

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

_____)	
In re:)	
)	
South Shore Power, L.L.C.)	PSD Appeal No. 03-02
)	
PSD Permit No. 342-01)	
_____)	

ORDER DENYING REVIEW

On January 30, 2003, the Michigan Department of Environmental Quality (“MDEQ”) issued a federal prevention of significant deterioration (“PSD”) permit (“Final Permit”) to South Shore Power, L.L.C. (“South Shore”) for construction of an electric generating facility (“Facility”) in Bridgman, Michigan. Several residents living in the vicinity of the Facility contest issuance of the Final Permit on numerous grounds.

I. BACKGROUND

A. Regulatory Background

The Clean Air Act (“CAA”) established the PSD program to regulate construction of certain new or modified sources of air pollution in areas where air quality meets or is cleaner than the national ambient air quality standard (“NAAQS”), known as “attainment” areas, as well as in areas that cannot be classified as “attainment” or “non-attainment” (“unclassifiable areas”). CAA §§ 160-169, 42 U.S.C. §§ 7470-7479. Congress enacted the PSD provisions for the purpose of,

among other things, “insur[ing] that economic growth will occur in a manner consistent with the preservation of existing clean air resources.” CAA § 160(3), 42 U.S.C. § 7470(3).

NAAQS are “maximum concentration ‘ceilings’” for particular pollutants, “measured in terms of the total concentration of a pollutant in the atmosphere.” U.S. EPA Office of Air Quality Planning, Draft New Source Review Workshop Manual (“NSR Manual”)¹ at C.3. NAAQS are currently in effect for six air contaminants known as “criteria” pollutants: sulfur oxides (measured as sulfur dioxide (“SO₂”)); particulate matter (“PM”)(measured as PM₁₀); carbon monoxide (“CO”); ozone (measured as volatile organic compounds (“VOCS”)); nitrogen dioxide (“NO₂”) (measured as any emissions of any nitrogen oxides (“NO_x”)); and lead. 40 C.F.R. § 50.4-.12.

Under the PSD program, applications for permits to build new stationary sources² of pollution are subject to a pre-construction review process if such sources have the potential to emit selected pollutants at rates equal to or in excess of specified “significance” levels.³ The PSD

¹The NSR Manual has been used as a guidance document in conjunction with new source review workshops and training, and as a guide for permitting officials with respect to PSD requirements and policy. Although it is not accorded the same weight as a binding Agency regulation, the NSR Manual has been looked to by this Board as a statement of the Agency’s thinking on certain PSD issues. *See, e.g., In re Hawaii Elec. Light Co.*, 8 E.A.D. 66, 72 n.7 (EAB 1998); *In re EcoEléctrica, L.P.*, 7 E.A.D. 56, 59 n.3 (EAB 1997); *In re Masonite Corp.*, 5 E.A.D. 551, 558 n.8 (EAB 1994).

²*See* 40 C.F.R. § 52.21(b)(1) (major stationary source is defined as including, inter alia, a fossil fuel-fired steam electric plant of more than 250 million British thermal units per hour heat input that emits 100 tons per year of more of any pollutant subject to regulation under the CAA).

³“Significant” emission rates triggering PSD review have been set for the six criteria pollutants and several other pollutants. *See* 40 C.F.R § 52.21(b)(23).

permitting requirements process is pollutant-specific, meaning that a facility may emit many pollutants but only one or a few may be subject to PSD review depending on whether the facility is in an attainment area (or unclassifiable area) for a particular pollutant, and the amount of pollutant emitted.

A major component of the PSD review process is a requirement by the permit applicant to demonstrate, through an analysis of the anticipated air quality impacts associated with the proposed facility, that the facility will not cause or contribute to an exceedance of any NAAQS or air quality “increment.” CAA § 165(a)(3), 42 U.S.C. § 7475(a)(3); 40 C.F.R. § 52.21(k)-(m). Air quality increments represent the maximum allowable increase in a particular pollutant’s concentration that may occur above a baseline ambient air concentration for that pollutant. *See* 40 C.F.R. § 52.21(c) (increments for six regulated air pollutants). The PSD increment concept was designed to accommodate economic growth and increased pollution associated with such growth while also placing limits on new pollution. *See* NSR Manual at 5.

In conducting air quality analyses, applicants for PSD permits ordinarily employ air quality models to predict the impacts on ambient air of pollutants subject to PSD review. In this regard, the applicable regulations at 40 C.F.R. part 52 state that “[a]ll estimates of ambient concentrations required under this paragraph shall be based on applicable air quality models, data bases, and other requirements specified in Appendix W of part 51 of this chapter (Guidelines on Air Quality Models).” 40 C.F.R. § 52.21(l)(1). Air quality models ordinarily take into account such factors as a proposed facility’s geographical, topographical, and meteorological setting in order to predict

impacts on ambient air quality. *See generally* 40 C.F.R. pt. 50, App. W (*Guideline on Air Quality Models*); 40 C.F.R. § 52.21(k)(1).

Another important requirement of the PSD program is that major new stationary sources employ the “best available control technology” (“BACT”) to limit emissions of pollutants that exceed levels of significance. 40 C.F.R. § 52.21(j)(2). The definition of BACT in the PSD Regulations reads, in relevant part, as follows:

[BACT] means an emissions limitation * * * based on the maximum degree of reduction for each pollutant subject to regulation under [the] Act which would be emitted from any proposed major stationary source * * * which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source * * * through application of production processes or available methods, systems, and techniques * * * for control of such pollutant.

40 C.F.R. § 52.21(b)(12); *see also* CAA § 169(3), 42 U.S.C. § 7479(3). During each BACT analysis, which is done on a case-by-case basis, the reviewing authority evaluates the energy, environmental, economic, and other costs associated with alternative pollution control technologies, and then specifies an emissions limitation for the source that reflects the maximum degree of reduction achievable for each pollutant that is emitted in greater than “significance” levels. *See* NSR Manual at C.3.; 40 C.F.R. § 52.21(j)(3).

B. Factual and Procedural Background

In November 2001, South Shore submitted an application for construction of a natural gas-fired electrical generating facility in Bridgman, Michigan. *See* MDEQ, Air Use Permit Application (Nov. 26, 2001). In June 2002, MDEQ issued a draft permit for the Facility. On August 21, 2002, MDEQ announced a one-month public comment period to allow written and oral comment on South Shore's draft permit. On the same date, MDEQ released a Fact Sheet and Supplemental Report setting forth its analysis of South Shore's permit application. *See* Fact Sheet (Aug. 22, 2002); MDEQ, Supplemental Report (Aug. 22, 2002) ("SR"). The public comment period concluded with a public hearing held September 24, 2002, which approximately 94 people attended. A number of individuals submitted written comments during the public comment period and made oral comments at the public hearing.

As configured, the Facility consists of two natural gas-fired turbines, each capable of producing 170 megawatts ("MW") of electricity. SR at 1. Each turbine contains a heat recovery steam generator (HRSG) that generates steam using exhaust from the gas-fired turbines. *Id.* The steam powers a steam turbine that drives an electric generator, thereby producing additional power. *Id.* Each HRSG is equipped with a natural gas-fired duct burner to provide additional steam generating capability, thus increasing the HRSG's maximum power generating capacity. *Id.* The duct burners are limited under the Final Permit to 2,000 hours of operation per year for each duct burner. *Id.* An in-line mechanical draft cooling tower is utilized to cool the steam exhausting from the steam turbine generator. *Id.*

The site of the proposed Facility is located in an attainment zone for all six criteria pollutants (CO, NO_x, SO₂, PM₁₀, ozone, and lead). *Id.* MDEQ determined that the Facility would be a major stationary source of pollutants, and that its emissions of CO, NO_x, PM 10, and VOCs would exceed significance levels, *see supra* Part I.A., thereby triggering PSD review for these pollutants. SR at 3. In accordance with PSD requirements, MDEQ performed an air quality or dispersion analysis to determine if the Facility's emissions of these pollutants would exceed NAAQS and air quality increments. MDEQ's analysis determined that the Facility's emissions of the criteria pollutants would not exceed any NAAQS or air quality increments.⁴

MDEQ also determined that BACT for the Facility's emissions of pollutants subject to PSD review would be achieved through use of the following technologies:

NO_x: Use of Selective Catalytic Reduction ("SCR"), a process in which ammonia is injected into the gas stream to chemically react with NO_x in turbine exhaust and convert it to nitrogen and water.

CO and VOCs: Use of efficient turbines and catalytic oxidation.

⁴According to the Supplemental Report, MDEQ modeled emissions of NO_x, CO, and PM-10. In determining that NO_x and PM-10 emissions would not exceed NAAQS or air quality increments, MDEQ modeled emission of these pollutants together with impacts from other sources and background concentrations. MDEQ did not conduct a full analysis including other sources and background concentrations for CO, because the Facility's predicted CO impacts on ambient air were determined to be insignificant. SR at 4.

PM-10: Use of pipeline-quality natural gas.

SR at 6-7.

On January 30, 2003, MDEQ issued a Final Permit to South Shore for construction of the Facility. Accompanying the Final Permit was a Response to Comments document responding to significant comments received during the public comment period and the public hearing. *See* MDEQ Resp. Ex. 4 (MDEQ, *Response to Comments Document* (Jan. 15, 2003))("RTC").

On February 28, 2003, several residents of Bridgman, Michigan -- John Hirmer, Dieter Kruger, Elizabeth Scully, and Dale Sorget -- ("Petitioners") filed a joint petition requesting on several grounds that the Final Permit be remanded for "additional evaluation and/or modifications * * * to ensure to the public that this facility will not negatively affect the environment and health of the residents." Petition at 1.

In their Petition, Petitioners make the following arguments:

(1) Personnel changes and a resulting lack of managerial consistency within MDEQ could adversely affect MDEQ's ability to "adequately judge the permit";

(2) MDEQ's air quality dispersion modeling was flawed because it did not reflect site-specific topographical and meteorological information from the area immediately surrounding the Facility;

(3) MDEQ should conduct an economic impact study of the siting of multiple power plants in southwestern Michigan and north central Indiana.

(4) MDEQ did not adequately evaluate the harmful impacts associated with the Facility's release of "tremendous amounts of humidity";

(5) MDEQ failed to respond to commenters' concerns about offensive ammonia odors stemming from the proposed Facility's use of SCR technology to reduce NOx emissions;

(7) South Shore appeared to err in calculating the Facility's natural gas use, heat inputs, and air quality analysis. MDEQ erred, in turn, by accepting these flawed calculations;

8) MDEQ disregarded commenters' concerns about Legionnaire's Disease,⁵ which may be transmitted through water droplets in the water vapor released from the Facility; and

(9) MDEQ should require South Shore to install dry cooling technology, similar to that used at the Indeck plant in Niles, Michigan, rather than cooling towers.

Petition at 2-14.

⁵Legionnaires' Disease is caused by a bacterium of the genus *Legionella*. Legionnaires' Disease is a potentially fatal, multi-system respiratory illness, accompanied by pneumonia. It is a major cause of sporadic, community-acquired pneumonia. MDEQ Resp. Ex. 5, at 4-5 (Association of Water Technologies, *Legionella, An Update and Statement by AWT* 4-5 (July 2000)). According to the Center for Disease Control, Legionnaires' Disease infects 10,000 to 15,000 persons annually in the United States. The Occupational Safety and Health Administration (OSHA) estimates that 25,000 cases of the illness occur each year and cause more than 4,000 deaths. *Id.* at 5.

At the request of the Board, on April 3, 2003, MDEQ filed a response to the petition. *See* Response of the Michigan Department of Environmental Quality (“MDEQ Resp.”).

For the reasons provided below, we determine that Petitioners’ arguments do not warrant review in accordance with the governing regulations at 40 C.F.R. part 124.

II. DISCUSSION

A. Standard of Review

To be reviewed on the merits, a petition for review of a PSD Permit must demonstrate that the permit condition for which review is being sought is based on:

- (1) A finding of fact or conclusion of law which is clearly erroneous, or
- (2) An exercise of discretion or an important policy consideration which the Environmental Appeals Board should, in its discretion, review.

40 C.F.R. § 124.19(a). The burden of demonstrating that review is warranted rests with the petitioner challenging the permit condition. *Id*; *see In re Tondu Energy Co.*, 9 E.A.D. at 710, 714

(EAB 2001); accord *In re AES Puerto Rico.*, 8 E.A.D. 66, 71 (EAB 1998); *In re EcoEléctrica, L.P.*, 7 E.A.D. 56, 61 (EAB 1997).

In complying with the above requirements, a petitioner must include specific information supporting its allegations. *In re Zion Energy, L.L.C.*, 9 E.A.D. 701, 705 (EAB 2001); *In Re Sutter Power Plant*, 8 E.A.D. 680, 688 (EAB 1999). As we have 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 that are being raised for review, the petitioner must explain why the permit issuer's previous response to those objections is clearly erroneous or otherwise warrants review. *In re Kawaihae Cogeneration Project*, 7 E.A.D. 107, 114 (EAB 1997); see also *In re Puerto Rico Elec. Power Auth.*, 6 E.A.D. 253, 255 (EAB 1995). Failure to do so will result in denial of review. See, e.g., *In re Hawaii Electric Light Co. ("HELCO")*, 8 E.A.D. 66, 71-72 (EAB 1988).

Moreover, in considering whether to grant review of a PSD permit, the Board will assess whether the issues raised are governed by the PSD program, and are therefore within the Board's scope of review, or are instead outside the scope of the Board's jurisdiction. See *In re Sutter Power Plant*, 8 E.A.D. at 688; *Zion Energy*, 9 E.A.D. at 706; *In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 126-27 (EAB 1999). As we have explained previously, the Board's jurisdiction, and thus review power, is limited, extending only to those issues which are directly related to permit conditions that implement the federal PSD program or that are otherwise linked to the PSD program in the context of a particular case. See *Knauf Fiber Glass*, 8 E.A.D. at 127, 161.

B. Personnel Changes Within MDEQ

Petitioners suggest that recent personnel managerial changes within MDEQ as well as “change in the government of * * * Michigan” could have harmed the agency’s permitting analysis in this proceeding due to the lack of managerial “consistency” and new personnel of uncertain experience and educational background. Petition at 2. Petitioners claim that “the new personnel changes could adversely affect the quality and the ability of the new individuals to adequately judge the permit and its contents as it relates to the accuracy of the data and how it pertains to the health and safety of the residents of Lake Township.” Petition at 2. *Id.*

Petitioners’ arguments in this regard appear to have little foundation or support and are merely speculative. As MDEQ argues, Petitioners’ concerns about administrative changes within MDEQ “[d]o not identify any clear error of fact or law or important policy matter warranting review.” MDEQ Resp. at 4. Instead, Petitioners appear to be using the PSD process to voice generalized apprehensions about MDEQ rather than to identify specific shortcoming in the Final Permit. As we have held in a related context, the Board’s role under the petition process is “to examine specific permit conditions that are claimed to be erroneous, not to address generalized concerns broadly directed toward * * * capabilities of this or any other regulatory agency.” *In re Ecoelectrica, L.P.*, 7 E.A.D. 56, 70 (EAB 1997)(where concerns were raised regarding a permitting authority’s capacity to enforce a permit); *see also In re Brine Disposal Well*, 4 E.A.D. 736, 746 (EAB 1993)(review denied where the petitioner merely alleged generalized concerns over EPA’s ability to enforce compliance with regulatory requirement).

Moreover, they are too speculative to warrant review under the Board's standards. *See, e.g., In re Three Mountain Power, LLC*, PSD Appeal No. 01-05, slip op. at 28 (EAB, May 30, 2001) (holding that petitioner's objections to provision in PSD permit were speculative because they lacked supportive information and thus did not warrant review); *see also In re Colmac Energy, Inc.*, 2 E.A.D. 687, 689 (Adm'r 1988). In addition, they pertain to concerns about personnel-related impacts on MDEQ's capacity to properly develop the permit before us. The permit has, of course, at this point been fully developed. Based on our review of the permit, we see no indication that Petitioners' personnel-related concerns have compromised MDEQ's capacity to properly develop the permit.

Because Petitioners' arguments in this regard are vague and speculative, we deny review of the Final Permit on this basis.

C. Air Quality Analysis

Petitioners allege that MDEQ's air quality analysis is flawed because the air quality dispersion modeling, which found that NAAQS and air quality increments would not be exceeded, did not reflect variability in the local topography as well as site-specific meteorological data. Petition at 2. In particular, Petitioners state that MDEQ's air dispersion analysis failed to reflect that (1) "the site is located between two lateral moraines, within a mile of Lake Michigan"; (2) "Lake Township and the surrounding area would be the recipient of the air emissions from the proposed plant during periodic climactic temperature inversions and * * * wind direction/speed

phenomena that occur almost daily”; and (3) “an offshore breeze develops that allows the pollutants and water vapor to be carried out over a populated area, then onto lake Michigan.” Petition at 3.

In its Response to Comments, MDEQ addressed terrain and meteorological factors in discussing the air modeling upon which its air quality impact analysis was based. In particular, MDEQ stated that the Industrial Source Complex model that it used to develop its air quality analysis “[took] into account actual and potential emissions, *terrain features*, building downwash, and numerous meteorological variables.” RTC at 8 (emphasis added).

MDEQ also responded specifically to concerns about MDEQ’s employing meteorological information for South Bend, Indiana, rather than site-specific meteorological information, explaining that “it is unlikely that site-specific data would yield predicted impacts significantly different from the South Bend data used in this study.” *Id.* at 9. As MDEQ further explained, under a worst-case scenario, the NOx impact would still be significantly below the NAAQS and air quality increments:

The worst-case meteorology data set assumed the area is under a permanent inversion layer capped at 100 meters. The atmospheric stability is forced to be permanently stable with winds never exceeding 3.5 meters per second. These modified meteorological conditions force minimal dispersion with pollutants remaining trapped near ground levels. This worst-case meteorology caused

maximum NOx impact concentration from the facility to increase by less than 1 microgram per cubic meter (e.g., less than 1 percent of the health standard). The worst-case impact, when added to other contributing sources in the area and background concentrations, is still well below the NAAQS.

RTC at 9.

In view of MDEQ's response to Petitioners' earlier comments regarding terrain analysis and meteorology, Petitioners' objections before this Board lack sufficient specificity to warrant Board review. Here Petitioners provide no acknowledgment or response to MDEQ's representations that it took terrain features into consideration in its air quality impact analysis. The Petition fails altogether to respond to MDEQ's representations that even under a "worst case" scenario with conditions much less conducive to pollution dispersion than those suggested by Petitioners' description of local meteorology, the NAAQS and air quality increments would not be exceeded.

Because Petitioners here do not specifically address how MDEQ's comments failed to address their terrain and meteorology concerns, Petitioners' arguments do not justify Board review. *See In re Kawaihae Cogeneration Project*, 7 E.A.D. 107, 114 (EAB 1997); *see also In re Puerto Rico Elec. Power Auth.*, 6 E.A.D. 253, 255 (EAB 1995).⁶

⁶Moreover, obtaining site-specific terrain or meteorological information is not a requirement of the PSD regulations. Petitioners' arguments in this regard contradict the weight of the Board's jurisprudence. Generally, while it is important that air quality data be representative,

For the foregoing reasons, review of the Final Permit is denied on this basis.

D. Economic Impacts Analysis

Petitioners express the concern that no study has been performed to determine the economic consequences that “this Facility and other proposed facilities are going to have on Berrien County and neighboring counties in Michigan and Indiana” as a result of deteriorating air quality. Petition at 4. Petitioners warn that “failure to adequately monitor the significant increases of criteria air pollutants to the air in this area could result in this area losing the ability to attract industry that would lead to further employment opportunities, and adversely impact our community’s health.” *Id.* at 5. Suggesting that such a study would “ensure that this area does not suffer the health and economic consequences of multiple power plants,” Petitioners request that

the choice of appropriate data sets for the air quality analysis is largely left to the discretion of a permitting authority, absent some indication of non-representativeness. *See Hawaii Elec. Light Co.*, 8 E.A.D. 66, 97 (EAB 1998)(citing *In re Hibbing Taconite Co.*, 2 E.A.D. 838, 851 (Adm’r 1989)(denying review of permitting authority’s decision to use “representative” off-site data, rather than requiring pre-application, on-site air monitoring); *In re Encogen Cogeneration*, 8 E.A.D. 244, 256 (EAB 1999) (holding that in conducting air quality assessment, permitting authority is not required to obtain site specific data; instead it may use representative data gathered from off-site locations and/or gathered from time periods other than the year immediately preceding the permit application); *accord In re Kawaihae Cogeneration Project*, 7 E.A.D. at 128; *In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 147 (EAB 1999)(upholding permitting authority's exercise of discretion in exempting permit applicant's collection of pre-construction, on-site ambient air data or meteorological data). Here, Petitioners’ comments and objections do not pose a serious challenge to the representativeness of the air quality data set used.

the U.S. EPA conduct “an economic impact analysis” on the proposed siting of multiple power plants in southwestern Michigan and north central Indiana. *Id.* at 4.

While issues related to siting are not necessarily beyond the Board’s jurisdiction, they nevertheless are issues on which we typically defer to other agencies that are assigned the tasks of determining zoning and land use planning. *In re Indeck-Niles*, PSD Appeal No. 02-03, at 15-16 (EAB, Mar. 11, 2002). For example, in *Sutter Power*, we declined to include within the PSD permitting process alternative siting locations for a proposed power plant. *In re Sutter Power Plant*, 8 E.A.D. 680, 689 (EAB 1999). Likewise, in *Hawaii Electric*, we held that land use planning issues “are more properly addressed by agencies within the local government.” *In re Hawaii Elec. Light Co.*, 8 E.A.D. 66, 109 (EAD 1998). *See also* CAA § 131, 42 U.S.C. § 7431 (providing that “[n]othing in [the CAA] constitutes an infringement on the existing authority of counties and cities to plan or control land use, and nothing in this Act provides or transfers authority over such land use.”).⁷

Petitioners have not shown a sufficient reason for the Board to depart from these precedents. Therefore, we decline review of the Final Permit based on arguments concerning local business or land-use planning issues properly left to other government agencies.

⁷Similarly, in *EcoEléctrica*, we upheld the permitting authority’s decision to defer to the appropriate state entities the question of whether alternative methods, such as energy conservation, might make the proposed power plant unnecessary. *In re EcoEléctrica, L.P.*, 7 E.A.D. 56, 71-74 (EAB 1997).

To the extent that Petitioners' arguments can be construed as raising air quality issues as a corollary to their siting concerns, such issues are adequately addressed by MDEQ's air quality analysis. In accordance with the PSD program, NAAQS are set at levels designed to protect public health, *see* 40 C.F.R. § 50.2, and air quality increments are designed to accommodate a measure of increased pollution associated with economic growth while preventing serious degradation of air quality. *See* 40 C.F.R. § 52.21(c),(k); NSR Manual at C.3. As noted, MDEQ's air quality analysis determined that these two indicators would not be exceeded.⁸

Moreover, contrary to the implication of Petitioners' comments, MDEQ addressed the issue of multiple-source pollution impacts in its air quality analysis. *See supra* note 4; RTC at 10; SR at 4. In particular, in determining that NAAQS and air quality increments would not be exceeded for NO_x and PM₁₀ (whose emissions exceeded significance levels), MDEQ analyzed the Facility's predicted emissions of NO_x and PM₁₀ in conjunction with background levels and existing sources of these two pollutants. SR at 4. MDEQ also responded to a question concerning the scope of its multi-source analysis. RTC at 10. MDEQ explained that its air quality analysis was limited to monitored background data and "emissions for those facilities that

⁸To the extent that Petitioners' challenge could be viewed as an attack on the adequacy of the NAAQS and air quality increments to achieve their intended goals, we have previously held that a permit appeal is generally not the appropriate vehicle for challenging Agency regulations. *See In re Hawaii Electric Light Co., Inc.*, PSD Appeal Nos. 01-24 through 01-29, slip op. at 28 (EAB, Nov. 27, 2001)(denying review of argument challenging the adequacy of PM₁₀ NAAQS to address health effects of sulfate aerosols); *In re Tondu Energy Co.*, 9 E.A.D. 710, 715 (EAB 2001) (declining to review petitioner's argument that current NAAQS for PM₁₀ fails to protect public health); *see also In re City of Port St. Joe and Florida Coast Paper Co.*, 7 E.A.D. 275, 286 (EAB 1997) ("A permit appeal proceeding is not the appropriate forum in which to challenge either the validity of Agency regulations or the policy judgments that underlie them.").

are allowed to operate under an approved permit to install or existed prior to the state permitting program,” and that consequently such an analysis “cannot include any new facility that does not have a permit to install and, therefore, cannot legally emit pollutants to the atmosphere.” *Id.* As MDEQ elaborated:

If a facility submits an application for a permit to install for location in Cass or Berrien Counties, the impacts from the proposed facility plus the impacts from South Shore Power and any other facility that has a permit approved by the AQD will be analyzed for compliance with the NAAQS and PSD increment.

RTC at 10. In their Petition, Petitioners provide no response to MDEQ’s pointed discussion on how it conducted its multiple pollution source analysis as well as the scope of that analysis.

In sum, to the extent that Petitioners’s arguments are viewed as raising air quality concerns, they do not merit Board review.

E. Facility’s Humidity Releases

Petitioners claim that MDEQ did not adequately address the issue of the “tremendous amount of humidity generated by the proposed [Facility],” asserting that MDEQ gave this issue a “very low priority.” Petition at 5. Petitioners contend that additional humidity generated by the Facility will cause “abnormal weather conditions to exist in the area surrounding the plant” and

that the U.S. EPA should “monitor this condition closely watching for increased mold, fungi, excess rainfall, for [sic], and icing conditions in the winter.” *Id.*

In response, MDEQ avers that the release of water vapor or moisture is “beyond the scope of the requirements of the PSD program,” contending that none of the analyses mandated by the PSD program “require[s] EPA or MDEQ to address increased humidity, mold, fungi, rainfall or icing conditions from water vapor emissions.” MDEQ Resp. at 7.

In requesting Board review of the PSD permit decision with regard to water vapor emissions, Petitioners seek an enlargement of the Board’s review powers beyond their proper boundaries. As we have held on repeated occasions, the Board’s review power on federally issued PSD permits extends only to issues that relate either to explicit requirements of the CAA’s PSD provisions or EPA’s implementing regulations or that are “otherwise linked to the federal PSD program in the context of this case.” *In re Knauf Fiber Glass*, 8 E.A.D. 121, 161-162 (1999); *see also In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 259 (EAB 1999).⁹

Humidity is not regulated by the CAA. As we have held, an issue of this kind is not subject to PSD review because the PSD regulations *a priori* do not apply to pollutants not

⁹As we noted in *Knauf*, “in determining whether we have jurisdiction, the Board places considerable reliance on how the issue is framed in the petition for review, such as the basis upon which relief is being sought.” *Knauf*, 8 E.A.D. at 161-62.

regulated by the CAA.¹⁰ *See Knauf*, 8 E.A.D. at 163 (holding that Board’s review powers did not extend to proposed facility’s emissions of odors, which are not regulated by the CAA). Because Petitioners have not otherwise demonstrated that their concerns about humidity are linked to the PSD program, we deny review on this issue.^{11,12}

F. Ammonia Odors

¹⁰*See* 40 C.F.R. § 52.21(i)(2) (“the requirements of paragraphs (j) through (r) of this section [PSD requirements] shall apply to any major stationary source * * * under the [Clean Air Act]”).

¹¹There is one exception to the general rule that pollutants that are not directly regulated by the PSD program are not subject to PSD review. It is legitimate to consider unregulated pollutants as collateral environmental impacts in the context of the BACT determination. If a technology has “an incidental effect of increasing or decreasing emissions of unregulated pollutants,” consideration of that effect may be taken into account in selecting BACT for a facility. *See Knauf*, 8 E.A.D. at 163 n.56; *see also In re Tondu Energy Co.*, 9 E.A.D. at 722 n.16. Here, because Petitioners have not raised their concern about humidity releases as a BACT issue, it is not subject to Board review under this exception. *See, e.g., In re Zion Energy, L.L.C.*, 9 E.A.D. 701, 706 (determining that petitioner’s arguments concerning facility’s emissions of unregulated pollutants were not subject to PSD review because they were not raised in context of BACT determination).

¹²While not within the purview of Board review, we nonetheless observe, as MDEQ notes, that humidity issues are directly addressed under Rule 901 of the Michigan Air Pollution Control Rules, which is incorporated as General Condition 6 of the Final Permit for South Shore (added by MDEQ as a state law requirement). RTC at 3-4. Rule 901 provides that a person shall not cause “the emission of an air contaminant or water vapor which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property.” Michigan Department of Environmental Quality, Air Quality Division, *Permit To Install* (Jan. 30, 2003), Condition 6, (citing Mich. Admin. Code r. 336.1901 (1980)). Furthermore, the existence of Rule 901 in the Final Permit, does not *per se* make this humidity issue reviewable in this proceeding.

Petitioners claim that employing SCR to control emissions of pollution from the facility will result in releases of ammonia (ammonia slip) that cause pollution and offensive odor.¹³ Petition at 6. Petitioners also assert that MDEQ’s statement in its response to comments that “[MDEQ] does not believe that the emissions for the process will cause or significantly contribute to the odor problems in the adjacent community” is unfairly dismissive of their concerns about odor impacts in the surrounding community. *Id.* Petitioners request that the Final Permit include a condition that calls for “immediate cessation of plant activities upon any citizens’ complaints of ammonia caused by [the Facility’s] activities.” Petition at 6.

MDEQ argues in response that odors constitute a non-regulated pollutant under the CAA that is not subject to PSD review. MDEQ Resp. at 7-8. We agree. Although we have observed that non-regulated pollutants *are* reviewable in the narrow context of a regulatory agency’s BACT analysis as collateral impacts associated with using alternative control technologies, *see Knauf*, 8 E.A.D. at 163 and *supra* note 11, here Petitioners do not claim error based on this exception to the general rule against reviewing non-regulated pollutants in PSD proceedings.¹⁴

¹³As explained by MDEQ, during the SCR process, a portion of ammonia that is injected into the turbine exhaust does not chemically react with NO_x to generate water and nitrogen. This unreacted ammonia is called “ammonia slip.” *See* Fact Sheet at 3.

¹⁴Petitioners’ comments clearly do not challenge MDEQ’s choice of SCR technology as the appropriate technology to achieve BACT for emissions of NO_x. While Petitioners object to the prospect of obnoxious ammonia odors, they make no statement that can be taken as a challenge to BACT based on MDEQ’s choice of SCR versus another technology, nor do they posit an alternative technology that would be preferable in terms of collateral impacts. Statements made during the public comment period corroborate that the ammonia-related concerns raised during the comment period were about management and monitoring of ammonia slip rather than

See In re Texas Industries, Inc., 2 E.A.D. 277, 278 n.2 (Adm'r 1986) (explaining that odor, as a non-regulated pollutant “can be taken into account as an ‘environmental impact’ when the [EPA] makes its * * * [BACT] determination for regulated pollutants under the [CAA].”).

Thus review of the Final Permit on this basis is denied.

G. Natural Gas Usage and Emissions Data

Petitioners contend that MDEQ appears to have miscalculated the Facility’s natural gas usage, energy input, and emissions of criteria pollutants. Petition at 8. For example, based on Petitioners’ assumption that heat input and output values should be in close balance, Petitioners note that MDEQ’s information on the Facility’s emissions units estimate a lower heat input value than heat output value (measured in British Thermal Units (“BTU”)) from the Facility’s burning of natural gas *Id.* at 7. Petitioners suggest that MDEQ’s reliance on this suspect data resulted in MDEQ’s erroneously predicting “that the impact of the criteria pollutants by [the Facility] * * * will be negligible,” given that “the quantity and quality of natural gas burned will * * * determine the amount of criteria pollutants emitted into the air.” *Id.* Although Petitioners’

Agency’s choice of BACT. None of the comments consolidated in MDEQ’s Response to Comments address, for example, MDEQ’s summary of its BACT analysis of alternative pollution control technologies included in the Supplemental Report issued by MDEQ issued at the start of the public comment period. *See* SR at 6-7. Instead, the consolidated comments seek MDEQ’s assurances on “[w]ho is to monitor the selective catalytic reduction * * * system to ensure the proper operation and maintenance and ensure ammonia slip will be below 10 parts per million (ppm)?” RTC at 13.

arguments in this regard are less than clear, they appear to indicate Petitioners' belief that MDEQ's figures understate the Facility's natural gas use and heat input (and therefore the Facility's emissions, which presumably depend on these two factors).

In its response to the Petition, MDEQ indicates that Petitioners misapplied information in the administrative record concerning the Facility's natural gas usage and heat input (expressed in BTU). MDEQ Resp. at 8. As MDEQ explains, in calculating the total heat input for the Facility, Petitioners included only the heat input for the natural gas used in the Facility's duct burners, but not the natural gas used in the two natural gas-fired turbines, which account for a considerably larger share of the Facility's heat input. *Id.* (citing Final Permit at 5). Thus, Petitioners' omission resulted in a figure for total heat input that is considerably below its actual value, and which appeared to be considerably below the Facility's heat output.¹⁵

MDEQ's argument that Petitioners omitted information on the heat input of the natural gas-fired generators, thus creating false impression of a large imbalance between heat input and heat output, strikes us as convincing. We also reject Petitioners' allegation that MDEQ's air

¹⁵As MDEQ observes, and as we note as well, Petitioners calculated the Facility's heat input value to be 1,014 MMBTU (million BTU), which is the sum of the heat input for each of the two duct burners (507 MMBTU/hr per duct burner \times 2). MDEQ Resp. at 8 (citing Final Permit at 5); Petition at 7. However, MDEQ notes that this calculation fails to include information on the two natural gas-fired burners, whose heat input value, as stated in the administrative record, is 1,779 MMBTU/hr per turbine or 3,558 BTU/hr in total. MDEQ Resp. at 8 (citing MDEQ, *Permit Evaluation Form* (1/15/03)). Thus, Petitioners' omission of the heat input data for the natural-gas fired turbines resulted in Petitioners understating the Facility's heat value by 3,558 BTUs.

quality analysis is suspect on this point, since Petitioners again base this charge upon the allegedly flawed natural gas use and heat input data. Therefore, the Board declines to review the Final Permit on this basis.

H. Legionnaires' Disease

Petitioners contend that MDEQ, in issuing the Final Permit, disregarded nearby residents' concerns about the risks of contracting Legionnaire's Disease ("LD") through dispersal of the Legionella bacteria in water vapor emitted by the Facility's cooling towers. Petition at 8. Petitioners also decry what they consider MDEQ's inadequate response to an "enormous volume of scientific data and documentation" demonstrating this risk provided to MDEQ during the public comment period. *Id.* at 8-9. Among this material, Petitioners in particular reference several reports from the Center for Disease Control ("CDC") and industry associations and a map of residences in close proximity to Facility. *Id.* In addition, Petitioners provide information on population and residence patterns in the vicinity of the Facility as well as selected citations from CDC and industry experts concerning links between LD outbreaks and cooling towers and the challenges involved in controlling the Legionella bacterium in water supplies. *Id.* at 11-13.

In its response to the Petition, MDEQ asserts that "an analysis of potential bacteria that might be emitted in water vapor is beyond the scope of the PSD program." MDEQ's Response at 9. We agree with MDEQ that dispersion of the Legionella bacterium via water vapor emitted by the Facility's cooling tower is not regulated by the CAA. As an unregulated pollutant, it is

therefore not ordinarily reviewable by the Board in a PSD proceeding. In addition, Petitioners make no demonstration of how the issue of LD is otherwise reviewable in this proceeding.¹⁶

Although Petitioners' objections regarding MDEQ's response to commenters' LD concerns do not merit Board review, we note that MDEQ, contrary to Petitioners' assertions, did make an effort to address some of these concerns. For example, in its Response to Comments, MDEQ related that it discussed effects from cooling towers with the U.S. Environmental Protection Agency (EPA) and the other Region 5 states (Minnesota, Illinois, Wisconsin, Indiana, and Ohio) and that "[MDEQ] is not aware of any documented cases of cooling towers causing Legionnaire's Disease in Michigan or anywhere in the region." RTC at 3. In addition, MDEQ explains in its response to the Petition that the Facility will deploy equipment designed to reduce the risk of transmission of Legionella through water vapor emission. MDEQ Resp. at 10. MDEQ notes that this equipment "includes a drift eliminator system that substantially reduces the amount of water droplets that can escape as water vapor through the cooling tower" and a "plume reduction system in which a heat exchanger will mix dry, heated air into the moist air stream, thereby decreasing the moisture content of the exiting air." *Id.* (citing RTC at 16); *see* SR at 7 (describing Facility's use of drift eliminator and plume reduction systems). In its response to comments, MDEQ also noted that Rule 901 of DEQ's Rules for Air Pollution Control, *see supra*, which "restricts the emissions of water vapor in quantities that cause injurious effects to human

¹⁶For example, as with its objections concerning humidity and ammonia vapors, Petitioners do not address LD in the context of MDEQ's discussion of collateral impacts in the MDEQ's BACT analysis. Thus, Petitioners have not invoked the limited exception to the general bar against reviewing non-regulated pollutants in PSD proceedings. *See supra* note 11.

health or safety, animal life, plant life, or property” and is incorporated in the Final Permit, would enable MDEQ to address risks of LD associated with the Facility’s water vapor emissions in the event that LD proves to be a problem. RTC at 3.

For the foregoing reasons, we deny review of the Final Permit on the basis of MDEQ’s arguments regarding links between LD and the Facility’s cooling towers.

I. Use of Dry Cooling Technology

In the context of their discussion of LD and the Facility’s cooling tower, Petitioners argue that MDEQ should have required the Facility to use dry cooling technology instead of a wet cooling tower that is part of the Facility’s approved design. Petitioners request that the Board either overturn MDEQ’s decision permitting wet cooling or “modify” the decision to “mandate” dry cooling technology. Petition at 10-11.¹⁷

In our view, Petitioners’ request is too lacking in specificity and foundational support to warrant Board review. In its Response to Comments, MDEQ responded to the question concerning why wet cooling rather than dry cooling was chosen for the Facility:

¹⁷Presumably, Petitioners support the use of dry cooling technology because it will reduce emissions of water vapor that can be a mode of transport for the Legionella bacterium. This is consonant with Petitioner Sorget’s comments during the public hearing stating that “[c]ooling tower drift or water loss creates the mist or aerosol that can transmit the [Legionella bacterium].” Network Reporting, *Hearing Transcript in the matter of Sempra Michigan* 36 (Sept. 24, 2002).

Based on water availability, environmental factors, energy efficiency, and economic analysis, South Shore Power chose to install a wet cooling tower configured with high efficiency drift eliminators and plume abatement over the dry cooling condenser system. While dry cooling presents certain benefits of eliminating visual plumes, fog, mineral drift, and water treatment and disposal issues associated with wet cooling towers, it also has substantial disadvantages. Dry cooling results in an increase in noise generation and a decrease in the overall efficiency of conventional wet cooling systems. In locations where adequate water supplies exist (such as Berrien County), the EPA, in a recent Best Available Control Technology (BACT) analysis, considered and subsequently rejected the dry cooling alternative on the basis of poor performance efficiency. South Shore took this decision into consideration when selecting wet cooling.

RTC at 16-17.

Significantly, Petitioners provide no response to MDEQ's explanation of the myriad factors, including economic and environmental considerations, that supported its decision to approve wet rather than dry cooling at the Facility. Because Petitioners simply assert that dry cooling is the preferable option without identifying or explaining why MDEQ's response is clearly erroneous or otherwise warrants review, Petitioners' objections do not rise to the level of specificity required to justify Board review. *See Zion Energy*, 9 E.A.D. at 705; *Kawaihae*

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Order Denying Review, in the Matter of South Shore Power, L.L.C., PSD Appeal No. 03-02, was sent to the following persons in the manner indicated:

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