BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF: DUKE ENERGY INDIANA EDWARDSPORT GENERATING STATION Permit No. T083-27138-00003 Proposed by the Indiana Department of Environmental Management	)))))))))	ORDER RESPONDING TO PETITIONER'S REQUEST THAT THE ADMINISTRATOR OBJECT TO ISSUANCE OF STATE OPERATING PERMIT

ORDER DENYING THE
PETITION FOR OBJECTION TO PERMIT

On July 31, 2009, pursuant to its authority under Title 326, Article 2 of the Indiana Administrative Code (IAC), title V of the Clean Air Act (Act or CAA), 42 U.S.C. §§ 7661-7661f, and the U.S. Environmental Protection Agency's (EPA) implementing regulations at 40 Code of Federal Regulations (C.F.R.) Part 70, the Indiana Department of Environmental Management (IDEM) issued a proposed title V renewal operating permit to Duke Energy Indiana's Edwardsport Generating Station (Duke).

On September 16, 2010, Pamela McGillivray submitted to the EPA on behalf of the Valley Watch, Sierra Club and Citizen Action Coalition of Indiana (the Petitioner) a petition requesting that the EPA object to issuance of the Duke title V permit ("Permit" or "Duke Permit") pursuant to section 505(b)(2) of the Act, 42 U.S.C. § 7661d(b)(2), and 40 C.F.R. § 70.8(d). The Petitioner alleges that: (1) the permit fails to include a Best Available Control Technology (BACT) limit for particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), and (2) the permit would cause a violation of the $PM_{2.5}$ national ambient air quality standard (NAAQS).

The EPA has reviewed the Petitioner's allegations pursuant to the standard set forth in section 505(b)(2) of the Act, which requires the Administrator to issue an objection if the Petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of the Act. *See also* 40 C.F.R. § 70.8(d); *New York Public Interest Research Group v. Whitman,* 321 F .3d 316, 333 n.11 (2d Cir. 2003).

STATUTORY AND REGULATORY FRAMEWORK

Section 502(d)(1) of the Act, 42 U.S.C. § 7661a(d)(1), requires each state to develop and submit to the EPA an operating permit program to meet the requirements of title V. The EPA granted final full approval of the Indiana title V operating permit program effective November 30, 2001. 66 Fed. Reg. 62969 (December 4, 2001).

All major stationary sources of air pollution and certain other sources are required to apply for title V operating permits that include emission limitations and other conditions necessary to assure compliance with applicable requirements of the Act, including the requirements of the applicable State Implementation Plan (SIP). *See* Sections 502(a) and 504(a) of the Act, 42 U.S.C. §§ 7661a(a) and 7661c(a). The title V operating permit program generally does not impose new substantive air quality control requirements (referred to as "applicable requirements"), but does require that permits contain monitoring, recordkeeping, reporting, and other requirements to assure compliance by sources with existing applicable emission control requirements. 57 Fed. Reg. 32250, 32251 (July 21, 1992) (EPA final action promulgating part 70). One purpose of the title V program is to "enable the source, states, the EPA, and the public to better understand the requirements to which the source is subject, and whether the source is meeting those requirements." *Id.* Thus, the title V operating permits program is a vehicle for ensuring that existing air quality control requirements are appropriately applied to facility emission units and that compliance with these requirements is assured.

For a major modification of a major stationary source, applicable requirements include the requirement to obtain a preconstruction permit that complies with applicable new source review requirements (e.g., Prevention of Significant Deterioration, or PSD, requirements). Part C of the CAA establishes the PSD program, the preconstruction review program that applies to areas of the country, such as Knox County, that are designated as attainment or unclassifiable for NAAQS. CAA §§ 160-169, 42 U.S.C. §§ 7470-7479. New Source Review, or "NSR," is the term used to describe both the PSD program as well as the nonattainment NSR program (applicable to areas that are designated as nonattainment with the NAAQS). In attainment areas (such as Knox County, Indiana, where Duke is located), a major stationary source may not begin construction or undertake certain modifications without first obtaining a PSD permit. CAA § 165(a)(l), 42 U.S.C. § 7475(a)(1). The PSD program analysis must address two primary and fundamental elements before the permitting authority may issue a permit: (1) an evaluation of the impact of the proposed new or modified major stationary source on ambient air quality in the area, and (2) an analysis ensuring that the proposed facility is subject to BACT for each pollutant subject to regulation under the PSD program. CAA § 165(a)(3),(4), 42 U.S.C. § 7475(a)(3), (4); *see also* 326 IAC 2-2 (Indiana's PSD program).

The EPA has promulgated two largely identical sets of regulations to implement the PSD program. One set, found at 40 C.F.R. § 52.21, contains the EPA's federal PSD program, which

applies in areas without a SIP-approved PSD program. The other set of regulations, found at 40 C.F.R. § 51.166, contains requirements that state PSD programs must meet to be approved as part of a SIP. In 2004, the EPA approved Indiana's PSD rules into the SIP as meeting these requirements. 69 *Fed. Reg.* 29071 (May 20, 2004); *see also 40* C.F.R. § 52.793. Thus, the applicable requirements of the Act for major modifications at major sources, such as at Duke, include the requirement to comply with PSD requirements under the Indiana SIP. *See, e.g.*, 40 C.F.R. § 70.2. In this case, Indiana's rules require a source to apply for a PSD permit which is then incorporated into the existing title V permit as a revision to the title V permit. Consistent with the Act and the EPA's regulations, to obtain a PSD permit in Indiana pursuant to 326 IAC 2-2-5, the applicant must show that the source will not cause or contribute to a violation of any NAAQS and satisfy the BACT requirement for any pollutant subject to regulation. As we have previously stated, if a PSD permit that is incorporated into a title V permit does not meet these requirements of the SIP, the title V permit will not be in compliance with all applicable requirements.[1]

Under Section 505(a) of the Act, 42 U.S.C. § 766ld(a), and the relevant implementing regulations at 40 C.F.R. § 70.8(a), states are required to submit each proposed title V operating permit to the EPA for review. Upon receipt of a proposed permit, the EPA has 45 days to object to final issuance of the permit if the EPA determines that the permit is not in compliance with applicable requirements or the requirements of title V, 40 C.F.R. § 70.8(c). If the EPA does not object to a permit on its initiative, section 505(b)(2) of the Act provides that any person may petition the Administrator, within 60 days of expiration of the EPA's 45-day review period, to object to the permit. 42 U.S.C. § 766ld(b)(2); *see also* 40 C.F.R. § 70.8(d). The petition must "be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided by the permitting agency (unless the petitioner demonstrates in the petition to the Administrator that it was impracticable to raise such objections within such period or unless the grounds for such objection arose after such period)." 42 U.S.C. § 766ld(b)(2). In response to such a petition, the Administrator must issue an objection if a petitioner demonstrates that a permit is not in compliance with the requirements of the Act. *Id.*; *see also* 40 C.F.R. § 70.8(c)(l); *New York Public Interest Research Group*, 321 F.3d at 333 n.11 (2nd Cir. 2003). Under section 505(b)(2) of the Act, the burden is on the petitioner to make the

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[1] In our 2009 Columbia Generating Order we stated:
Where a petitioner's request that the Administrator object to the issuance of a title V permit is based in whole, or in part, on a permitting authority's alleged failure to comply with the requirements of its approved PSD program (as with other allegations of inconsistency with the Act) the burden is on the petitioners to demonstrate that the permitting decision was not in compliance with the requirements of the Act, including the requirements of the SIP. Such requirements, as EPA has explained in describing its authority to oversee the implementation of the PSD program in states with approved programs, include the requirements that the permitting authority (1) follow the required procedures in the SIP; (2) make PSD determinations on reasonable grounds properly supported on the record; and (3) describe the determinations in enforceable terms. *See In the Matter of Wisconsin Power and Light, Columbia Generating Station,* Permit No. 111003090-P20; Petition Number V-2008-1 (October 8, 2009) at 8.

required demonstration to the EPA. *Sierra Club v. Johnson*, 541 F.3d 1257, 1266-1267 (11th Cir. 2008); *Citizens Against Ruining the Environment v. EPA*. 535 F.3d 670, 677-678 (7th Cir. 2008); *Sierra Club v. EPA*, 557 F.3d 401, 406 (6th Cir. 2009) (discussing the burden of proof in title V petitions). If, in responding to a petition, the EPA objects to a permit that has already been issued, the EPA or the permitting authority will modify, terminate, or revoke and reissue the permit consistent with the procedures set forth in 40 C.F.R. §§ 70.7(g)(4), (5)(i) - (ii) and 70.8(d).

BACKGROUND

I. The Facility

The Duke Edwardsport Generating Station is an existing coal-fired power plant in Knox County, Indiana, consisting of three coal-fired boilers installed prior to 1971, one fuel oil-fired boiler installed prior to 1971, and one coal transfer system installed in 1974. Duke received its initial title V permit from IDEM in 2004. In 2008, the facility was permitted to construct an integrated gasification combined cycle plant (IGCC). Duke has committed to retiring the existing boilers and coal transfer system prior to the operation of the IGCC plant.

II. Permit History

On August 18, 2006, Duke submitted permit applications for a PSD permit and title V significant modification to install an IGCC plant at its Edwardsport facility. IDEM provided public notice on the draft permits on November 18, 2007. The Petitioner submitted comments to IDEM during the public comment period. IDEM issued the final PSD permit on January 25, 2008, and the final title V significant modification on March 11, 2008. The Petitioner filed a petition for review of the PSD permit before the Indiana Office of Environmental Adjudication on February 12, 2008; the petition for review was dismissed on November 24, 2010. Duke submitted an application for a title V renewal permit on November 13, 2008. IDEM issued a public notice of a draft title V renewal on July 31, 2009. The Petitioner submitted adverse comments on the permit regarding $PM_{2.5}$, netting analysis and carbon dioxide. With regard to $PM_{2.5}$, the Petitioner commented that the state improperly relied on the EPA's 1997 PM_{10} Surrogate Policy and the draft permit failed to include BACT limits for $PM_{2.5}$ and failed to demonstrate that the facility would not cause or contribute to a violation of the $PM_{2.5}$ NAAQS. In its response to comments, IDEM stated that it followed the approach outlined in the 1997 PM_{10} Surrogate Policy in treating PM_{10} as a surrogate for $PM_{2.5}$. The permit was proposed for the EPA review on June 7, 2010. On June 22, 2010, EPA Region 5 submitted a letter to IDEM advising it, in light of recent title V petition orders, to fully respond to the stakeholder comments. IDEM has not issued the final title V renewal permit.

III. EPA's 1997 PM10 Surrogate Policy and Implementation of the $PM_{2.5}$ NAAQS

Section 165(a)(3) of the Clean Air Act provides that to obtain a PSD permit an applicant must demonstrate that "emissions from construction or operation of [the proposed] facility will not cause, or contribute to, air pollution in excess of any … (B) national ambient air quality standard." 42 U.S.C. s. 7475(a)(3). In addition, section 165(a)(4) of the Act requires that a PSD permit contain emission limits based on BACT for "each pollutant subject to regulation" under the Act. 42 U.S.C. s. 7475(a)(4). On July 28, 1997, the EPA revised the NAAQS for PM to add new standards for "fine" particulates, using $PM_{2.5}$ as the indicator. 62 Fed. Reg. 39852 (July 28, 1997). In recognition of the immediate need to apply the statutory provisions described above to $PM_{2.5}$ after promulgation of the 1997 NAAQS, the then-Director of EPA's Office of Air Quality Planning and Standards (OAQPS), John Seitz, issued a memorandum regarding implementation of the 1997 standards under the PSD program titled, "Interim Implementation of New Source Review Requirements for $PM_{2.5}$." This memorandum explained that sources would be allowed to use implementation of a PM_{10} program as a surrogate for meeting PSD permitting requirements for $PM_{2.5}$ until certain technical difficulties were resolved. Seitz Memorandum at 1. The EPA has since referred to this policy as the "1997 PM_{10} Surrogate Policy." See e.g., 76 Fed. Reg. 28646 (May 18, 2011). When nonattainment area designations for the 1997 $PM_{2.5}$ NAAQS became effective on April 5, 2005, the EPA issued a second guidance memorandum from OAQPS Director Stephen D. Page titled, "Implementation of New Source Review Requirements in $PM_{2.5}$ Nonattainment Areas" (Page Modeling Memorandum). This memorandum extended the surrogate policy to nonattainment NSR permitting and re-affirmed the application of the October 23, 1997, Seitz Memorandum to PSD permitting. Page Modeling Memorandum at 1.

On May 16, 2008, the EPA promulgated the final rule titled, "Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers ($PM_{2.5}$)" (May 2008 $PM_{2.5}$ NSR Implementation Rule). 73 Fed. Reg. 28321 (May 16, 2008). In the preamble to that rule, the EPA explained the transition to the $PM_{2.5}$ NSR requirements beginning on page 28340. Specifically, the EPA concluded that, if a state with an approved PSD program in its SIP (SIP-approved state) is unable to implement a PSD program for the $PM_{2.5}$ NAAQS based on that rule, the state may continue to implement a PM_{10} program as a surrogate to meet the PSD program requirements for $PM_{2.5}$ under the 1997 PM_{10} Surrogate Policy described in the Seitz Memorandum until May 2011 (the end of three-year statutory period for submitting revised SIPs) or until the EPA approves the SIP revisions, whichever occurs first. 73 Fed. Reg. at 28340-28341.

On August 12, 2009, the EPA clarified that the 1997 PM_{10} Surrogate Policy should only be used in a manner consistent with court precedent on use of surrogates. *Louisville Gas and Electric Co.* (Order on Petition) (August 12, 2009) at 42-46. This order discussed this court precedent as follows:

When EPA issued the PM_{10} Surrogate Policy in 1997, the Agency did not identify criteria to be applied before the policy could be used for satisfying the $PM_{2.5}$ requirements. However, courts have issued a number of opinions that are properly read as limiting the use of PM_{10} as a surrogate for meeting the PSD requirements for $PM_{2.5}$. Applicants and state permitting authorities seeking to rely on the PM_{10} Surrogate Policy should consider these opinions in determining whether PM_{10} serves as an adequate surrogate for meeting the $PM_{2.5}$ requirements in the case of the specific permit application at issue.

Courts have held that a surrogate may be used only after it has been shown to be reasonable to do so. See, e.g., *Sierra Club v. EPA*, 353 F.3d 976,982-984 (D.C. Cir. 2004) (stating general principle that EPA may use a surrogate if it is "reasonable" to do so and applying analysis from *National Lime Assoc. v. EPA*, 233 F.3d 625,637 (D.C. Cir. 2000) that is applicable to determining whether use of a surrogate is reasonable in setting emissions limitations for hazardous air pollutants under Section 112 of the Act); *Mossville Envt'l Action Now v. EPA*, 370 F. 3d 1232, 1242-43 (D.C. Cir. 2004) (EPA must explain the correlation between the surrogate and the represented pollutant that provides the basis for the surrogacy); *Bluewater Network v. EPA*, 370 F.3d 1, 18 (D.C. Cir. 2004) ("The Agency reasonably determined that regulating [hydrocarbons] would control PM pollution both because HC itself contributes to such pollution, and because HC provides a good proxy for regulating fine PM emissions"). Though these court decisions do not speak directly to the use of PM_{10} as a surrogate for $PM_{2.5}$, EPA believes that the overarching legal principle from these decisions is that a surrogate may be used only after it has been shown to be reasonable (such as where the surrogate is a reasonable proxy for the pollutant or has a predictable correlation to the pollutant). Further, we believe that this case law governs the use of EPA's PM_{10} Surrogate Policy, and thus that the legal principle from the case law applies where a permit applicant or state permitting authority seeks to rely upon the PM_{10} surrogate policy in lieu of a $PM_{2.5}$ analysis to obtain a PSD permit.

With respect to PM surrogacy in particular, there are specific issues raised in the case law that bear on whether PM_{10} can be considered a reasonable surrogate for $PM_{2.5}$. The D.C. Circuit has concluded that PM_{10} was an arbitrary surrogate for a PM pollutant that is one fraction of PM_{10} where the use of PM_{10} as a surrogate for that fraction is "inherently confounded" by the presence of the other fraction of PM_{10}. *ATA v. EPA*, 175 F.3d 1027,1054 (D.C. Cir. 1999) (PM_{10} is an arbitrary indicator for coarse PM (PM_{10}-$PM_{2.5}$) because the amount of coarse PM within PM_{10} will depend arbitrarily on the amount of fine PM ($PM_{2.5}$)). In another case, however, the D.C. Circuit held that the facts and circumstances in that instance provided a reasonable rationale for using PM_{10} as a surrogate for $PM_{2.5}$. *American Farm Bureau v. EPA*, 559 F.3d 512,534-35 (D.C. Cir. 2009) (where record demonstrated that (1) $PM_{2.5}$ tends to be higher in urban areas then [*sic*] in rural areas, and (2) evidence of health effects from coarse PM in urban areas is stronger, EPA reasoned that setting a single PM_{10} standard for both urban and rural areas would tend

> to require lower coarse PM concentrations in urban areas. The court considered the reasoning from the *ATA* case and accepted that the presence of $PM_{2.5}$ in PM_{10} will cause the amount of coarse PM in PM_{10} to vary, but on the specific facts before it held that such variation was not arbitrary). EPA believes that these cases demonstrate the need for permit applicants and permitting authorities to determine whether PM_{10} is a reasonable surrogate for $PM_{2.5}$ under the facts and circumstances of the specific permit at issue, and not proceed on a general presumption that PM_{10} is always a reasonable surrogate for $PM_{2.5}$.
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> This case law suggests that any person attempting to show that PM_{10} is a reasonable surrogate for $PM_{2.5}$ would need to address the differences between PM_{10} and $PM_{2.5}$. For example, emission controls used to capture coarse particles in some cases may be less effective in controlling for $PM_{2.5}$. 72 Fed. Reg. 20586, 20617 (April 25, 2007). As a further example, the particles that make up $PM_{2.5}$ may be transported over long distances while coarse particles normally travel only short distances. 70 Fed. Reg. 65984, 65997-98 (November 1, 2005). Under the principles in the case law, any person seeking to use the PM_{10} Surrogate Policy properly would need to consider these differences between PM_{10} and $PM_{2.5}$ and demonstrate that PM_{10} is nonetheless an adequate surrogate for $PM_{2.5}$.

In this order, the EPA also observed that "the PM_{10} Surrogate Policy contains limits." The order explained that "[i]n view of significant technical difficulties that existed in 1997, the EPA believed that PM_{10} could properly be used as a surrogate for $PM_{2.5}$ in meeting NSR requirements 'until these difficulties are resolved.'" Seitz Memorandum at 1.

Based on this analysis, the EPA granted a petition to object to a title V permit. The EPA's order also suggested a possible approach to making an adequate demonstration of surrogacy consistent with the case law. *Id.* at 45-46.

Based on the principles in the case law, in a February 11, 2010, *Federal Register* notice, the EPA proposed to end the use of the surrogate policy in SIP-approved states prior to May 2011. 75 Fed. Reg. 6827, 6833-34. This proposal was based on the same reasoning quoted above from the LG&E Order. In addition, the EPA made the following observation with respect to continued application of the 1997 PM_{10} Surrogate Policy:

> [B]ased on this case law, rather than simply assuming that using the 1997 PM_{10} Surrogate Policy is always an adequate alternative for satisfying the $PM_{2.5}$ PSD requirements, permit applicants and permitting authorities seeking to apply the 1997 PM_{10} Surrogate Policy must ensure that the record for each permit supports using PM_{10} as a surrogate for $PM_{2.5}$ under the circumstances.

75 Fed. Reg. at 6832.

On March 23, 2010, the EPA issued a memorandum titled, "Modeling Procedures for Demonstrating Compliance with PM 2.5 NAAQS" (Page Modeling Memorandum). This memorandum discussed the EPA's August 12, 2009, LG&E Order and the February 11, 2010, proposal to accelerate the end date for application of the 1997 PM_{10} Surrogate Policy in SIP-approved states. This memorandum described the current state of the EPA's policy as follows:

> While we continue to allow states to use the PM_{10} surrogate policy during their transition to the new $PM_{2.5}$ requirements, we have also made clear that the policy needs to be implemented by taking into account court decisions that address the surrogacy concept. Accordingly, an applicant seeking a PSD permit under a SIP-approved PSD program may still rely upon the PM_{10} surrogacy policy as long as (1) the appropriateness of the PM_{10}-based assessment for determining $PM_{2.5}$ compliance has been adequately demonstrated based on the specifics of the project; and (2) the applicant can show that a $PM_{2.5}$ analysis is not technically feasible.

Page Modeling Memo at 2. The EPA also provided guidance on technical issues associated with making such a surrogacy demonstration. The guidance identified several differences between PM_{10} and $PM_{2.5}$ that should be addressed in the development of a surrogacy demonstration in order to demonstrate compliance with the $PM_{2.5}$ NAAQS.

The EPA elected not to finalize the action proposed in February 2010 to end the application of the 1997 Surrogate Policy in SIP approved states early.[2] Thus, in accordance with EPA's original May 2008 action, the application of the 1997 PM_{10} Surrogate Policy in SIP-approved states ended on May 16, 2011. 76 Fed. Reg. 28646, 28648, 28659. Consistent with this, in a June 17, 2011, letter to the EPA, IDEM confirmed that it will no longer consider compliance with the PSD requirements for PM_{10} to be sufficient to satisfy the applicable PSD permitting requirements for $PM_{2.5}$ and has discontinued relying on the 1997 PM_{10} Surrogate Policy to satisfy the PSD requirements for $PM_{2.5}$.

ISSUES RAISED BY THE PETITIONER

I. PSD Requirements for $PM_{2.5}$

Petitioner's Claim. The Petitioner claims that the Administrator must object to the Duke Permit because it does not comply with PSD requirements for $PM_{2.5}$. The Petitioner asserts that the EPA recently confirmed in the LG&E Order (Aug. 12, 2009) that using PM_{10} as a surrogate for $PM_{2.5}$

[2] In a final rule dated May 18, 2011, the EPA discussed its decision not to finalize the February 2010 proposal to end the Surrogate Policy. The May 2011 action also repealed a grandfathering provision that extended the application of the 1997 PM_{10} Surrogate Policy under the federal PSD program.

"is generally not legally defensible." Petition at 11. The Petitioner further claims that case law and EPA guidance require that, to use PM_{10} as a surrogate for $PM_{2.5}$, the permitting authority must show that it is reasonable to use the surrogate under the specific facts of the permit at issue; that the permitting authority adequately has addressed the differences between PM_{10} and $PM_{2.5}$; and the existence of technical difficulties that would necessitate relying on the surrogate. Petition at 15-16. The Petitioner argues that there is no factual support for the use of the surrogate, and, therefore, that BACT for $PM_{2.5}$ is required for units added or modified since 1997. The Petitioner claims that since no factual record was developed to support the use of PM_{10} as a surrogate for $PM_{2.5}$, it cannot meet the requirements of the Surrogate Policy as explained in LG&E.[3]

EPA's Response. Since the EPA's receipt of the petition at issue here, IDEM has developed a revised technical support document (TSD) for the permit record, including additional justification for treatment of PM_{10} as a surrogate for $PM_{2.5}$. On December 7, 2011, IDEM issued a public notice withdrawing the July 31, 2009, proposed renewal permit from the EPA's consideration, seeking public comment on the revised draft permit and the revised TSD, and also mentioning that the revised draft permit and revised TSD will supersede the previous proposed renewal permit and TSD issued for public notice on July 31, 2009 (i.e., the one that is the subject of this petition).

Based on the actions taken by IDEM, the petition on the claim is denied as moot as the previous proposed permit and TSD subject to the petition are no longer before the EPA. The EPA notes that the EPA and the public (including the Petitioner) will have an opportunity to comment on the revised draft permit and revised TSD. The EPA will then review any resubmitted proposed permit and revised TSD during a 45 day review period. The EPA would expect to review any resubmitted proposed permit and revised TSD keeping in mind that, consistent with the EPA's clarifications on use of the surrogate policy, IDEM's record needs to support the use of PM_{10} as a surrogate for $PM_{2.5}$ in order to ensure compliance with all applicable PSD requirements for $PM_{2.5}$. If the EPA does not object to the resubmitted proposed permit, the Petitioner will also have an opportunity to petition the EPA to object to the resubmitted proposed permit.

II. PM2.5 NAAQS Violation

Petitioner's Claim. The Petitioner alleges that the permit does not ensure that the facility will comply with the $PM_{2.5}$ NAAQS. Petition at 17. The Petitioner argues that IDEM not only failed to create a record to support the use of PM_{10} as a surrogate, but also failed to compare the results of PM_{10} modeling to the $PM_{2.5}$ NAAQS. *Id.* at 20. The Petitioner further claims that modeling of emissions from $PM_{2.5}$ alone showed violations of the $PM_{2.5}$ NAAQS. *Id.* at 23. In its public

[3] The EPA received two petitions concerning Louisville Gas and Electric Co. Trimble Station: one in 2006 and one in 2008. The petition order dated August 12, 2009, discusses the EPA's position regarding the use of the Surrogacy Policy.

comments, the Petitioner described independent monitoring results and provided an interpretation of the data to show that the permit will allow NAAQS violations:

> The organizations commenting here hired an independent engineer to model $PM_{2.5}$ emissions from the Edwardsport plant because IDEM has not done so. Using inputs obtained from IDEM, including the modeling files provided by Duke Energy (i.e. the file called "duke pm10naaqs_88_OTHER.DTA") and IDEM's background concentrations for Knox County, the modeling results show that NAAQS (as well as U.S. EPA's proposed PSD increments) will be exceeded. This analysis assumed that 100% of the PM emissions from combustion sources are $PM_{2.5}$ fraction. For fugitive sources, we adjusted Duke's own PM_{10} emission rates (which are significantly understated) based on USEPA AP-42 particle size factors (i.e. 15% of PM10 = $PM_{2.5}$). The results are shown in the table below. Note that if the fugitive emissions from the Edwardsport plant are correctly estimated, the $PM_{2.5}$ impacts would be significantly higher (i.e., show greater violations of the NAAQS). The modeling files are included in Exhibit 1.

Duke IGCC -Edwardsport, IN - $PM_{2.5}$ Modeling Results							
Air Standard	Averaging Period	Highest Value	Predicted Concentration	Background Concentration	Total Concentration	Air Standard	Standard Exceeded
			(µg/m3)	(µg/m3)	(µg/m3)	(µg/m3)	
Proposed Increment	24	8th	9.93			9	Yes
	Annual	1st	1.68			4	No
NAAQS	24	8th	9.93	31.7	**41.6**	35	Yes
	Annual	1st	1.68	13.8	**15.48**	15	Yes

Note 1 Values for Proposed Increment from Federal Register / Vol. 72, No. 183 / Friday, September 21, 2007
Note 2 Background provided by IDEM from Knox County monitor for 2006-08 period. See Exhibit 2.

> *Public Comments from Petitioners on Draft IDEM Permit T083-27138-00003 (August 28, 2009), at 22-23.*

In its response to comments in support of the proposed permit, IDEM responded:

> On February 11, 2010, U.S. EPA published a proposed rule to, among other things, end the PM_{10} surrogacy policy established by previous guidance and rules, including the May 2008 Rule (75 FR 6827). While U.S. EPA clearly expresses its intent to end the use of the PM10 surrogacy policy, it acknowledges that the surrogate policy "is in effect" (75 FR at 6833) and states that "EPA is proposing to end the PM_{10} Surrogate Policy before the end of the three-year transition period for revising SIPs . . . ." Thus, while EPA undoubtedly has concerns about continuing the surrogate policy, the policy remains in effect. It is not necessary to demonstrate compliance with the $PM_{2.5}$ NAAQS since the PM_{10} surrogate policy is applicable and, as explained in the previous Response to Comment 1, IDEM has determined that it is reasonable to use PM_{10} as a surrogate for $PM_{2.5}$ for this permitting

action at this source. IDEM conducted modeling that demonstrated that emissions from the source with the revisions allowed in this permit will continue to comply with NAAQS for PM_{10}, which acts as a surrogate for a demonstration of compliance with the $PM_{2.5}$ NAAQS. The emission units added and other changes in this permit have decreased PM emissions making any additional modeling unnecessary.

Addendum to the Technical Support Document for Duke Part 70 Operating Permit Renewal, page 25.

EPA's Response. As mentioned in response to the previous claim, since the EPA's June 2010 letter and the EPA's receipt of the petition at issue here, IDEM has developed a revised TSD for the permit record, including additional justification for treatment of PM_{10} as a surrogate for $PM_{2.5}$. On December 7, 2011, IDEM issued a public notice withdrawing the July 31, 2009, proposed renewal permit from the EPA's consideration, seeking public comment on the revised draft permit and the revised TSD, and also mentioning that the revised draft permit and revised TSD will supersede the previous permit and TSD issued for public notice on July 31, 2009 (i.e., the one that is the subject of this petition).

Based on the actions taken by IDEM, the petition on the claim is denied as moot as the previous proposed permit and TSD subject to the petition are no longer before the EPA. Again, the EPA notes that the EPA and the public (including the Petitioner) will have an opportunity to comment on the revised draft permit and revised TSD. The EPA will then review any resubmitted proposed permit and revised TSD during a 45 day review period. The EPA would expect to review any resubmitted proposed permit and revised TSD keeping in mind that, consistent with the EPA's clarifications on use of the surrogate policy, IDEM's record needs to support the use of PM_{10} as a surrogate for $PM_{2.5}$ in order to ensure compliance with all applicable PSD requirements for $PM_{2.5}$. If the EPA does not object to the resubmitted proposed permit, the Petitioner will also have an opportunity to petition the EPA to object to the resubmitted proposed permit.

For these reasons and based on the actions taken by IDEM, the petition on the claim is denied as moot as the proposed permit and TSD subject to the petition are no longer before the EPA.

CONCLUSION

For the reasons set forth above, and pursuant to Section 505(b) of the CAA and 40 C.F.R. § 70.8(d), I hereby deny the issues in the petition submitted on September 16, 2010.

Dated: DEC 13 2011

Lisa P. Jackson
Administrator