not created to provide persons displeased with the terms of an issued permit a second opportunity to challenge those terms that could have been timely raised during the permitting process. *See In re New England Plating Co.*, 9 E.A.D. 726, 732 (EAB 2001) (the purpose of the issue preservation requirement is to "ensure that the Region has an opportunity to address potential problems with the draft permit before the permit becomes final, thereby promoting the longstanding policy that most permit decisions should be decided at the regional level, and to provide predictability and finality to the permitting process").

Co., 11 E.A.D. at 726 (citing, *e.g.*, *In re City of Phoenix Ariz. Squaw Peak & Deer Valley Water Treatment Plants*, 9 E.A.D. 515, 524 (EAB 2000)). The Board routinely dismisses claims where a petitioner has failed to demonstrate that the issues were properly raised during the public comment period. *See, e.g., ConocoPhillips*, slip op. at 45; *In re Phelps Dodge Corp.*, 10 E.A.D. 460, 519-20 (EAB 2002).

The Petitioner bears the burden of demonstrating that comments regarding the 1-hour NO_2 NAAQS were raised with sufficient specificity during the public comment period. *See ConocoPhillips*, slip op. at 45-46 (finding that the petitioner's comment expressing "extensive concern" was insufficient to preserve the issue for appeal); *Carlota Copper Co.*, 11 E.A.D. at 722-23. The Petitioner has failed to do so. In fact, the Petitioner acknowledged that its comments merely "**generally** discussed the requirement to ensure compliance with the NAAQS in effect at the time of the comments." *See* Petition at 36 (emphasis added); *see also* Responsiveness Summary at 39-40. A "general" comment that a PSD permit must demonstrate compliance with the NAAQS could not have ensured "prompt focused consideration" by IEPA on the specific issue it now seeks that this Board consider on appeal – specifically, whether Vulcan's issued PSD permit was required to ensure compliance with the proposed 1-hour NO_2 NAAQS. *See Carlota Copper Co.*, 11 E.A.D. at 722 ("mere asking of generalized question, without indicating how the answer to those questions would affect the permit limits, does not provide the requisite specificity the applicable regulations require")(citing *In re Westborough*, 10 E.A.D. 297, 308 (EAB 2002)). This is not an instance where the Board is asked to determine whether publicly submitted comments were specific enough to preserve the issue on appeal. The Petitioner simply offered no comments regarding 1-hour NO_2 NAAQS during the public comment period.

2. The proposed 1-hour NO_2 NAAQS was "reasonably ascertainable" to allow any person to submit comments on the proposed rule during the public comment period.

Petitioner offers as defense to its failure to provide public comments on the 1-hour NO_2 NAAQS that the issue was not reasonably ascertainable during the public comment period because only the proposed 1-hour NO_2 NAAQS existed at that time. *See* Petition at 36-37; *see also* 40 C.F.R. § 124.13. In addition, according to Petitioner, the apparent uncertainty that EPA would promulgate the 1-hour NO_2 NAAQS, the timing of that promulgation, and the question of whether the standard would apply to Vulcan, precluded the Petitioner, or any person for that matter, from raising the issue during public comment.

Petitioner is attempting to inappropriately expand the scope of the "reasonably ascertainable" requirement. Simply because an issue may change in the future does not mean that it is not "reasonably ascertainable" for purposes of submitting comments on a draft permit.[27] There is minimal precedent interpreting the meaning of "reasonably ascertainable." However, in instances where the Board has found that an issue was not reasonably ascertainable, it has done so in the context of information that was unavailable to the petitioner during the public comment period. For instance, in *In re Dominion Energy Brayton Point, L.L.C*, the Board permitted a petitioner to appeal an issue not raised during public comment because key documentation was not reasonably ascertainable by the petitioner during the public comment period. *See* 12 E.A.D. 490, 584 n. 154 (EAB 2006). The permitting authority in *Dominion Energy* failed to make available a document containing calculations relevant to the evaluation of the draft permit until

[27] For example, as discussed in Part V, *infra*, in more detail below, Petitioner did not avoid submitting comments on what it believed should be considerations of CO_2 requirements simply because any proposed CO_2 control programs were in even more speculative form than the proposed 1-hour NO_2 NAAQS during the public comment period.

after the close of the public comment period. *Id.* Accordingly, the Board ruled that the petitioner could not have reasonably ascertained this information and thus should not be barred from raising the issue on appeal. *Id.* ("because Petitioner alleges that it only ascertained the issue after the Region explained the significance of the map in . . . a time period well beyond the close of the comment period . . . we will consider the issue on appeal"); *see also In re Campo Landfill Project*, 6 E.A.D. 505, 518-19 (EAB 1996) (finding issues not barred from appeal that were "masked" by the permitting authority during the public comment period, and for which the importance of the information became apparent to the petitioner only after the public comment period).

The public comment period in this matter ran from April 17, 2009, through July 22, 2009. *See* Responsiveness Summary at 2-3. EPA proposed the 1-hour NO_2 NAAQS on June 26, 2009. The proposed standard was published in the Federal Register on July 15, 2009. *See* 74 Fed. Reg. 34,404 (July 15, 2009). Both the proposal of the 1-hour NO_2 NAAQS and its notice in the Federal Register occurred within the public comment period for the Permit. The proposed 1-hour NO_2 NAAQS was available to any member of the public, including Petitioner. Petitioner argues that the future of the 1-hour NO_2 NAAQS was too uncertain for it to submit a public comment to IEPA requesting consideration of the proposed rule's applicability. *See* Petition at 37. However, Petitioner was clearly aware of the proposed 1-hour NO_2 NAAQS. Petitioner admitted that it evaluated the proposed rule at the time of public comment and determined that it was too uncertain to warrant raising the issue with IEPA. *See* Petition at 37. Petitioner cannot have it both ways. Either the proposed 1-hour NO_2 NAAQS was reasonably ascertainable (but allegedly too uncertain for public comment), or the proposed standard was not reasonably ascertainable because it was only in proposed form.

Moreover, Petitioner's own actions with respect to CO_2 and greenhouse gases ("GHG") run contrary to its position that it is not reasonably ascertainable and too speculative and uncertain to submit public comments on a proposed regulatory requirement. During the public comment period, Petitioner submitted dozens of comments concerning prospective GHG/CO_2 regulation under the CAA and PSD program. *See, e.g.,* Responsiveness Summary at 5-36. It is irrefutable that final regulation of GHG/CO_2 under the CAA was neither certain nor final when Petitioner submitted its comments. *See, e.g.,* Responsiveness Summary at 5 ("At the present time, GHG emissions of the proposed plant are not regulated under the federal PSD program pursuant to the Clean Air Act . . .. The fact that GHG are a pollutant and USEPA intends to regulate GHG emissions [SIC] in the future does not alter the current 'unregulated' status of GHG emissions."). By Petitioner's own actions, its submission of comments on the non-final GHG/CO_2 regulation demonstrates that a regulation need not be final or effective to be "reasonably ascertainable" to file public comments and preserve the issue for appeal.

The Board should deny review of Petitioner's claims regarding the 1-hour NO_2 NAAQS. The claim was not properly preserved for appeal. No comments were specifically submitted during the public comment period, and the proposed rule was publicly available during the comment period and thus reasonably ascertainable for the submission of such comments.

B. If the Board Does Not Bar Petitioner's Claim, the Board Should Deny Review of the Claim Because IEPA Is Not Required to Consider Regulations That Are Not Effective on the Date the PSD Permit Is Issued.

If the Board determines that Petitioner's 1-hour NO_2 NAAQS claim is not procedurally barred, the Board should deny review of the claim in the alternative because IEPA did not act clearly erroneously by not including a proposed rule at the time of permit issuance in the permit. IEPA's decision to not apply a proposed standard at the time of permit issuance was not contrary to law or clearly erroneous and was, in fact, in accordance with current EPA guidance.

Permitting decisions should be upheld unless the permitting authority's decision is clearly erroneous. *See Cherry Point*, 12 E.A.D. at 217.

Petitioner argues that because the Permit does not become final until resolution of this appeal, IEPA is required to evaluate the 1-hour NO_2 NAAQS that was promulgated three days after IEPA issued the Permit. *Compare* PSD Permit 091806AAB, issued April 9, 2010 *with* 75 Fed. Reg. 6474 (effective April 12, 2010). Petitioner mistakenly confuses a permit's **issuance** date with the finality or **effective** date of a permit. As explained below, only the permit's **issuance** date is relevant for establishing the cutoff date for requirements and information that the permitting authority must consider and include in issuing its final permit decision. A permitting authority is not required to consider or include regulations or requirements that are not effective on the date the final permit decision is **issued**. The appeal of an issued permit does not alter that cutoff date.

The Petitioner misconstrues and confuses the concepts of a "final permit decision," a "final agency action," and when a permit becomes "effective." The appeal of a PSD permit impacts only when the permit becomes effective and when a final agency action has occurred to permit judicial review. The applicable regulations are unambiguous. The permitting authority **issues** a final permit decision "[a]fter the close of the public comment period under § 124.10 on a draft permit." *See* 40 C.F.R. § 124.15(a); *see also* 124.19(a) ("[w]ithin 30 days after a . . . PSD final permit decision . . . has been issued under §124.15"). However, a final permit decision does not "become **effective** [until] 30 days after the service of notice of the decision," or, as in this matter, after the Board issues a decision on the merits of the appeal and no issue is subject to remand. *See* 40 C.F.R. §§ 124.15(b) (emphasis added), (b)(2), 124.19(f)(1)(ii). Further, judicial review is predicated on the final agency action that occurs upon exhaustion of the administrative

review procedures. *See* 40 C.F.R. § 124.19(f)(1), (f)(1)(ii) ("For purposes of judicial review under the appropriate Act, final agency action occurs . . . [w]hen the [Board] issues a decision on the merits of the appeal and the decision does not include a remand of the proceedings.").

The fact that the final 1-hour NO_2 NAAQS became effective prior to final agency action, *i.e.*, the Board's decision, in this matter is irrelevant. What is relevant is what IEPA considered and included in its final permitting decision. EPA guidance and Board cases support that the issuance date is the cutoff date for applying applicable rules and requirements. In no uncertain terms, EPA recently concluded that only permits **issued** on or after the effective date of the new standard are required to undertake a compliance demonstration for 1-hour NO_2 NAAQS. *See* Stephen D. Page, Director, U.S. EPA Office of Air Quality Planning and Standards, Memorandum, "*Applicability of the Federal Prevention of Significant Deterioration Permit Requirements to New and Revised National Ambient Air Quality Standards*," at 3 (Apr. 1, 2010), *available at* < http://www.epa.gov/region7/air/nsr/nsrmemos/psdnaaqs.pdf > ("permits *issued* under 40 C.F.R. § 52.21 **on or after April 12, 2010**, must contain a demonstration that the source's allowable emissions will not cause or contribute to a violation of the new 1-hour NO_2 NAAQS") (emphasis added) (hereinafter "*PSD NAAQS Memo*"); *see also Reconsideration of Interpretation of Regulations that Determine Pollutants Covered by Clean Air Act Permitting Programs*, Final Action on Reconsideration of Interpretation, 75 Fed. Reg. 17,004, 17,018 (Apr. 2, 2010) ("a final permit decision issued after the effective date of a NAAQS must consider such a NAAQS").[28]

[28] Petitioner's comment regarding the absence of a "grandfathering" provision for the 1-hour NO_2 NAAQS is inapposite. The grandfathering provision applies to proposed major modifications where complete PSD permit applications have been submitted but for which a permit has not yet issued. *See PSD NAAQS Memo* at 3 ("EPA did not promulgate a grandfathering provision related to the 1-hour NO_2 NAAQS for permits **in process but not yet**

Similarly, the Board has consistently used the issuance date as the point in time after which the permitting authority does not need to consider applicable regulations and requirements. *See Dominion Energy*, 12 E.A.D. at 615 ("'the proper point in time for fixing applicable NPDES standards and guidelines is when the Regional Administrator initially issues a final permit'") (*quoting Alabama ex. Rel. Baxley v. EPA*, 557 F.2d 1101, 1108-10 (5th Cir. 1977), *enforcing in part, vacating in part, In re U.S. Pipe & Foundry Co.*, NPDES Appeal No. 75-4 (Adm'r 1975)); *Phelps Dodge*, 10 E.A.D. 460 at 478 ("the Region's obligation, as the permit issuer, is to apply the CWA statute and implementing regulations in effect at the time the final permit decision is made"); *In the matter of: Homestake Mining Co.*, 2 E.A.D. 195, at *3 (Adm'r 1986) ("permit terms and conditions cannot be based on proposed rules" that existed at the time the final permit was issued); *see also Prairie State*, slip op. at 85-86 & n. 68 ("long-standing EPA policy states [29] that the BACT determination is made on the date that the permit is issued").

The issuance date of the Permit marked the cut-off date that IEPA was required to ensure the Permit's compliance with any effective and applicable regulatory requirements. The 1-hour NO_2 NAAQS was not effective as of the date of permit issuance and, therefore, was properly not

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issued as of April 12, 2010") (emphasis added). As previously noted, Vulcan's Permit issued prior to the effective date of the 1-hour NO_2 NAAQS.

[29] *See* John S. Seitz, Director, U.S. EPA Stationary Source Compliance Division, Office of Air Quality Planning and Standards, to Region 1-10 Memorandum, Re: BACT LAER Determination Cut-off Date (Jan. 11, 1990) (citing John S. Seitz, Director, U.S. EPA Stationary Source Compliance Division, to David Kee, Director, Office of Air and Radiation Division Region 5, Memorandum, at 1 (Feb. 4, 1989) ("The conditions in a new source permit are not set until the final permit is issued. The final permit is not issued until after a draft permit has been published, there has been a public comment period, and the permitting agency has had an opportunity to consider any new information that may have come to light during the comment period.")), *available at* < http://www.epa.gov/region7/air/nsr/nsrmemos/bactlaer.pdf. > and < http://www.epa.gov/region7/air/nsr/nsrmemos/cut-off.pdf >.

included by IEPA in its final permitting decision. *Compare* PSD Permit 091806AAB, issued April 9, 2010 *with* 75 Fed. Reg. 6474 (effective April 12, 2010). The Board has ruled that a permit issuer does not need to consider regulations that are not effective as of the date of permit issuance. *See Phelps Dodge*, 10 E.A.D. at 478 (EAB 2002) ("the Region's obligation . . . is to apply . . . **regulations in effect at the time the final permit decision is made**, not as the statute or regulations may exist at some point in the future") (emphasis added).

Further, the Board is not compelled to exercise discretion to remand permits to address regulations that were not effective on the date of issuance. Retroactive application of rules is not favored in the law. *See Dominion Energy*, 12 E.A.D. at 613 (citing *Landgraf v. USI Film Products*, 511 U.S. 244, 264 (1994)). In *Dominion Energy*, the petitioner argued that a rule in proposed form at the time the final permit was issued should have been considered "because the permit is not yet 'final' while it is still on appeal." 12 E.A.D. at 611. The Board in *Dominion Energy* acknowledged that while it possessed the discretion to remand a permit in such circumstances, it was not "compelled" to do so. *Id.* at 599, 616. The Board concluded that:

> to the extent that it may have the discretion to remand permit conditions for reconsideration in light of legal requirements that change before a permit becomes final agency action, it is not appropriate to remand the permit to the Region in this case for several reasons. **These reasons include the fact that the [rule] clearly was not intended to be applied and does not apply retroactively,** the rule is currently being appealed in the federal courts, what [the permittee] would be required to do under the [rule] (had it been applicable) is unclear, and requiring application of the [rule] . . .would invariably lead to an extended further delay, with substantial continued harm to [the permittee]. . ..

Id. at 492 (emphasis added); *but see id.* at 616 n. 201, citing *In re GSX Servs. of S.C., Inc.*, 4 E.A.D. 451, 465 & n. 17 (EAB 1992) (presenting a matter where the Board remanded the permit for reconsideration in light of a new rule, but noting, significantly, that the new **rule required** a

permit modification to meet the new rule and provided for a "reevaluation of all pending and issued permits where construction has not begun").

The Board should similarly not exercise its discretion to remand the Permit for consideration of the 1-hour NO_2 NAAQS. Nothing within the 1-hour NO_2 NAAQS requires or allows for retroactive application of the rule. Further, as explained in Section IV.C. of this Response, it is unlikely that consideration of the new 1-hour standard would alter IEPA's BACT determination for NOx. Lastly, the remand of the Permit to evaluate the 1-hour NO_2 NAAQS would invariably lead to substantial and unwarranted delay.

IEPA did not act clearly erroneously in applying only those regulations that were **in effect** at the time it made its final permitting decision. IEPA had no obligation to retroactively apply the 1-hour NO_2 NAAQS that became effective after issuance of the Permit. Therefore, the Board should deny Petitioner's claims regarding 1-hour NO_2 NAAQS.

C. IEPA's Evaluation That Vulcan's Modified Source Will Not Cause or Contribute to a Violation of the Annual NO_2 NAAQS Is Sufficient to Satisfy Consideration of the 1-Hour NO_2 NAAQS.

Notwithstanding the procedural bar to Petitioner's claim and the fact that IEPA acted appropriately in not considering a regulation that was not effective on the date the Permit was issued, remand of the Permit to consider the 1-hour NO_2 NAAQS is unnecessary. Moreover, EPA was allowed permitting authorities to use the annual NO_2 demonstration as a surrogate for demonstrating that the proposed modification did not cause or contribute to a violation of the 1-hour NO_2 NAAQS. *See* Preamble to Primary National Ambient Air Quality Standards for Nitrogen Dioxide, Final Rule, 75 Fed. Reg. 6474, 6525 (Feb. 9, 2010).

Section 165 of the CAA requires a demonstration that allowable emissions from the proposed major modification "will not cause, or contribute to, air pollution in excess of any . . . national ambient air quality standard in an air quality control region." CAA § 165(a)(3), 42

U.S.C. § 7475(a)(3). EPA regulations also require a demonstration that the allowable emission increase would not cause or contribute to violation of "[a]ny applicable maximum allowable increase over the baseline concentration in any area" (also known as a PSD increment). *See* 40 C.F.R. § 52.21(k). IEPA determined that Vulcan's proposed plant would not "be accompanied by exceedances of the NAAQS for . . . NO_2." *See* Responsiveness Summary at 77. IEPA evaluated compliance with the annual NO_2 NAAQS, as the 1-hour NO_2 NAAQS was not effective prior to the Permit's issuance. Project Summary at Section VIII, (noting NOx annual averaging period).

In response to public comments on the proposed 1-hour NO_2 NAAQS, EPA understood that sources subject to permitting shortly after promulgation of the 1-hour NO_2 NAAQS would have difficulty demonstrating compliance with the new standard. *See* 75 Fed. Reg. at 6525. EPA acknowledged, for example, that it needs to evaluate whether demonstrating compliance with Section 165 of the CAA requires issuance of a new 1-hour NO_2 PSD increment. *See* 75 Fed. Reg. at 6525 ("Historically, EPA has developed increments for each applicable averaging period for which a NAAQS has been promulgated."). No 1-hour NO_2 PSD increment has been established as of the date of this Response. Further, critical background data for a new 1-hour NO_2 PSD increment is not available and will not become available until a new NO_2 air quality monitoring network design is deployed. *See* 75 Fed. Reg. at 6503-04 ("EPA recognizes that the data from the current NO_2 network is inadequate to fully assess compliance with the revised NAAQS.").

Until the uncertainties and hurdles in the implementation of the 1-hour NO_2 NAAQS are resolved, EPA determined that it was appropriate to allow sources to use the annual NO_2 NAAQS to demonstrate compliance with both the 1-hour and annual NO_2 NAAQS. *See* 75 Fed.

Reg. at 6525 ("major new and modified sources applying for NSR/PSD permits will initially be required to demonstrate that their proposed emissions increases of NOx will not cause or contribute to a violation of **either the annual or 1-hour NO2 NAAQS and the annual PSD increment**") (emphasis added). IEPA effectively did just that by finding that Vulcan demonstrated that it would not cause or contribute to a violation of the annual NO_2 NAAQS. *See* Responsiveness Summary at 77; *see also* Project Summary at Section VIII.[30]

Accordingly, the Board should deny review on this issue. IEPA is not currently required to conduct any compliance demonstration with respect to NO_2 NAAQS beyond that which it already performed.

V. PETITIONER'S ASSERTION THAT VULCAN'S PSD PERMIT, IF REMANDED, MUST CONTAIN BACT LIMITS FOR CO_2 IS EVIDENCE OF PETITIONER'S MOTIVATION FOR THIS APPEAL, WHICH IS DELAY WITH THE HOPE THAT SUCH DELAY WILL REQUIRE IMPOSITION OF CO_2 BACT.

The Board should generally limit its review to those issues properly raised by a petitioner on appeal. *See Conoco Phillips*, slip op. at 44-45. Petitioner, by its own statement, does not appeal IEPA's decision to not include BACT CO_2 limits in Vulcan's PSD permit. *See* Petition at 39; *see also* Responsiveness Summary at 8 (IEPA noting that the BACT analysis does not and should not address CO_2 because CO_2 is not yet regulated under the PSD program). Accordingly, the Board should not consider this an issue raised on appeal. See, *e.g.*, *Dominion* Energy, 12 E.A.D. at 598 n. 173 (not deciding an issue on appeal in part because "Petitioner in fact appears to argue that it has not raised this issue"). Moreover, the Board should not require BACT CO_2

[30] With the impending effective date of the new 1-hour NO_2 NAAQS, in an abundance of caution, though not required, IEPA performed a "doubly conservative" analysis and determined that it was "highly unlikely that operation of the lime kiln [would] cause a violation of the new 1-hour NO_2 standard." *See* Memorandum from Matthew Harrell, IEPA Air Quality Planning Section, to Minesh Patel, IEPA Permit Section, re: "Vulcan-Manteno PSD Updates (091806AAB – Construction Permit 96020014)," at 2 (Apr. 8, 2010), attached as Exhibit I

limits that were not in effect on the date of the Permit's issuance and that will not become effective, if at all, until January 2, 2011. Rather, the Board should view Petitioner's request that the Board order the inclusion of CO_2 BACT limits as what it is – the motivation for this appeal. The motivation is to delay effectiveness on the Project until after January 2, 2011, so that Petitioner can argue more vociferously in a future appeal that CO_2 BACT must apply. As discussed above, the issues raised in this appeal are without merit, and Petitioner's objective to delay effectiveness would not achieve Petitioner's desired outcome of inclusion of CO_2 limitations in the Permit. The issues before the Board on appeal are merely a pretext for delay to force Vulcan, IEPA, and the Board to address Petitioner's real objective, which is requiring CO_2 reductions where none are mandated by law.

The Petitioner's apparent basis for raising the issue of CO_2 BACT limits rests on the issuance of EPA's April 2, 2010, Final Reconsideration of the "Johnson Memo" on GHG applicability. *See Reconsideration of Interpretation of Regulations that Determine Pollutants Covered by Clean Air Act Permitting Programs*, Final Action on Reconsideration of Interpretation, 75 Fed. Reg. 17,004 (Apr. 2, 2010) ("Final Reconsideration"). EPA determined in the Final Reconsideration that PSD BACT will begin to apply to GHGs on January 2, 2011 "assuming that EPA issues final GHG emissions standards under section 202(a) . . . as proposed." *See* 75 Fed. Reg. at 17,019. Accordingly, the Petitioner suggests that because Vulcan's PSD permit **may** not be **final** (*i.e.*, effective) until after January 2, 2011, the Board should require that IEPA apply CO_2 BACT limits if the Board remands the Permit for any reason.

Petitioner is wrong for multiple reasons. First, the Final Reconsideration clearly states that "each PSD permit **issued on or after January 2, 2011** would need to contain provisions

that satisfy the PSD requirements that will apply to GHGs as of that date." *See* 75 Fed. Reg. at 17,021. (Emphasis added.) As discussed in detail in Section IV, *supra,* the issuance date of a permit is distinct from the final or effective date of that permit. A permitting authority need only apply the law in effect at the time a final permitting decision is made, *i.e.*, the date that the permit is initially issued. *See, e.g., Ziffrin v. United States*, 318 U.S. 73, 78 (1943); *Dominion Energy*, 12 E.A.D. at 614-16; *Phelps Dodge*, 10 E.A.D. 478 n. 10. IEPA issued its final permitting decision on Vulcan's PSD permit on April 9, 2010. Whether Vulcan's PSD permit becomes final and effective at some later date is inapposite. As of the date Vulcan's PSD permit issued, PSD did not apply to GHGs. Therefore, IEPA was, and should not be, required to set CO_2 BACT limits with respect to Vulcan's PSD Permit, even if there is some delay that results from this appeal. *See Appalachian Voices v. State Air Pollution Control Board*, 2010 WL 2035119, at *5 (Va. App. May 25, 2010) ("CO_2 is not a 'regulated NSR pollutant' under the PSD permitting program, and the Board was not required to complete a BACT analysis to establish permit limits for CO_2 emissions at the time it *issued* the . . . PSD permit) (emphasis added). Second, EPA notes in the Final Reconsideration that "permitting authorities that issue permits before January 2, 2011 . . . should, use the discretion currently available under the BACT provisions of the PSD program to promote technology choices for control of criteria pollutants that will also facilitate the reduction of GHG emissions." *See* 75 Fed. Reg. at 17,020. IEPA has done just that. *See* Responsiveness Summary at 8 (explaining that the preheater tower is an example of how the "proposed lime plant would be designed to reduce its GHG emissions, with features that reduce its fuel and electricity consumption").[31]

[31] Moreover, IEPA went one step further and noted that the preheater tower is estimated to reduce CO_2-equivalent (CO_2e) annual emissions by 45,360 tons per year.

Finally, whether regulations will become effective and PSD applicable to GHGs on January 2, 2011, is speculative at best.[32] A permitting authority is not required to consider law that may become applicable at some point in the future, if at all. Likewise, the Board does not have the authority to order consideration of such a future applicable requirement. Petitioners point out that there are several variables that could occur between the date of this appeal and final action on this appeal, including resolution of various court cases that could impact the viability of the very basis for Petitioner's request. This is true. And just as Petitioner predicts a favorable outcome in those court cases, so do EPA and others, except their definition of *favorable outcome* is very different. Congress could act in the meantime preempting the basis for Petitioner's request. Petitioner is asking the Board to act on mere speculation. Respectfully, for the Board to accede to Petitioner's request is not good policy and is contrary to law.

In sum, the Board should disregard Petitioner's CO_2 request. The Petitioner did not raise CO_2 BACT limits on appeal. Moreover, Petitioner did not even allege that IEPA acted erroneously by not setting CO_2 BACT limits because, as of the date of permit issuance, the PSD program did not apply to GHGs.

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[32] Despite EPA's attempts to develop a manageable regulatory approach to the situation by both delaying the effects of the regulations and publishing a Tailoring Rule, EPA faces opposition to the new rulemaking. For example, mining and agricultural groups filed suit on April 2, 2010, challenging the rule. *See Coalition for Responsible Regulation v. EPA*, No. 10-1073, (D.C. Cir. petition filed April 2, 2010). These groups question whether EPA has authority under the CAA to regulate stationary source GHG emissions. Challenges to the Tailoring Rule are expected as well. Moreover, Senator Murkowski and 40 cosponsors introduced legislation in the Senate that would strike down EPA's endangerment finding. The legislation has been referred to the Senate Committee on Environment and Public Works. Similar proposals have been introduced in the House and referred to the House Committee on Energy and Commerce. *See, e.g.,* S.J.Res. 26, 111th Cong. (2010); H.R.J.Res. 77, 111th Cong. (2010).

VI. CONCLUSION

For the reasons set forth herein, Vulcan respectfully requests that the EAB deny review of all issues raised by Petitioner in this appeal.

In addition, Vulcan respectfully requests that the EAB deny Petitioner's request for oral argument. The Board's procedural rules do not provide a right to an oral argument. Recognizing that oral argument is entirely within the Board's discretion, Vulcan asks the Board to rule that none of the issues in the Petition warrant oral argument. All of the issues have been before the Board in one form or another over the last five years, and the Board through the various opinions in those cases has demonstrated that it has a sufficient understanding of the issues such that oral argument will not assist the Board in resolving the matter but will only result in further delay, which jeopardizes the continued viability of the Project.

This appeal is all about delay. Petitioner has raised specious arguments obviously intended to cause the Project to be delayed even further, using the EAB as a proxy for this delay. The Project has been pending since 2002. Vulcan's product will be used to control emissions by other sources; it is an environment-friendly product. The Permit more than adequately protects the environment under the PSD regulations. Vulcan requests that the Board not delay in its decision-making regarding this appeal and that it deny review of all issues presented by Petitioner.

Respectfully submitted,

VULCAN CONSTRUCTION MATERIALS, LP

By: _____
one of its attorneys

Dated: June 14, 2010

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Exhibit List

Exhibit A	PSD Permit
Exhibit B	Responsiveness Summary
Exhibit C	Hearing Transcript
Exhibit D	Sierra Club's Request for Extension of Public Comment Period
Exhibit E	IEPA Calculation Sheet
Exhibit F	2008 BACT Analysis Update
Exhibit G	PM2.5 Analyses
Exhibit H	Project Summary
Exhibit I	1-Hour NO_2 NAAQS Analysis

CERTIFICATE OF SERVICE

I certify that on the 14th day of June, 2010, I did file electronically **RESPONSE TO THE PETITION** on behalf of Vulcan Construction Materials, LP, addressed to the Clerk of the Environmental Appeals Board as follows:

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

I further certify that I did send a true and correct copy of the same by First Class Mail with postage fully paid to:

David C. Bender McGillivray Westerberg & Bender LLC 305 South Paterson Street Madison, WI 53703 Tel. 608-310-3560 Fax. 608-310-3561	Douglas P. Scott, Director Illinois Environmental Protection Agency 1021 North Grand Avenue East P.O. Box 19276 Springfield, IL 63794-9276
Robert A. Kaplan, Regional Counsel Office of Regional Counsel U.S. EPA, Region 5 77 West Jackson Boulevard Chicago, IL 60604-3507	James Gignac Sierra Club 70 East Lake Street, Suite 1500 Chicago, IL 60602 Tel. 312-251-1680 Fax. 312-251-1780
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Joshua More
On behalf of Vulcan Construction Materials, LP

Dated: June 14, 2010

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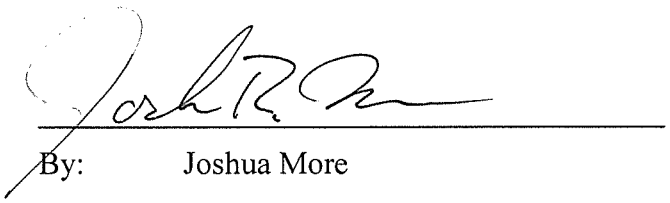
CERTIFICATE OF IDENTICAL PAPER COPY

I, Joshua R. More, certify that the foregoing **RESPONSE TO THE PETITION** and accompanying exhibits are identical copies of those filed in this case with the Environmental Appeals Board on June 14, 2010



By: Joshua More

Dated: June 14, 2010

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