

BEFORE THE ADMINISTRATOR  
 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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	)	
IN THE MATTER OF	)	PETITION NUMBERS VI-2010-05, VI-
	)	2011-06 AND VI-2012-07
CONSOLIDATED ENVIRONMENTAL	)	
MANAGEMENT, INC. – NUCOR STEEL	)	ORDER RESPONDING TO THE
ST. JAMES PARISH, LOUISIANA	)	JUNE 25, 2010 REQUEST FOR
	)	OBJECTION TO THE ISSUANCE
PIG IRON AND DRI MANUFACTURING	)	OF A TITLE V OPERATING
PERMIT NUMBERS: 2560-00281-V0;	)	PERMIT AND PARTIAL ORDER
2560-00281-V1; AND 3086-V0	)	RESPONDING TO MAY 3, 2011
	)	AND OCTOBER 3, 2012
ISSUED BY THE LOUISIANA DEPARTMENT	)	REQUEST FOR OBJECTION TO THE
OF ENVIRONMENTAL QUALITY	)	ISSUANCE OF TITLE V OPERATING
	)	PERMITS
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**ORDER GRANTING IN PART AND DENYING IN PART THREE PETITIONS FOR  
 OBJECTION TO PERMITS**

This Order responds to issues that were raised in three related Petitions received by the U.S. Environmental Protection Agency (EPA) from the Louisiana Environmental Action Network (LEAN) and Sierra Club (collectively referred to as “Petitioners”) on June 25, 2010 (the 2010 Petition), May 3, 2011 (the 2011 Petition), and October 3, 2012 (the 2012 Petition) pursuant to Section 505(b)(2) of the Clean Air Act (“CAA” or “Act”), 42 United States Code (U.S.C.) § 7661d(b)(2). The Petitions regard one or more of the following three operating permits issued by the Louisiana Department of Environmental Quality (LDEQ) to Consolidated Environmental Management, Inc. - Nucor Steel Louisiana (Nucor): an operating permit for the pig iron manufacturing process (pig iron process) (permit number 2560-00281-V0), a modification to the operating permit for the pig iron process (permit number 2560-00281-V1), and an operating permit for the direct reduced iron manufacturing process (“DRI process” or “DRI”) (permit number 3086-V0). The Petitions request that the EPA object to each of these permits for a number of reasons outlined below. The source is located in Convent (St. James Parish), Louisiana. These permits are operating permits issued pursuant to title V of the CAA, CAA §§ 501-507, 42 U.S.C. §§ 7661-7661f, the Louisiana Administrative Code (L.A.C.) at 33:III.507, and the EPA’s implementing regulations at 40 Code of Federal Regulations (C.F.R.) Part 70. These operating permits, also referred to as title V permits or part 70 permits, also include provisions from Nucor’s preconstruction review permits, including two Prevention of Significant Deterioration (PSD) permits, and many of the issues raised in the Petitions regard the preconstruction review conditions associated with the facility.

## I. INTRODUCTION

The Petitioners timely filed the June 25, 2010 Petition. The 2010 Petition requested that the Administrator object to the operating permit issued by LDEQ on May 24, 2010, for Nucor's pig iron process (permit number 2560-00281-V0) on the basis that: (1) the permit fails to apply the appropriate maximum achievable control technology (MACT) standards, 2010 Petition at 4-8; (2) the modeling submitted by Nucor to support its PSD analysis is flawed, 2010 Petition at 8-45 and (3) the title V permit fails to incorporate conditions sufficient to assure compliance with PSD, 2010 Petition at 45-67.

The Petitioners timely filed the May 3, 2011, Petition. The 2011 Petition requested that the Administrator object to two operating permits issued by LDEQ on January 27, 2011: a modified operating permit for the pig iron process (the modified pig iron title V permit) (permit number 2560-00281-V1); and a new operating permit for the DRI process (DRI title V permit) (permit number 3086-V0).<sup>1</sup> The Petition identifies the following bases on which the EPA should object: (1) LDEQ failed to aggregate PSD permitting for emissions from the entire facility, 2011 Petition at 5-6; (2) the modified pig iron permit fails to apply MACT standards for the topgas boilers, 2011 Petition at 7-8; (3) LDEQ failed to include emission limits for particulate matter less than 2.5 microns (PM<sub>2.5</sub>), 2011 Petition at 8-10; (4) the limit for natural gas consumption is not the best available control technology (BACT) for greenhouse gas (GHG) emissions from the DRI process, 2011 Petition at 10-17 and (5) the DRI permits must specify procedures estimating GHG emissions, 2011 Petition at 17-19.

The Petitioners timely filed the October 3, 2012, Petition. The 2012 Petition requested in relevant part that the Administrator object to Nucor's pig iron title V permit, the modified pig iron title V permit, and the DRI title V permit for the reasons expressed in the 2010 and 2011 Petitions, which were incorporated by reference and attached as Attachments B and C to the 2012 Petition. 2012 Petition at 1. The 2012 Petition did not provide any additional information, analysis, or argument in support of the claims it re-raised from the 2010 and 2011 Petitions. *See id.* Thus, the EPA's responses to those claims in this order also respond to and resolve those claims as they were re-raised in the 2012 Petition. Accordingly, the responses in today's order address claims in the 2010 and 2011 Petitions, which were re-raised in the 2012 Petition, as well as addressing the corresponding claims in the 2012 Petition, and the EPA's responses below should be understood in this light. Because the 2012 Petition re-raised issues from the earlier petitions by attaching those petitions, the claim numbers and page numbers are the same in the 2012 Petition as in the earlier petitions. For ease of reference and clarity, we refer to the claim numbers and page numbers as originally raised in the 2010 and 2011 Petitions.

Pursuant to a settlement agreement entered into by the EPA and the Petitioners, the EPA agreed to sign an order or orders granting or denying the 2010 Petition and 2011 Petition (except "Specific Objection I"). "Specific Objection I" is the claim that LDEQ failed to aggregate pig

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<sup>1</sup> For the sake of clarity, we adopt the following naming convention for the various title V and PSD permits that have been issued for Nucor and that are discussed in this Order: the "pig iron title V permit" for Permit # 2560-00281-V0; the "pig iron PSD permit" for Permit # PSD-LA-740; the "modified pig iron title V permit" for Permit # 2560-00281-V1; the "DRI title V permit" for Permit # 3086-V0; and the "DRI PSD permit" for Permit # PSD-LA-751.

iron and DRI processes under a single PSD permit, which was the first claim in the 2011 Petition as described above, and which was excepted because, as recognized in the settlement agreement, on June 19, 2013, the EPA issued a partial order denying “Specific Objection I” of the 2011 Petition and as re-raised in the 2012 Petition. Today’s order addresses all the issues originally raised in the 2010 Petition and all the remaining issues originally raised in the 2011 Petition, which were all re-raised in the 2012 Petition. This order does not address the issues originally raised in “Specific Objection I” (which were also re-raised in the 2012 Petition) because those were addressed in the previously issued June 19, 2013 Order. Thus, with the June 19, 2013 Order and today’s order together, the EPA has responded to all of the issues originally raised in the 2010 and the 2011 Petitions, which were re-raised in the 2012 Petition. Similarly, the EPA has now also responded to the 2012 Petition, as that Petition re-raises issues in the 2010 and 2011 Petitions.

Thus, as relevant to this order, the Petitioners asked the EPA to object to the title V permits because they assert that they do not comply with the CAA, the EPA regulations, and the Louisiana state implementation plan (SIP) for six reasons from the above-referenced Petitions:

- (1) the permit fails to apply the appropriate MACT standards, 2010 Petition at 4–8; 2011 Petition at 7–8, 2012 Petition, Att. B at 4-8 and Att. C at 7-8;
- (2) the modeling submitted by Nucor to support its PSD analysis is flawed, 2010 Petition at 8–45, 2012 Petition, Att. B at 8-45;
- (3) the title V permit fails to incorporate conditions sufficient to ensure compliance with PSD, 2010 Petition at 45–67, 2012 Petition, Att. B at 45-67;
- (4) LDEQ failed to include emission limits for PM<sub>2.5</sub>, 2011 Petition at 8–10, 2012 Petition, Att. C at 8-10;
- (5) the limit for natural gas consumption is not BACT for GHG emissions from the DRI process, 2011 Petition at 10–17, 2012 Petition, Att. C at 10-17; and
- (6) the DRI permits must specify procedures estimating GHG emissions, 2011 Petition at 17–19, 2012 Petition, Att. C at 17-19.

Based on a review of the Petitions, and other relevant materials, including the Nucor permits and permit records, and relevant statutory and regulatory authorities, and as explained more fully below, I grant in part and deny in part the Petitions requesting that the EPA object to the Nucor permits. Specifically, I grant or grant in part on issues (1), (3), and (4).

## **II. STATUTORY AND REGULATORY FRAMEWORK**

CAA § 502(d)(1), 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 of the CAA. The State of Louisiana originally submitted its title V program governing the issuance of operating permits in 1993, and the EPA granted full approval on September 12, 1995. 60 *Fed. Reg.* 47296; 40 C.F.R. Part 70, Appendix A. This program, which became effective on October 12, 1995, is codified in L.A.C. Title 33, Part III, Chapter 5.<sup>2</sup>

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<sup>2</sup> Date of signature by the Secretary is November 9, 1993; promulgated in the *Louisiana Register*, Volume 19, Number 11, 1420-1421, Nov. 20, 1993.

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 as necessary to assure compliance with applicable requirements of the CAA, including the requirements of the applicable SIP. CAA §§ 502(a) and 504(a), 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 permits to contain adequate monitoring, recordkeeping, reporting and other requirements to assure sources’ compliance with applicable requirements. 57 *Fed. Reg.* 32250, 32251 (July 21, 1992). One purpose of the title V program is to “enable the source, States, the EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements.” *Id.* Thus, the title V operating permit program is a vehicle for ensuring that air quality control requirements are appropriately applied to facility emission units and for assuring compliance with such requirements.

Applicable requirements for a new major stationary source or for a major modification to a major stationary source include the requirement to obtain a preconstruction permit that complies with applicable new source review (NSR) requirements. The NSR program is comprised of two core types of preconstruction permit programs for major sources. Part C of Title I of the CAA establishes the PSD program, which applies to areas of the country, such as St. James Parish, Louisiana, that are designated as attainment or unclassifiable for the national ambient air quality-standards (NAAQS). CAA §§ 160-169, 42 U.S.C. §§ 7470-7479. Part D of Title I of the Act establishes the nonattainment NSR program, which applies to areas that are designated as nonattainment with the NAAQS. At issue in this order is the PSD part of the NSR program, which requires a major stationary source in an attainment area to obtain a PSD permit before beginning construction of a new facility or undertaking certain modifications. CAA § 165(a)(1), 42 U.S.C. § 7475(a)(1). The analysis under the PSD program must address two primary and fundamental elements (among other requirements) 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 Act. CAA §§ 165(a)(3), (4), 42 U.S.C. §§ 7475(a)(3), (4); *see also* L.A.C. 33:III.509.

The EPA has two largely identical sets of regulations implementing the PSD program, one set, found at 40 C.F.R. § 51.166, contains the requirements that state PSD programs must meet to be approved as part of a SIP. The other set of regulations, 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 EPA has approved LDEQ’s PSD SIP. *See* 61 *Fed. Reg.* 53639 (October 15, 1996) and 40 C.F.R. § 52.970(c) (discussing approval of PSD provisions in L.A.C. 33:III.509); *see also* 40 C.F.R. § 52.999(c) and 52.986. As LDEQ administers a SIP-approved PSD program, the applicable requirements of the Act for new major sources or major modifications include the requirement to comply with PSD requirements under the Louisiana SIP. *See, e.g.*, 40 C.F.R. § 70.2.<sup>3</sup> In this

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<sup>3</sup> Under 40 C.F.R. § 70.1(b), “[a]ll sources subject to [the title V regulations] shall have a permit to operate that assures compliance by the source with all applicable requirements.” “Applicable requirements” are defined in 40 C.F.R. § 70.2 to include “(1) [a]ny standard or other requirement provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under title I of the [Clean Air] Act that implements the relevant requirements of the Act, including any revisions to that plan promulgated in [40 C.F.R.] part 52; (2) [a]ny

case, the “applicable requirements” include Louisiana’s PSD provisions contained in L.A.C. 33:III.509, as approved by the EPA into Louisiana’s SIP.

### **A. Raising PSD Issues in a Petition**

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 to the Administrator that the permitting decision was not in compliance with the requirements of the Act, including the requirements of the SIP. Such requirements, as the 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, e.g., In the Matter of Wisconsin Power and Light, Columbia Generating Station*, Order on Petition No. V-2008-01 (October 8, 2009) (*Columbia Generating Order*) at 8.<sup>4</sup>

As the permitting authority for Louisiana’s SIP-approved PSD program, LDEQ has substantial discretion in issuing PSD permits. Given this discretion, in reviewing a PSD permitting decision, the EPA will not substitute its own judgment for that of Louisiana. Rather, consistent with the decision in *Alaska Dep’t of Env’t Conservation v. EPA*, 540 U.S. 461 (2004), in reviewing a petition to object to a title V permit raising concerns regarding a state’s PSD permitting decision, the EPA generally will look to see whether the petitioner has shown that the state did not comply with its SIP-approved regulations governing PSD permitting or whether the state’s exercise of discretion under such regulations was unreasonable or arbitrary. *See, e.g., In re Louisville Gas and Electric Company*, Order on Petition No. IV-2008-3 (Aug. 12, 2009)(hereafter “*LG&E Order*”); *In re East Kentucky Power Cooperative, Inc. Hugh L. Spurlock Generating Station*, Order on Petition No. IV-2006-4 (Aug. 30, 2007)(hereafter “*Spurlock Order*”); *In re Pacific Coast Building Products, Inc.* (Order on Petition) (Dec. 10, 1999); *In re Roosevelt Regional Landfill Regional Disposal Company* (Order on Petition) (May 4, 1999).

### **B. Review of Issues in a Petition**

State and local permitting authorities issue title V permits pursuant to the EPA-approved title V programs. Under CAA § 505(a), 42 U.S.C. § 766ld(a), and the relevant implementing

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term or condition of any preconstruction permits issued pursuant to regulations approved or promulgated through rulemaking under title I, including parts C or D, of the Act.”

<sup>4</sup> As the EPA has previously explained, in reviewing PSD permit determinations in the context of a petition to object to a title V permit, the standard of review applied by the Environmental Appeals Board (EAB) in reviewing the appeals of federal PSD permits provides a useful analogy. *In the Matter of Louisville Gas and Electric Company*, Order on Petition No. IV-2008-3 (Aug. 12, 2009) at 5 n.6; *see also In the Matter of East Kentucky Power Cooperative, Inc., Hugh L. Spurlock Generating Station*, Order on Petition No. IV-2006-4 (Aug. 30, 2007) at 5. The standard of review applied by the EAB in its review of federal PSD permits is discussed in numerous EAB orders as the “clearly erroneous” standard. *See, e.g., In re Prairie State Generation Company*, 13 E.A.D. 1, 10 (EAB, Aug. 24, 2006)(*Prairie State*); *In re Kawaihae Cogeneration*, 7 E.A.D. 107, 114 (EAB, April 28, 1997). In short, in such appeals, the EAB has explained that the burden is on a petitioner to demonstrate that review is warranted.

regulations found 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 of the Act. CAA §§ 505(b)(1), 42 U.S.C. § 7661d(b)(1); *see also* 40 C.F.R. § 70.8(c) (providing that the EPA will object if the EPA determines that a permit is not in compliance with applicable requirements or requirements under 40 C.F.R. Part 70). If the EPA does not object to a permit on its own initiative, § 505(b)(2) of the Act and 40 C.F.R. § 70.8(d), provide that any person may petition the Administrator, within 60 days of the expiration of the EPA's 45-day review period, to object to the permit. The petition shall 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). CAA § 505(b)(2), 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(d). In response to such a petition, the Act requires the Administrator to issue an objection if a petitioner demonstrates to the Administrator that a permit is not in compliance with the requirements of the Act. CAA § 505(b)(2), 42 U.S.C. § 7661d(b)(2); 40 C.F.R. § 70.8(c)(1); *see also New York Public Interest Research Group, Inc. (NYPIRG) v. Whitman*, 321 F.3d 316, 333 n.11 (2nd Cir. 2003). Under § 505(b)(2) of the Act, the burden is on the petitioner to make the required demonstration to the EPA. *MacClarence v. EPA*, 596 F.3d 1123, 1130-33 (9th Cir. 2010); *Sierra Club v. Johnson*, 541 F.3d 1257, 1266-1267 (11th Cir. 2008); *Citizens Against Ruining the Environment v. EPA*, 535 F.3d 670, 677-78 (7th Cir. 2008); *WildEarth Guardians v. EPA*, 728 F.3d 1075, 1081-1082 (10th Cir. 2013); *Sierra Club v. EPA*, 557 F.3d 401, 406 (6th Cir. 2009) (discussing the burden of proof in title V petitions); *see also NYPIRG*, 321 F.3d at 333 n.11. In evaluating a petitioner's claims, the EPA considers, as appropriate, the adequacy of the permitting authority's rationale in the permitting record, including the response to comments (RTC).

The petitioner's demonstration burden is a critical component of CAA § 505(b)(2). As courts have recognized, CAA § 505(b)(2) contains both a "discretionary component," to determine whether a petition demonstrates to the Administrator that a permit is not in compliance with the requirements of the Act, and a nondiscretionary duty to object where such a demonstration is made. *NYPIRG*, 321 F.3d at 333; *Sierra Club v. Johnson*, 541 F.3d at 1265-66 ("it is undeniable [CAA § 505(b)(2)] also contains a discretionary component: it requires the Administrator to make a judgment of whether a petition demonstrates a permit does not comply with clean air requirements"). Courts have also made clear that the Administrator is only obligated to grant a petition to object under CAA § 505(b)(2) if the Administrator determines that the petitioners have demonstrated that the permit is not in compliance with requirements of the Act. *See, e.g., Citizens Against Ruining the Environment*, 535 F.3d at 667 (§ 505(b)(2) "clearly obligates the Administrator to (1) determine whether the petition demonstrates noncompliance and (2) object if such a demonstration is made") (emphasis added); *NYPIRG*, 321 F.3d at 334 ("§ 505(b)[2] of the CAA provides a step-by-step procedure by which objections to draft permits may be raised and directs the EPA to grant or deny them, *depending on* whether non-compliance has been demonstrated.") (emphasis added); *Sierra Club v. Johnson*, 541 F.3d at 1265 ("Congress's use of the word 'shall' ... plainly mandates an objection *whenever* a petitioner demonstrates noncompliance") (emphasis added). When courts review the EPA's interpretation of the

ambiguous term “demonstrates” and its determination as to whether the demonstration has been made, they have applied a deferential standard of review. *See, e.g., Sierra Club v. Johnson*, 541 F.3d at 1265-66; *Citizens Against Ruining the Environment*, 535 F.3d at 678; *MacClarence*, 596 F.3d at 1130-31. We discuss certain aspects of the petitioner demonstration burden below; however, a fuller discussion can be found in *In the Matter of Consolidated Environmental Management, Inc. – Nucor Steel Louisiana*, Order on Petition Numbers VI-2011-06 and VI-2012-07 (June 19, 2013) (*Nucor II Order*) at 4-7.

The EPA has looked at a number of criteria in determining whether the petitioner has demonstrated noncompliance with the Act. *See generally Nucor II Order* at 7. For example, one such criterion is whether the petitioner has addressed the state or local permitting authority’s decision and reasoning. The EPA expects the petitioner to address the permitting authority’s final decision, and the permitting authority’s final reasoning (including the RTC). *See MacClarence*, 596 F.3d at 1132-33; *see also, e.g., In the Matter of Noranda Alumina, LLC*, Order on Petition No. VI-2011-04 (December 14, 2012) (*Noranda Order*) at 20 (denying title V petition issue where petitioners did not respond to state’s explanation in response to comments or explain why the state erred or the permit was deficient); *In the Matter of Kentucky Syngas, LLC*, Order on Petition No. IV-2010-9 (June 22, 2012) at 41 (*2012 Kentucky Syngas Order*) (denying title V petition issue where petitioners did not acknowledge or reply to state’s response to comments or provide a particularized rationale for why the state erred or the permit was deficient). Another factor the EPA has examined is whether the petitioner has provided the relevant analyses and citations to support its claims. If the petitioner does not, the EPA is left to work out the basis for petitioner’s objection, contrary to Congress’ express allocation of the burden of demonstration to the petitioner in CAA § 505(b)(2). *See MacClarence*, 596 F.3d at 1131 (“the Administrator’s requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive”); *In the Matter of Murphy Oil USA, Inc.*, Order on Petition No. VI-2011-02 (Sept. 21, 2011)(hereafter “*Murphy Oil Order*”) at 12 (denying a title V petition claim, where petitioners did not cite any specific applicable requirement that lacked required monitoring). Relatedly, the EPA has pointed out in numerous orders that, in particular cases, general assertions or allegations did not meet the demonstration standard. *See, e.g., In the Matter of Luminant Generation Co. – Sandow 5 Generating Plant*, Order on Petition Number VI-2011-05 (Jan. 15, 2013) at 9; *In the Matter of BP Exploration (Alaska) Inc., Gathering Center #1*, Order on Petition Number VII-2004-02 (Apr. 20, 2007) at 8; *In the Matter of Chevron Products Co., Richmond, Calif. Facility*, Order on Petition No. IX-2004-10 (Mar. 15, 2005) (hereafter “*Chevron Order*”) at 12, 24. Also, if the petitioner did not address a key element of a particular issue, the petition should be denied. *See, e.g., In the Matter of Public Service Company of Colorado, dba Xcel Energy, Pawnee Station*, Order on Petition Number: VIII-2010-XX (June 30, 2011) at 7–10; *See, e.g., In the Matter of Georgia Pacific Consumer Products LP Plant*, Order on Petition No. V-2011-1 at 6-7, 10-11 (July 23, 2012) at 10–11, 13–14.

### **III. BACKGROUND**

#### **A. The Facility**

The Nucor facility is located on an approximately 4,000-acre site on the Mississippi River, in St. James Parish, near Convent, Louisiana, outside of the Baton Rouge Ozone Nonattainment Area.

The facility, as permitted, is composed of two primary manufacturing processes: a pig iron process and a DRI process, both of which produce feedstock for steelmaking. The pig iron process is designed to produce pig iron, while the DRI process is designed to produce sponge iron. The pig iron process was originally permitted (as reflected in the pig iron title V permit) with two blast furnaces (including hot blast stoves and top gas boilers), two coke oven batteries of 140 ovens each (with associated coke charging, pushing and quenching operations), iron ore sintering, furnace slag handling, storage piles, and material handling and transfer operations and haul roads. The capacity of the pig iron process was reduced by approximately half through removal of one blast furnace and associated units, in a subsequent permitting action (the modified pig iron title V permit). As described in the DRI title V permit, issued on the same day as the modified pig iron title V permit, the DRI process consisted of two production lines, each consisting of a natural gas reformer<sup>5</sup>(where reducing gases are produced), a reduction furnace (where reducing gases are passed through the iron ore), package boilers (which produce steam used in emission control systems), and material handling and transfer operations and haul roads. The DRI process differs from the pig iron process in that it does not use blast furnaces, coke ovens, or slag handling operations because the iron ore is reduced in solid form.

## **B. Nucor Permitting History**

Underlying the 2010 and 2011 Petitions are two sets of permits that LDEQ issued to Nucor for the two processes: one set for the pig iron process and the other set for the DRI process. On May 24, 2010, LDEQ separately but concurrently issued the pig iron title V permit and a related pig iron PSD permit. On August 20, 2010, Nucor submitted an application for the new construction of a DRI process to be built on the same site as the pig iron process. On October 13, 2010, Nucor submitted a permit application asking for modification of the May 24, 2010, pig iron title V permit for several reasons. Specifically, Nucor requested that the production capacity be reduced, that certain material handling and haul road activities be transferred over to the DRI process (under development by LDEQ at that time) “in order to allow for construction and operation of the DRI facility to proceed independently of the [pig iron] permit,”<sup>6</sup> and proposed the addition of selective catalytic reduction (SCR) emission controls at several pig iron emission units. On October 28, 2010, Nucor submitted an addendum to the October 13<sup>th</sup> application asking for removal of the coke battery heat recovery steam generator (HRSG) bypass vents that had been permitted for the pig iron process.

On January 27, 2011, the second set of permits was issued by LDEQ, including the modified pig iron title V permit. At the time of permit issuance on January 27, 2011, LDEQ also placed an administrative stay on the modified pig iron title V permit, which stated that it “shall affect the

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<sup>5</sup> Nucor has subsequently modified its title V and PSD permits for the DRI process to replace one of the reformer-based DRI units with a reformer-less DRI unit. See a modified title V permit for the DRI process, Permit No. 3086-V1, issued on March 8, 2012, a second modified title V permit for the DRI process, Permit No. 3086-V2, issued on November 26, 2013, and a modified PSD permit for the DRI process, Permit No. PSD-LA-751(M-1), issued on November 16, 2012.

<sup>6</sup> See LDEQ Electronic Data Management System (EDMS) Document ID 769711 at page 10. This document may be accessed through the EDMS, the LDEQ's electronic repository of official records, available at <http://edms.deq.louisiana.gov/app/doc/querydef.aspx> (use Agency Interest ID “157847” to find the Nucor permitting record generally). Such records may be searched using a variety of search terms including document date, but most directly by using the EDMS assigned document ID number (EDMS Doc. ID).

permit as modified and precludes the commencement of construction as authorized by the permit.” *Stay of Effectiveness of Permit No. 2560-00281-VI*, at 1 (Jan. 27, 2011), EDMS Doc. ID 7806741. The modified pig iron title V permit reduces production capacity and removes the material handling and haul road units that Nucor had requested to be transferred to the DRI process. The modified pig iron permit also requires operation of SCR and removal of HRSG bypass vents at the pig iron process, as Nucor requested in its October 13, 2010, and October 28, 2010, applications. The record for the permit modification stated that LDEQ was not revising the pig iron PSD permit.

The second set of permits consists of title V and PSD permits for the DRI process, which were issued separately but concurrently on January 27, 2011. These permits also include the material handling operations and haul roads that Nucor requested to be transferred from the pig iron process to the DRI process in its permit application of October 13, 2010. Because this permit was issued after GHGs became a regulated pollutant for purposes for PSD, LDEQ included a BACT determination intended to address GHGs in the DRI PSD permit.

The EPA additionally notes that Nucor’s pig iron and DRI permits have subsequently been modified. With respect to the pig iron process, LDEQ issued a modified PSD permit on July 9, 2013 (Permit No. PSD-LA-740(M-1)). With respect to the DRI process, LDEQ issued a modified title V permit on March 8, 2012 (Permit No. 3086-V1) and a subsequent modification on November 26, 2013 (Permit No. 3086-V2), as well as a modified PSD permit on November 16, 2012 (Permit No. PSD-LA-751(M-1)). The Petitions themselves regard three particular title V permits issued for the pig iron and DRI processes (permit numbers 2560-00281-V0, 2560-00281-V1, and 3086-V0).

### **C. Relevant Prior Petition History**

On March 23, 2012, the EPA issued an order granting two other petitions on the Nucor permits from a different petitioner, Zen-Noh Grain Corp (Zen-Noh). *In the Matter of Consolidated Environmental Management, Inc. – Nucor Steel Louisiana*, Order on Petition Nos. VI-2010-02 and VI-2011-03 (Permit Numbers 2560-00281-V0, 3086-V0, and 2560-00281-V1) (Mar. 23, 2012) (*Zen-Noh Order*). One of Zen-Noh’s claims raised in its 2011 petition was that LDEQ’s determination that the PSD air quality analysis need not be conducted on the aggregate emissions from the DRI and pig iron processes was not based on reasonable grounds or properly supported in the record. *See Zen-Noh’s 2011 Petition* at 18. As part of the first ground for granting Zen-Noh’s petitions, the EPA determined that the permit record did not provide an adequate basis to allow the EPA to determine whether the PSD requirement to conduct an ambient air quality impact analysis for the source had been satisfied. *Zen-Noh Order* at 13.<sup>7</sup> The EPA granted the

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<sup>7</sup> The *Zen-Noh Order* has resulted in two separate lawsuits. In one, Zen-Noh brought a lawsuit arguing that the EPA had a nondiscretionary duty to deny the Nucor title V permits. The judge in that case granted the EPA’s motion to dismiss the case on jurisdictional grounds. *See Zen-Noh Grain Corp. v. Jackson*, Order, Doc. No. 35, Civ. Action No. 12-2535 (E.D. La. April 30, 2013). In the other, LDEQ sought judicial review of the *Zen-Noh Order* in the U.S. Court of Appeals for the 5<sup>th</sup> Circuit, and Nucor intervened; the EPA defended the *Zen-Noh Order* in that case and argued that CAA § 505(c) precluded the court from exercising jurisdiction. *See LDEQ v. EPA*, 730 F.3d 446 (5<sup>th</sup> Cir. 2013). On September 13, 2013, the Court issued a decision in the EPA’s favor, dismissing LDEQ’s petition for review for lack of subject matter jurisdiction. *Id.* at 448-50. LDEQ and Nucor are seeking rehearing of that decision and that request remains pending.

Zen-Noh petitions on the basis that “[t]he respective permit records for the pig iron and DRI title V permits, including the responses to comments, fail to provide an adequate basis and rationale for the EPA to determine that these permits assure compliance with applicable requirements and are in compliance with the Act.” *Zen-Noh Order* at 10. In sum, after considering Zen-Noh’s petitions under the standard in CAA § 505(b)(2), the EPA explained that “the decision to grant these petitions is based on two threshold issues”: “(1) LDEQ has not adequately justified its decision to permit the DRI and pig iron processes as two separate projects for purposes of PSD analysis; and (2) LDEQ has not provided permit records from which the full scope of applicable requirements for the pig iron and DRI title V permits can be determined and, in particular, has not adequately explained the basis for its transfer of emissions units between the pig iron and DRI processes via the title V permits, and its incorporation by reference of permit requirements established in a title V permit into a PSD permit.” *Zen-Noh Order* at 10.

On June 21, 2012, LDEQ submitted a response, which it also described as a supplement to the permit record, to the EPA’s *Zen-Noh Order* granting an objection to Nucor’s title V permits. LDEQ’s Response disagreed with the *Zen-Noh Order* on multiple grounds and defended the Nucor permits, arguing that LDEQ satisfied SIP and title V requirements. In its Response, LDEQ also provided some clarification of how it viewed both the permitting approach and the interaction between the title V and PSD permits. *See, e.g.*, Memorandum from Sam L. Phillips, Assistant Secretary, LDEQ, to Jeffrey Robinson, U.S. EPA Region 6, *Re: Order Responding to Petition VI-2010-02 & VI-2010-03 Consolidated Environmental Management, Inc. – Nucor Steel Louisiana*, ( June 21, 2012), EDMS Document ID 8437945 (hereafter “2012 LDEQ Response”) at 6–7, 16–21. For example, LDEQ stated that “LDEQ agrees that the pig iron and DRI manufacturing facilities constitute a single ‘major stationary source.’” *Id.* at 6. LDEQ also explained its view that “the pig iron and DRI project do not have to be addressed in a single PSD permit (i.e. a single physical document).” *Id.* at 7. In support, LDEQ explained that in a situation where “a single site includes more than one process,” LDEQ interprets its regulations to mean that “a single permit may be issued to include all processes at the site” or that “multiple permits may be issued each of which addresses one or more processes at the site.” *Id.* at 7 n. 43. LDEQ’s Response also committed to make certain PSD permit revisions to address the second threshold issue. *See* 2012 LDEQ Response at 18, 20.

In the *Zen-Noh Order*, the EPA explained that it would entertain future petitions from Zen-Noh, LEAN or Sierra Club raising any of the issues in their 2010 and 2011 petitions that they still wished to raise after LDEQ’s Response to that objection, as well as any new claims based on any new proposed permit. *Zen-Noh Order* at 16–17 and n. 9. On September 26, 2012, counsel for the EPA contacted counsel for Zen-Noh to emphasize that the EPA viewed LDEQ’s June 21, 2012 Response to the *Zen Noh Order* as a new proposed title V permit for Nucor, and that the proper course to raise any issues from the 2010 or 2011 Petitions that the Petitioners still wished to raise, or any new claims based on the new proposed permit, would be to submit a title V petition, by October 3, 2012. On the same day, the EPA also contacted counsel for LEAN and Sierra Club to emphasize the EPA’s view on this issue. 2012 Petition, Att. A. On October 3, 2012, as described above, LEAN and Sierra Club filed a new petition, which, among other things, requested that the EPA object to the DRI and pig iron title V permits for the reasons stated in the 2010 and 2011 Petitions.<sup>8</sup>

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<sup>8</sup> The 2012 Petition also disagreed with the EPA’s interpretation that LDEQ’s Response was a new proposed permit

Issues originally raised in the 2010 Petition are discussed in section IV below; issues originally raised in the 2011 Petition are discussed in section V.

#### **IV. EPA DETERMINATIONS ON ISSUES ORIGINALLY RAISED BY THE PETITIONERS ON THE PIG IRON PERMIT IN THE 2010 PETITION**

##### **A. Petitioners' Contention that the Permit Fails to Apply Appropriate MACT Standards**

The Petitioners raise three issues regarding the CAA § 112 MACT standards in the revised pig iron permit: (a) the permit fails to apply a CAA § 112(j) case-by-case MACT standard for the topgas boiler and construction without a CAA § 112(g) case-by-case MACT determination would be illegal, 2010 Petition at 4–7 and 2011 Petition at 7<sup>9</sup>; (b) the revised permit fails to comply with 40 C.F.R Part 63, Subpart L requirements for coal charging operations at coke oven batteries, 2010 Petition at 7; and (c) the permit fails to apply a CAA § 112(j) case-by-case MACT standard for the heat recovery coke ovens and construction without a CAA § 112(g) case-by-case MACT determination would be illegal. *Id.* at 7–8. These claims are discussed in more detail below.

##### **1. The Permit Fails to Include a Case-by-Case MACT Determination for the Topgas Boiler**

*Petitioners' Claims.* The Petitioners claim that Nucor's pig iron title V permits violate CAA § 112 because it does not contain case-by-case MACT standards under CAA § 112(j) for hazardous air pollutants (HAPs) emitted from the facility's topgas boiler. 2010 Petition at 4-5 and 2011 Petition at 7-8. Petitioners also claim that construction without a case-by case MACT determination under CAA § 112(g) would be illegal. *Id.* Petitioners contend that because Nucor is a major source under CAA § 112 and because the EPA's Industrial Boiler MACT Rule was vacated, CAA § 112(g) and CAA § 112(j) requirements apply and further contend that the EPA must object to the pig iron title V permits because LDEQ failed to assure compliance with them.<sup>10</sup> *Id.*

These claims were re-raised in the 2012 Petition, Att. B at 4-5, Att. C at 7-8.

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that had created another title V petition opportunity. *See Nucor II Order* at 14-15 (discussing the EPA's views on this issue).

<sup>9</sup> This issue is raised in a similar fashion in the 2010 and 2011 Petitions, and those issues were re-raised in the 2012 Petition. For the sake of clarity, we address the similar MACT issue from the 2011 Petition in this section, rather than in Section V.

<sup>10</sup> CAA § 112(j) provides generally that major sources in a listed category or subcategory for which the EPA fails to promulgate standards by CAA deadlines must submit permit applications for case-by-case emission limits and that federal or state permit writers must then determine on a case-by-case basis emission limits equivalent to the limitation that would apply if an emission standard had been issued in a timely manner under CAA §§ 112(d) or (h) of the Act. *See* CAA § 112(j)(5), 40 C.F.R. § 63.55(a). Under CAA § 112(g), no person may begin actual construction or reconstruction of a major source of HAP unless the permitting authority determines that new source MACT requirements will be met and such determination shall be made on a case-by-case basis where there is no applicable federal MACT standard in place.

*EPA's Response.* For the reasons provided below, the EPA denies these CAA § 112(j) and 112(g) claims.<sup>11</sup>

The relevant CAA § 112(d) emissions standard for the boilers at issue is now promulgated and in effect. 76 *Fed. Reg.* 15554 (March 21, 2011). Even if Petitioners' claims on these issues were correct, they are now moot. The requested relief would no longer be appropriate. The EPA does not believe it would be appropriate to now require the pig iron permit be revised to reflect requirements or standards under CAA § 112(j) which is no longer applicable. *See Noranda Order* at 22; *Cf. In the Matter of CF&I Steel LP dba EVRAZ Rocky Mountain Steel*, Order on Petition No. VIII-2011-1 (May 31, 2012) at 23 (denying title V petition issue where provisions claimed to be applicable requirements no longer existed). Moreover, the EPA's regulations implementing CAA § 112(j) at 40 C.F.R. § 63.50(c) provide that no further action to develop a case-by-case limit are required after a federal standard has been promulgated. In addition, with a CAA § 112(d) standard in place, there is no requirement to obtain a § 112(g) case-by-case determination prior to construction of the top-gas boiler.<sup>12</sup>

Further, the Petitioners failed to acknowledge or address the LDEQ's RTC which set forth LDEQ's view that the CAA §§ 112(g) and 112(j) do not apply. LDEQ responded to comments raising CAA §§ 112(g) and 112(j) issues in LDEQ's 2010 response to comments document (*Public Comments Response Summary, Part 70 Operating Permit 2560-00281-VO and Prevention of Significant Deterioration Permit PSD-LA-740, May 24, 2010*, EDMS Document ID 2947527 (hereafter the "2010 RTC") at 230-233. In the 2010 RTC, LDEQ stated that the vacatur of the boiler rule raises the issue of whether CAA § 112(j) has been triggered and then summarized two arguments that "proffered" that CAA § 112(j) has not been triggered. Petitioners do not acknowledge or address these arguments in their 2010 petition and Petitioners have failed to demonstrate why LDEQ's rationale is deficient. *See Kentucky Syngas Order* at 41 (denying title V petition issue where Petitioners failed to acknowledge or reply to state's response to comments or provide a particularized rationale for why the state erred or the permit was deficient).<sup>13</sup>

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<sup>11</sup> The EPA notes that the modified pig iron title V permit issued January 27, 2011 did not modify any requirements applicable to the topgas boilers and thus Claim II in the 2011 Petition concerning applicability of CAA §§ 112(g) and 112(j) to the topgas boilers is outside the scope of issues that may be raised in a petition to object to the modified title V permit. *See In the Matter of Wisconsin Public Service Corporation – Weston Generating Station*, Order on Petition Number V-2006-4 (Dec. 19, 2007) (*Weston Order*) at 11-17 ("[I]n evaluating a petition objecting to a significant modification permit, the EPA will determine based on the facts whether the issues raised by the petitioner are directly related to the permit modification action."). This provides a basis to deny the claims as originally raised in the 2011 Petition. *Id.* (denying petition claim that was "not directly related to the permit modification action.") However, we are addressing the substantive CAA §§ 112(g) and 112(j) issues as they were originally raised in the 2010 Petition. This analysis would also apply to the issues raised in the 2011 Petition, although the issues were not properly raised in light of the scope of the permit action.

<sup>12</sup> The EPA has been advised (via electronic mail from Herman Robinson, LDEQ Counsel to Suzanne Murray, Regional Counsel, EPA Region 6, on March 7, 2011, re: clarifying scope of stay) that construction of the pig iron plant, where the topgas boilers would be located, has not commenced. *See also Stay of Effectiveness of Permit No. 2560-00281-V1*, at 1 (Jan. 27, 2011). The EPA believes this stay on such construction is still in effect. *See a subsequently modified pig iron PSD permit, Permit No. PSD-LA-740 (M-1) (July 9, 2013)* ("The stay of effectiveness, which remains in effect, 'precludes the commencement of construction as authorized by the permit.'")

<sup>13</sup> Although the EPA's view is that the CAA §§ 112(g) and (j) claims in the 2011 Petition are outside the scope of issues that can be raised in a Petition on the modified pig iron title V permit issued January 27, 2011, the EPA notes

Notwithstanding the denial of these claims on this issue, we note that following promulgation of the CAA § 112(d) standard, permitting authorities may be required under 40 C.F.R. § 70.7(f)(1)(i) to reopen title V permits to ensure they incorporate newly applicable requirements under CAA § 112(d) of the CAA, 42 U.S.C. § 7412(d). Thus, the appropriate course in this situation is for a permitting authority to consider whether a title V permit must be reopened under title V to incorporate the newly applicable requirements under CAA § 112(d).

For these reasons, the EPA denies these CAA § 112(j) and 112(g) claims.

## **2. Permit Fails to Comply with Charging Requirements for Coke Oven Batteries**

*Petitioners' Claims.* The Petitioners contend that Nucor's Pig Iron Title V Permit fails to comply with the coke oven charging requirements set forth in 40 C.F.R. § 63.303(b)(2).<sup>14</sup> The Petition states that Nucor requested no controls based on its plan to compact the coal and LDEQ issued a permit with a permit shield excusing Nucor from complying with the National Emissions Standard for Hazardous Air Pollutants (NESHAP) for coal charging. 2010 Petition at 7. The Petitioners further urge the EPA to object based on LDEQ's failure to comply with 40 C.F.R. Part 63, Subpart L for the reasons discussed in certain public comments. *Id.*; *id.*, n.16.

These claims were re-raised in the 2012 Petition, Att. B at 7.

In order to clarify the nature of the issue and give context for LDEQ's response, which is summarized below, a summary of comment numbers 154-157 may be helpful. These comments allege that 40 C.F.R. § 63.303(b)(2) requires the facility have some type of emission control for charging operations. 2010 RTC at 120-122. The comments note that "charge" or "charging period" as defined in 40 C.F.R. § 63.301 means "the period of time that commences when coal begins to flow into an oven and ends when the push side door is replaced." The comments note that Nucor relies on two proposed conditions to fulfill the charging requirement of the MACT: (i) baghouse control on the coal brick preparation and (ii) negative pressure on the oven system. The comment asserts that the use of a negative pressure coke oven and compacted coal charging does not replace the need for emission controls during charging. *Id.* at 121. The comments request that Nucor demonstrate how their process will meet either the NESHAP standard for charging operations or some alternative emission standard established in accordance with 40 C.F.R. § 63.6(g). *Id.* at 122.

LDEQ responded to these comments, reasoning that use by the regulation of the word "flow" in the definition of "charge" or "charging period" clearly indicates that the regulators intend the

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that the 2011 Petition does not acknowledge or reply to additional arguments raised in LDEQ's 2011 RTC document and failure to do so would provide an additional basis for the EPA's denial of the claims in the 2011 Petition. For instance, the 2011 Petition does not acknowledge or reply to LDEQ's argument that § 112(j) does not require the permit to contain a CAA § 112(j) limit because 40 C.F.R. § 63.52(b) provides that a CAA § 112(j) limit for this source would not be required until 30 days after startup of the source.

<sup>14</sup> Subpart L, the NESHAP for Coke Oven Batteries at 40 C.F.R. § 63.303(b)(2) provides that "[f]or charging operations, the owner or operator shall install, operate, and maintain an emission control system for the capture and collection of emissions in a manner consistent with good air pollution control practices for minimizing emissions from the charging operation."

regulation to apply to loose coal and that “Nucor’s use of a coal/brick preparation process and the use of the brick on plate transfer system to a negative pressure oven system is itself controlled in accordance with 40 C.F.R. § 63.303(b)(2).” *Id.* at 121. LDEQ further stated that this matter was addressed by means of a permit shield and that 40 C.F.R. § 70.6(f) provides that a permitting authority may expressly include in a part 70 permit a provision stating that compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance. *Id.* LDEQ explained that it determined that the combination of negative pressure ovens and compacted coal charging will satisfy the requirements of 40 C.F.R. § 63.303(b)(2). *Id.* LDEQ added that Nucor will be required to develop a site specific stack test plan to demonstrate compliance. Nucor must demonstrate this equivalency by complying with the particulate matter limitation of 0.0081 pounds per ton of dry coal charged imposed by 40 C.F.R. § 63.303(d)(2). *Id.*

*EPA’s Response.* For the reasons provided below, the EPA grants on these claims.<sup>15</sup>

The permit fails to incorporate the applicable requirement of 40 C.F.R. § 63.303(b)(2) that “[f]or charging operations, the owner or operator shall install, operate, and maintain an emission control system for the capture and collection of emissions in a manner consistent with good air pollution control practices for minimizing emissions from the charging operation.” The lack of a control device is contrary to 40 C.F.R. § 63.303(b)(2) and 40 C.F.R. § 63.313(d)(1) does not allow a state to create an alternative standard through use of a permit shield or otherwise.<sup>16</sup> The EPA does not agree with LDEQ that the term “flow” indicates that 40 C.F.R. § 63.303(b)(2) only applies to loose coal. The use of the term “flow” was not intended to narrow the definition of charging to the filling of a coke oven with loose coal.<sup>17</sup> In addition, compliance with the

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<sup>15</sup> As noted above, the 2010 Petition further urges the EPA to object based on LDEQ’s failure to comply with 40 C.F.R. Part 63, Subpart L for the reasons presented in comments 154–158 in LDEQ’s 2010 RTC and also references comments 169, 198 and 264.G in LDEQ’s 2010 RTC on this point. 2010 Petition at 7 and n.16. The EPA notes that these comments raise issues relating to both MACT and BACT requirements. However, it does not appear that the Petitioners are raising an objection related to the relevant BACT determinations in this claim, since the claim specifically cites these comments with regard to “LDEQ’s failure to comply with 40 C.F.R. Part 63, Subpart L.” *Id.* In addition, the EPA notes that such general references to comments, without any attempt to explain how those comments are relevant to the argument in the Petition and without addressing the state’s final permit decision, including the state’s response to comments, is not sufficient to meet the Petitioners’ demonstration burden. *See MacClarence*, 596 F.3d at 1132-33; *see generally Nucor II Order* at 7 (discussing demonstration burden). LDEQ provided a response to these comments, including responses regarding BACT. 2010 RTC at 120-123; *see also* 2010 RTC at 130, 154-155, 305-306. The Petition does not acknowledge or address LDEQ’s response to these comments, or point to any flaw in LDEQ’s explanation. *See, e.g., MacClarence*, 596 F.3d at 1132-33; *Noranda Order* at 20. Thus, the EPA is not reaching the points contained in those comments relating to the BACT determinations as part of this grant.

<sup>16</sup> 40 C.F.R. § 63.313(d)(1) provides that the authority for approval of alternatives to the requirements in §§ 63.300 and 63.302 through 63.308 (except the authorities in § 63.306(a)(2) and (d)) “cannot be delegated to State, local, or Tribal agencies....” *See also* 40 C.F.R. § 63.91(g)(2)(i) & (ii)(A) (providing that state may not seek delegation of authority to approve § 63.6(g) alternative non-opacity standards), CAA § 112(l)(1) (a delegation shall not include authority to set standards less stringent than those promulgated by the Administrator) and 75 *Fed. Reg.* 19252, 19254-55 (April 14, 2010) (the EPA’s action approving the delegation of the Subpart L NESHAPs to LDEQ was based on a finding that the state program is no less stringent than the federal program and the EPA’s oversight of the delegation includes ensuring that LDEQ does not make decisions that decrease the stringency of the delegated standards.). The EPA notes that Nucor could seek an alternative emission limit for the charging operation pursuant to the procedures in 40 C.F.R. § 63.6(g).

<sup>17</sup> *See 57 Fed. Reg.* 57534, 57542 (Dec. 4, 1992) (in describing the charging emission point, the EPA indicated that

performance tests and procedures set forth at 40 C.F.R. § 63.309(k) contemplate a capture and control device and it is not clear how compliance (stack) tests could be performed without such a device. Further, LDEQ's reliance on its authority to establish a permit shield is not valid. The permit shield provision in CAA § 505(f) and the title V regulations at 40 C.F.R. § 70.6(f) only authorize a permit shield for applicable requirements if the permit "includes the applicable requirements" or the requirements are determined to be "not applicable." As described above, we have determined that the requirements of 40 C.F.R. § 63.303(b)(2) are applicable and the permit does not include them. Furthermore, the permit shield in the pig iron permit specifically refers to terms and conditions that purport to comply with 40 C.F.R. § 63.303(b)(2). Since the EPA has determined that those terms and conditions do not satisfy the requirements of 40 C.F.R. § 63.303(b)(2), the permit shield itself is also invalid and needs to be revised. Thus, the permit must be revised to include the relevant applicable requirement consistent with 40 C.F.R. § 63.303(b)(2) and the permit shield should likewise be revised with the new terms and conditions associated with 40 C.F.R. § 63.303(b)(2).

The EPA additionally notes that in Claim III.B.1 as originally raised in the 2010 Petition, certain assertions are made about the monitoring required to assure compliance for the controls addressed in this claim with respect to certain emission units. 2010 Petition at 52-53. LDEQ explained that the BACT limits for these units was established at 0.0081 pound per ton of dry coal charged, the limit associated with 40 CFR 63, Subpart L – National Emission Standards for Coke Oven Batteries. 2010 RTC, Comment 258.C.1, at 214. In addressing this grant on Claim I.B, LDEQ should also consider whether any revisions are required for these BACT limits and ensure that the permit includes monitoring sufficient to assure compliance with any revised permit terms. *See, supra*, section C.2.

For the reasons provided above, the EPA grants on these claims.

### **3. The Permit Fails to Apply A Case-by-Case MACT Determination for the Heat Recovery Process**

*Petitioners' Claims.* The Petitioners state that there are two types of coke ovens, byproduct and heat recovery, and that although there are national emission standards for byproduct coke ovens (at 40 C.F.R part 63, Subparts L and CCCC) there are no national emission standards for heat recovery coke ovens. The Petitioners claim that therefore, Nucor, as a major source, is required "to obtain a case-by-case MACT determination from LDEQ" under CAA § 112(j) and that construction of the facility would be illegal under CAA § 112(g). 2010 Petition at 8. The Petitioners assert that Nucor's pig iron permit violates CAA § 112 because it fails to include a case-by-case MACT determination. *Id.* at 7. The Petitioners also incorporate by reference two comments by Sierra Club and Zen-Noh, known as comment 3 and comment 265 in LDEQ's 2010 RTC. *Id.* at 8.<sup>18</sup>

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it considered charging more generally as "when the hot oven is being filled with coal.").

<sup>18</sup> While the Petition does not include any further description or analysis of these comments, for context, the EPA notes that these comments discuss the need to address various toxic pollutants, such as mercury, dioxin and furan, and hydrochloric acid and sulfuric acid. Comment 3 asserts that LDEQ failed to consider the adverse affects of Nucor's mercury emissions and failed to require mercury controls. 2010 RTC at 12-13 (citing *inter alia* 40 C.F.R. 52.21(o) and mercury controls required by Ohio EPA for a coke plant). The EPA notes that the claim discussed in

These claims were re-raised in the 2012 Petition, Att. B at 7-8.

*EPA's Response.* For the reasons provided below, the EPA denies these claims.

The Petitioners have not demonstrated that the permit is not in compliance with the requirements of the Act. Petitioners' claim that there is no national emission standard for heat recovery coke ovens is incorrect. Heat recovery coke ovens<sup>19</sup> are a type of "non-recovery coke oven" as defined in 40 C.F.R. § 63.302 and are regulated under Part 63, subparts L<sup>20</sup> (NESHAP for coke oven batteries) and CCCCC<sup>21</sup> (NESHAP for coke ovens). The term "non-recovery" refers to lack of recovery of chemical by-products and a coke oven that recovers heat (but not by-product) is a "non-recovery coke oven." *See* 66 *Fed. Reg.* 35326, 35328 (July 3, 2001) (explaining that non-recovery coke oven process allows for recovery of heat rather than by-products). Because there is a national emission standard in place for heat recovery coke ovens, CAA §§ 112(j) and 112(g) are not applicable.

In addition, the Petitioners' mere incorporation by reference of Comment 3 and Comment 265 into this argument without any attempt to explain how these comments relate to the argument in the Petition and without confronting LDEQ's reasoning supporting the final permit is not sufficient to satisfy the Petitioners' demonstration burden. *See generally Nucor II Order* at 7 (discussing demonstration burden). In particular, LDEQ provided a response to these comments. *See* 2010 RTC at 13-15; 2010 RTC at 309, 311-312, 316. The Petition does not acknowledge or address LDEQ's response to these comments, or point to any flaw in LDEQ's explanation. *See, e.g., MacClarence*, 596 F.3d at 1132-33; *Noranda Order* at 20.

For these reasons, the EPA denies these claims.

## **B. The Modeling Submitted by Nucor to Support its PSD Analysis is Flawed**

The Petitioners raise six issues in regards to the modeling submitted by Nucor for its PSD analysis: (a) Nucor cannot use Significant Impact Levels (SILs) to justify modeled class I PSD increment violations; (b) Nucor's air modeling uses Baton Rouge Airport wind data, which excludes low wind speeds necessary for verifying compliance with the NAAQS and Class II PSD increments; (c) LDEQ improperly exempted Nucor from PSD monitoring requirements; (d) Nucor's finding that class I area particulate matter less than 10 microns (PM<sub>10</sub>) impacts are

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the body of the 2010 Petition does not discuss or cite 40 C.F.R. § 52.21(o), which relates to PSD requirements, but instead raises issues related to requirements under CAA § 112. Thus, the requirements of 40 C.F.R. § 52.21(o) appear to be outside of the scope of the claim specifically raised and discussed by the Petition. Comment 265 generally claims that "Nucor should be required to quantify and implement MACT for all HAP emissions," including hydrogen chloride, mercury, dioxins, and furans, from the non-recovery coke ovens and the HRSG bypass vents. *Id.* at 307-14. The comment also asserts that LDEQ cannot rely on "NESHAP Subpart CCCCC" for the HAP emissions MACT standard because Subpart CCCCC applies to byproduct coke ovens and not to the coke ovens used by Nucor. *Id.* at 308, 310.

<sup>19</sup> A heat recovery coke oven operates under negative pressure to combust coal to produce heat and electricity used in the plant.

<sup>20</sup> 40 C.F.R. Part 63 Subpart L - NESHAP for Coke Oven Batteries.

<sup>21</sup> 40 C.F.R. Part 63 Subpart CCCCC - NESHAP for Coke Ovens: Pushing, Quenching, and Battery Stacks.

insignificant neglects contributions from secondary particulate formation; (e) emissions calculations that Nucor submitted to LDEQ to support Nucor's PSD analysis are unverifiable; and (f) LDEQ could not provide the modeling input files necessary to evaluate Nucor's class I area impact modeling. 2010 Petition at 8–45. These allegations are discussed in more detail immediately below in Sections IV.B.1-IV.B.6 of this Order (Petition Claims II.A–II.F as originally raised in the 2010 Petition).

### **1. Nucor Cannot Use SILs to Justify Modeled Class I PSD Increment Violations**

*Petitioners' Claims.* The Petitioners generally contend that it is inappropriate to use SILs to determine whether emissions from the proposed pig iron process would cause or contribute to a predicted violation of the PSD increments. 2010 Petition at 8-17. The Petitioners state that Nucor's cumulative source modeling identified violations of the Class I increments for the 24-hour and 3-hour sulfur dioxide (SO<sub>2</sub>) standards but that Nucor argued that its impacts on the day and location that it modeled the PSD increments were below the applicable SILs. *Id.* at 8–9.

The Petitioners state that the use of SILs in this manner is inconsistent with the Wyoming Supreme Court decision in *Powder River Basin Resource Council, et al. v. Wyoming Dept. of Env'tl. Quality*, 2010 WY 25 (Wyo. 2010). The Petitioners state that the *Powder River Basin* decision held that SILs can be used only to determine if a cumulative increment analysis is necessary, not to determine whether an air concentration that exceeds increment levels contributes to a violation in the cumulative analysis. 2010 Petition at 9-10. The Petitioners disagree with LDEQ's statement that the Wyoming law at issue in the *Powder River Basin* decision is distinguishable from the Louisiana statute because the Wyoming law requires a demonstration that the "predicted impact" will not cause or contribute to a violation. *Id.* at 11-12. The Petitioners contend that the Louisiana statute also requires a demonstration based on modeled values. *Id.* at 12.

The Petitioners further state that LDEQ's issuance of the permit was inconsistent with the statutory requirements of CAA § 165(a)(3). 2010 Petition at 10-11. The Petitioners interpret § 165(a)(3) to prohibit the construction of a facility that makes "any contribution" to an exceedance of a NAAQS or increment. *Id.* at 11 ("The statute does not state that the contribution must be significant in order for the construction to be prohibited."). The Petitioners contend that the "EPA has made clear in other circumstances that such a use of SILs is improper." *Id.* The Petitioners note that in 2002, the EPA commented on a proposed North Dakota SIP revision, stating that it is not appropriate to establish Class I SILs when an increment violation exists and that any impact caused by the facility in such an area would be considered to contribute to that violation. *Id.* (citing Letter from Richard R. Long, EPA, to Terry L. O'Clair, North Dakota Department of Health, Apr. 12, 2002). Therefore, the Petitioners contend that LDEQ cannot label some contributions "not significant." *Id.* at 11.

The Petitioners contend that the EPA's regulations establishing SILs at 40 C.F.R. § 51.165(b)(2) apply only to NAAQS and not increments. *Id.* at pp. 12-13. The Petitioners state that the regulations also do not allow for the exemption of modeled violations when Nucor's contribution is below the significance threshold at the time and location of each predicted violation. The Petitioners contend that "locality" in § 51.165(b)(2) refers to contributions in a "broader region,

such as the zone of impact or even the air quality control region, not a specific modeled receptor.” *Id.* at 13. The Petitioners therefore contend that while the EPA guidance asserts that project impacts are insignificant only if they exceed the SIL at the same time and location as the identified increment violation, this interpretation is beyond the intent of SILs set forth in the regulation and interferes with the intentions of the CAA. *Id.* at 14-15. The Petitioners explain that air dispersion models are not designed to pinpoint project impacts at specific locations and time periods, and LDEQ’s application of the SILs based on such modeling implies a false level of model accuracy, citing the EPA guideline on Air Quality Models to support the assertion that models cannot be reliably used in this manner. *Id.* at 15 (citing 40 C.F.R. Part 51 Appendix W, *Guidelines on Air Quality Models* (hereafter “Appendix W”), at § 9.2.1). The Petitioners conclude that Nucor could only capture specific time and location violations by using “infinitely more receptors to identify all possible source-to-receptor combinations.” *Id.* at 15-16.

Although conceding that LDEQ did not reference the 1990 Draft New Source Review Workshop Manual (U.S. EPA, New Source Review Workshop Manual, Prevention of Significant Deterioration and Nonattainment Area Permitting (Draft, October 1990) (hereafter “NSR Manual”)) to support the use of SILs in the cumulative increment analysis, the Petitioners state that reliance on the document as a supporting reference is inconsistent with the EPA regulations. *Id.* at 13. The manual may be helpful when it explains how to implement the statute and regulations, but it cannot supersede statutory requirements. *Id.* at 13-14. The Petitioners note that the EPA indicated the manual is not intended to be a final agency action or an official statement of policy, and in the case of a conflict with regulations and policy, those regulations and policies govern. *Id.* (citing NSR Manual at Preface). Moreover, the Petitioners state that the manual is outdated and has not been updated to reflect regulatory changes that have occurred in the last 20 years, such as the development of the PM<sub>10</sub> increments in 1993. *Id.* at 14.

Finally, the Petitioners contend that the NAAQS SILs provide inadequate protection of the increments, which are much smaller values than the respective NAAQS. *Id.* at 16. In particular, the Petitioners state that the use of the NAAQS SILs for the PM<sub>10</sub> increment analysis is unlawful because the 24-hour PM<sub>10</sub> NAAQS is five times the allowable increment, yet LDEQ applied the same SIL value to both. *Id.* While the Petitioners contend that the use of SILs for NAAQS “makes sense,” PSD increments are not protected with regional ambient air monitoring networks and other SIP-planning requirements in the same way as the NAAQS, such that without a full modeling analysis increment violations are never detected or prevented. *Id.* at 17.

These claims were re-raised in the 2012 Petition, Att. B at 8-17.

*EPA’s Response.* For the reasons provided below, the EPA denies these claims.

The EPA does not agree with the Petitioners that the language of either the statute or the regulations prohibit the use of significant impact levels in the increment analysis to determine whether a source contributes to an existing increment violation. As explained in various authorities, the EPA has long interpreted the Act to permit the use of SILs to determine whether a proposed new or modified major source will cause or contribute to a violation of the NAAQS or increment. The Petitioners have failed to demonstrate that the LDEQ acted inconsistent with the statute or regulations in applying this interpretation to the permit.

Section 165(a)(3) of the CAA requires the owner or operator of a major emitting facility, as a condition of obtaining a construction permit, to demonstrate that the facility will not “cause, or contribute to, air pollution in excess of any (A) maximum allowable increase or maximum allowable concentration for any pollutant in any area to which this part applies more than one time per year, (B) national ambient air quality standard in any air quality control region, or (C) any other applicable emission standard or standard of performance under this chapter.” The statute does not define the phrase “cause, or contribute to,” or specify how a facility is to “demonstrate” that it does not cause or contribute to a violation of the NAAQS or increments. Therefore, the statute is ambiguous with respect to the precise questions at issue here. The EPA recently defended this interpretation of the statute in the U.S. Court of Appeals for the D.C. Circuit in *Sierra Club v. EPA*, 705 F.3d 458 (D.C. Cir. 2013). The court declined to rule on the precise question, but in the briefing, the EPA explained that it has long interpreted the phrase “cause, or contribute” to refer to significant or non-*de minimis* emission contributions. See Brief of Respondents at 26-32, 37-44.

In particular, the EPA has long interpreted and continues to interpret this ambiguity in the statute to permit the use of SILs to determine if the impact from a source contributes to an existing violation. For example, in 1980, Richard Rhoads, Director of the EPA’s Control Programs Development Division, issued a memo explaining, “If the proposed source or modification has no significant contribution to the nonattainment problem, then the proposed project does not contribute to this violation.” Memo from R. Rhoads, Director, Control Programs Development Division, to A. Smith, Director, Air & Hazardous Materials Division, Region X, re: Interpretation of “Significant Contribution” (Dec. 16, 1980), at 1.

In 1988, Gerald Emison of the EPA’s Office of Air Quality and Planning Standards (OAQPS) issued a memo to resolve inconsistent practices among the Regions in applying the significance standard to the air quality analysis. Memo from G. Emison, Director, OAQPS, to T. Maslany, Director, Air Management Division, re: *Air Quality Analysis for Prevention of Significant Deterioration (PSD)* (July 5, 1988) (hereafter “Emison Memo”). The memo notes that “[h]istorically, the Environmental Protection Agency’s (EPA’s) position has been that a PSD source will not be considered to cause or contribute to a predicted NAAQS or increment violation if the source’s estimated air quality impact is insignificant (i.e., at or below defined *de minimis* levels).” *Id.* at 1. The Emison Memo notes that one approach used by some Regions was “where a proposed source would automatically be considered to cause or contribute to any modeled violation that would occur within its impact area. . . . The permit would be denied, even if the source’s impact was not significant at the predicted site of the violation during the violation period.” *Id.* The second approach included an “additional step [which] determines whether the emissions from the proposed source will have a significant ambient impact at the point of the modeled NAAQS or increment violation when the violation is predicted to occur. If it can be demonstrated that the proposed source’s impact is not ‘significant’ in a spatial and temporal sense, then the source may receive a PSD permit.” *Id.* at 2. The Emison Memo concludes that the second approach is the most appropriate. *Id.*

The NSR Manual similarly concludes that a source’s impact on a NAAQS or increment violation only contributes to an existing violation where it is significant:

When a violation of any NAAQS or increment is predicted at one or more receptor in the impact area, the applicant can determine whether the net emissions increase from the proposed source will result in a significant ambient impact at the point (receptor) of each predicted violation, and at the time the violation is predicted to occur. The source will not be considered to cause or contribute to the violation if its own impact is not significant at any violating receptor at the time of each predicted violation. In such case, the permitting agency, upon verification of the demonstration, may approve the permit.

*Id.* at C.52.<sup>22</sup>

The EAB issued an order relying on these authorities to uphold this use of SILs in the cumulative NAAQS or increment analysis in *Prairie State*. The EAB concluded that the “cause, or contribute to” language “must mean that some non-zero emission of a NAAQS parameter is permissible, otherwise such a demonstration [that emissions from a proposed facility will not ‘cause, or contribute to’ air pollution in excess of a NAAQS standard] could not be made. Courts have long recognized that the EPA has discretion under the Clean Air Act to exempt from review ‘some emission increases on grounds of de minimis or administrative necessity.’” *Id.* at 104-05 (quoting *Alabama Power Co. v. Costle*, 636 F.2d 323, 400 (D.C. Cir. 1979)).<sup>23</sup>

The Petitioners attempt to distinguish these precedents by citing one isolated document, a 2002 letter sent from the Director of the Air and Radiation Program in Region 8 to the North Dakota Department of Health. In that letter, the Region provided comments on a proposed SIP revision, including a comment expressing the position that SILs should not be used when an increment violation already exists in a Class I area because any impact on a receptor that shows a violation of the “increment would be considered to contribute to that violation.” Letter from R. Long, EPA Region 8, to T. O’Clair, North Dakota Department of Health (April 12, 2002), Attachment at 5-6. It does not appear that this particular document was cited or analyzed in the Petitioners’ underlying comments during the period for public comment in the permitting action. Rather, the Petitioners’ are raising the points in response to statements LDEQ made in the RTC. Thus, LDEQ has not had an opportunity to consider and respond to the Petitioners’ points. Nevertheless, although the 2002 letter indicates that the Region “consulted with our Headquarters offices,” the letter does not necessarily represent the EPA’s interpretation of the Clean Air Act or federal PSD regulations. The Petitioners have not cited to and the EPA is not

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<sup>22</sup> Although conceding that LDEQ did not reference the NSR Manual in its response to comments, the Petitioners contend that the manual cannot be used to justify the use of SILs in the cumulative air quality analysis. As discussed further in this order, the EPA does not agree that the guidance described in the manual conflicts with the requirements of the statute or the regulations. Rather, it is consistent with previous and subsequent guidance provided by the agency as to this issue. Moreover, the fact that the manual does not include increments for PM<sub>10</sub> is irrelevant to the Petitioners’ claim that LDEQ should not have used SILs for the SO<sub>2</sub> increment analysis.

<sup>23</sup> The *Prairie State* order and LDEQ also rely on Appendix W, which states with respect to SO<sub>2</sub> emissions for sources located in areas designated as attainment or unclassifiable that “the demonstration as to whether the source will cause or contribute to an air quality violation should be based on sufficient data to show whether” among other things, “the source *contributes significantly*, in a temporal and spatial sense, to any modeled violation.” Appendix W, § 10.2.3.2.a (emphasis added). Although this language applies specifically to the NAAQS analysis, nothing in Appendix W suggests this same standard could not also be applied to the increment analysis, consistent with existing EPA guidance.

aware that this position has been reiterated in any official guidance or rulemaking in the decade since that letter was drafted.

On the contrary, in 1996, the EPA proposed SILs for SO<sub>2</sub>, PM, and NOs, including Class I SILs to be used to determine whether a source would cause or contribute to a NAAQS or increment violation. 61 *Fed. Reg.* 38250, 38292 (July 23, 1996). Although those values were not finalized at that time, the EPA did finalize Class I increment SILs for PM<sub>2.5</sub> in 2010 for purposes of determining whether a source would cause or contribute to a NAAQS violation. 75 *Fed. Reg.* 64864, 64890-95 (Oct. 20, 2010). In proposing the PM<sub>2.5</sub> SILs, the EPA noted that it was aware that many states had been using the SILs proposed in the 1996 proposal as screening tools. 72 *Fed. Reg.* 54112, 54140 (Sept. 21, 2007). *See also* Memo from J. Calcagni, Director, AQMD, to T. Maslany, Director, ARTD (Sept. 10, 1991) (“EPA does not have a national policy defining air quality significant impact levels for Class I increments. I see no reason, however, why the concept of a significant impact should not also be applied to Class I increments, provided the significant impact levels are determined in a reasonable manner.”). At no point in those rulemakings did the EPA indicate or suggest that the Class I SILs could not be used or approved into a state’s SIP where there was an existing increment violation.<sup>24</sup> Thus, the 2002 letter from Region 8 would appear to be an isolated communication that is inconsistent from both prior and subsequent EPA statements generally supporting the application of SILs in Class I areas.

The Petitioners’ reliance on the language of the EPA’s regulations at § 51.165(b)(2) also does not compel the EPA to object to the permit. The regulations in that section provide:

A major source or major modification will be considered to cause or contribute to a violation of a national ambient air quality standard when such source or modification would, at a minimum, exceed the following significance levels at any locality that does not or would not meet the applicable national standard:  
[Table of values].

40 C.F.R. § 51.165(b)(2). Although the regulation explicitly applies the use of SILs to evaluating

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<sup>24</sup> In the *Sierra Club* litigation mentioned above and in the preamble to the final rule at issue in that case, the EPA acknowledged that there may be circumstances in which an impact from an individual source could cause a NAAQS or increment violation even if the impact falls below the applicable SILs. *See* Brief of Respondents at pp. 32-33; 75 *Fed. Reg.* at 64894 (“[W]e have historically cautioned states that the use of a SIL may not be appropriate when a substantial portion of any NAAQS or increment is known to be consumed.”). The EPA concluded that “notwithstanding the existence of a SIL, permitting authorities should determine when it may be appropriate to conclude that even a *de minimis* impact will ‘cause or contribute’ to an air quality problem and to seek remedial action from the proposed new source or modification.” 75 *Fed. Reg.* at 64892. The Petitioners cite no evidence in the record indicating that the source in this case is *causing* an increment violation despite the fact that its impact is not significant. Rather the question at issue is whether the source is considered to “contribute” to the modeled violation. Subsequent to the court decision in *Sierra Club*, the EPA issued guidance regarding the continued use of the SILs. *See* EPA Office of Air Quality Planning and Standards, Circuit Court Decision on PM<sub>2.5</sub> Significant Impact Levels and, Significant Monitoring Concentration, Questions and Answers (March 4, 2013). The EPA explained that “[a]s part of a cumulative analysis, the applicant may continue to show that the proposed source does not contribute to an existing violation of the PM<sub>2.5</sub> NAAQS by demonstrating that the proposed source’s PM<sub>2.5</sub> impact does not significantly contribute to an existing violation of the PM<sub>2.5</sub> NAAQS.” *Id.* at 3. The permit at issue in this claim was issued well before the *Sierra Club* court decision, but even so, the permit record does not contradict any holdings of that decision or EPA’s subsequent guidance.

a contribution to a NAAQS violation, nothing in the language of the regulation precludes the application of a similar concept to the increment analysis.

The EPA also does not agree that the term “locality” in this regulation precludes the application of the SILs at the time and location of the violation. Nothing in 40 C.F.R. § 51.165(b)(2) or any other regulation precludes states from considering both a geographical and temporal element when using SILs in increment analysis. Such an approach is consistent with the EPA guidance. *See* 1980 Rhoads memo at 1-2 (“if the proposed PSD source can demonstrate that its new emissions would not have a significant impact at the point of the violation when that violation is actually occurring, then the proposed source would meet the requirements of 40 C.F.R. §52.21(k)(1) provided that it would not cause any new violations of the NAAQS”); 1988 Emison Memo at 2 (“If it can be demonstrated that the proposed source's impact is not ‘significant’ in a spatial and temporal sense, then the source may receive a PSD permit.”); NSR Manual at C.52 (“When a violation of any NAAQS or increment is predicted at one or more receptors in the impact area, the applicant can determine whether the net emissions increase from the proposed source will result in a significant ambient impact at the point (receptor) of each predicted violation, and at the time the violation is predicted to occur. The source will not be considered to cause or contribute to the violation if its own impact is not significant at any violating receptor at the time of each predicted violation.”); *Prairie State* at 105 (“With respect to SO<sub>2</sub> emissions, Appendix W states that, for sources located in attainment or unclassifiable areas, ‘the demonstration as to whether the source will cause or contribute to an air quality violation should be based on,’ among other things, ‘the *significance* of the spatial and temporal contribution to any modeled violation.’”) (citing Appendix W § 11.2.3.2(a) (1995)); Appendix W § 10.2.3.2.a (“the demonstration as to whether the source will cause or contribute to an air quality violation should be based on,” among other things, whether “the source contributes significantly, in a temporal and spatial sense, to any modeled violation”). The Petitioners do not clearly explain why these authorities contradict the statute or the regulations. Rather, the Petitioners make conclusory statements that this policy “clearly” contradicts the intentions of both the statute and the regulations. As discussed above, the EPA does not agree that the statute or the regulations so limit the application of SILs in the increment analysis.

Also, the claim about the number of receptors modeled by Nucor does not discuss any of the relevant statutes, regulations or EPA guidance on the number of receptors or geographical extent of receptors required to be used in refined modeling, and thus, is not sufficient to demonstrate an error in the ambient impact assessment performed for Nucor. *See, e.g., MacClarence*, 596 F.3d at 1131 (“the Administrator's requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive”); *Nucor II Order* at 7 (explaining that the EPA has looked at whether title V petitioners have provided the relevant citations and analyses to support its claim in determining whether it has a duty to object under CAA section 505(b)(2)). Moreover, the Petitioners’ contention that the number of receptors modeled by Nucor is insufficient does not discuss any of the relevant statutes, regulations or EPA guidance that have a bearing on the number of receptors or geographical extent of receptors required for refined modeling, and thus, is not sufficient to demonstrate an error in the ambient impact assessment performed for Nucor. The claim does not demonstrate an error by LDEQ in the selection of receptors used for the refined PSD modeling performed for Nucor. In particular, Appendix W § 7.2.2 Critical Receptor Sites, provides that “[r]eceptor sites for refined modeling

should be utilized in sufficient detail to estimate the highest concentrations and possible violations of a NAAQS or a PSD increment. In designing a receptor network, the emphasis should be placed on receptor resolution and location, not total number of receptors. The selection of receptor sites should be a case-by-case determination taking into consideration the topography, the climatology, monitor sites, and the results of the initial screening procedure.” The Petitioners did not address any of the source-specific factors identified in Appendix W with respect to the selection of receptors for modeling at the Nucor facility. Thus, LDEQ’s selection of receptors was not demonstrated to be unreasonable for the Nucor facility and the Petitioners have not identified any error in the modeling or the application of the SILs on this basis.

The Petitioners’ reliance on the Wyoming Supreme Court decision in *Powder River Basin* is also misplaced. In that case, the court was evaluating whether Wyoming law permitted the Wyoming Department of Environmental Quality (WDEQ) to use the SILs in the cumulative analysis to determine whether a source (the Dry Fork Station) caused or contributed to modeled exceedances on a nearby Indian reservation classified as a Class I area. 2010 WY 25, P7-39. A state court decision interpreting a state regulation is not binding on either the EPA’s interpretation of its own regulations or another state’s interpretation of its regulations. However, even if the opinion is substantively evaluated, it does not preclude or undermine LDEQ’s use of the SILs in the present permitting action.

The Wyoming court (and the Petitioners here) agreed that SILs may be used in the initial impact analysis to determine whether a cumulative analysis was required, but expressed doubt about whether the SILs could be relied upon in the cumulative analysis to determine that a source’s impact on a modeled exceedance would not cause or contribute to an increment violation. *Id.* at 17-22. The court evaluated the EPA authorities on this issue and acknowledged that many demonstrated the EPA’s support for the use of SILs in the cumulative phase of the air quality analysis. *Id.* at 23-24 (citing, e.g., NSR Manual; *Prairie State*). However, the Court’s holding ultimately turned on the plain language of the Wyoming regulation, which reads: “A permit to construct . . . shall be issued only . . . if the predicted impact . . . is less than the maximum allowable increment . . .” *Id.* at 27-28. (quoting 6 WAQSR § 4(b)(i)(A)(I)). The court held that the state regulatory language requiring the “predicted impact” be lower than the increment “does not provide authority for the DEQ to treat small exceedances as de minimis and issue the permit anyway.” *Id.* at 29. The court continued:

Given the language of the regulation, we see no room for the DEQ to waive application of the increment through the use of [SILs], and no authority for the DEQ to invoke [SILs] to issue a permit despite modeled exceedances of the increment, no matter how small those exceedances might be or how small the proposed source’s contribution may be. We therefore conclude that the DEQ’s reliance solely on [SILs] is not consistent with the language of the regulations.

*Id.* Thus, the Wyoming court decision did not turn on either the language of the CAA, the federal regulations or EPA guidance. Rather, as LDEQ correctly stated in its response to comment, the *Prairie River Basin* decision turned on a peculiarity in Wyoming law. *See* 2010 RTC at 242.<sup>25</sup>

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<sup>25</sup> Modeling using the maximum allowable emissions indicated that the Dry Fork Station would contribute between 0.0002 and 0.0009 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) to 29 modeled increment exceedances in the Class I area. *Id.*

The Petitioners have not identified a similar peculiarity in Louisiana law or in the federal regulations that prohibits the use of the SILs in the cumulative analysis. In fact, the Louisiana law mimics the federal regulations as to this point, reading:

The owner or operator of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emission increases or reductions, including secondary emissions, would not cause or contribute to air pollution in violation of: 1. any national ambient air quality standard in any air quality control region; or 2. any applicable maximum allowable increase over the baseline concentration in any area.

*Compare* LAC 33:III.509.K, *with* 40 C.F.R. § 51.166(k)(1). The Petitioners contend that the requirement for LDEQ to “demonstrate” that source emissions will not violate a NAAQS or increment means that the analysis must be based on modeled values and the Louisiana regulation is therefore comparable to the Wyoming regulation. The EPA disagrees that the language of the Louisiana regulation, like the Wyoming regulation, explicitly prohibits the issuance of a permit where the modeled impacts exceed the increment in all cases. Rather, as explained above, the term “contribute” is ambiguous and allows the permitting authority (in this case, LDEQ) and the EPA to determine that certain impacts simply do not contribute to an existing violation. The Petitioners did not cite any other requirement or decision that suggests that LDEQ did not follow the proper procedures under its own SIP-approved regulations, nor did they show that its exercise of discretion under such regulations was unreasonable or arbitrary. *See, e.g., infra* at 5.

Finally, the Petitioners have not demonstrated that LDEQ’s use of the SILs in this case does not adequately protect the Class I increments. The Petitioners generally contend that the SILs are not protective of increments in the same manner as they protect the NAAQS, but they do not address the SILs used by LDEQ in the final increment analysis in this permitting action. In fact, LDEQ did not use the SIL values found at 40 C.F.R. § 51.165(b)(2) for the Class I increment. Rather, according to the final permitting record, LDEQ compared the impact of the Nucor facility to a SIL of 1.0 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) for the 3-hour  $\text{SO}_2$  standard and 0.2  $\mu\text{g}/\text{m}^3$  for the 24-hour standard. *See* pig iron PSD permit at 113. These SIL values represent 4 percent of the respective increments of 25  $\mu\text{g}/\text{m}^3$  and 5  $\mu\text{g}/\text{m}^3$ .

The Petitioners use the example of the  $\text{PM}_{10}$  SILs to support their contention that the SILs generally are not adequately protective of the increments, arguing that the  $\text{PM}_{10}$  SIL represents only 3.3 percent of the 24-hour NAAQS standard as compared to 16.7 percent of the 24-hour increment. This example is irrelevant for several reasons. First, the Petitioners do not appear to be challenging the application of the SILs in the  $\text{PM}_{10}$  increment analysis in this petition. In fact, the final permitting record demonstrates that there were no modeled Class I increment violations

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at 15-16. Using maximum actual emissions, no exceedances were predicted. *Id.* at 14. The Wyoming court ultimately concluded that, while the state could not rely on the SILs in the cumulative air quality analysis, it was entitled to technical deference to determine whether the source would actually have any predicted impact on the modeled exceedances. *Id.* at 34-35. Because the state determined that the predicted exceedances occurred only when modeling the maximum allowable emissions and were exceedingly small, the court held that the state was within its discretion to rely more heavily on the modeling of the maximum actual emissions as providing a better prediction of source impacts. *Id.* at 36.

for the 24-hour PM<sub>10</sub> NAAQS. *See* the pig iron PSD permit, Permit No. See pig iron PSD permit at 113. Second, the fact that the PM<sub>10</sub> SIL may represent a more significant fraction of the PM<sub>10</sub> increment has no bearing on whether the entirely different SIL values used by LDEQ to evaluate the Class I SO<sub>2</sub> increments are sufficiently protective of the increment. As the SIL values used by LDEQ represent 4 percent of the applicable increment, they are more comparable to the PM<sub>10</sub> SILs as compared to the PM<sub>10</sub> NAAQS, where the former represents 3.3 percent of the latter. The Petitioners do not address whether the use of a SIL that represents 4 percent of the increment would be adequately protective of the increments in their view.

The Petitioners contend that increment violations cannot be detected without a full modeling analysis and that the use of SILs in the increment analysis would preclude this preventative measure. The use of SILs in an increment analysis does not necessarily preclude a finding that a source has caused or contributed to a predicted violation of an increment and does not preclude a state from taking appropriate measures to remediate existing violations at any source. However, earlier in the petition, the Petitioners only objected to the use of SILs to determine whether a source's impact contributes to an existing violation identified in the full or cumulative modeling analysis. The Petitioners did not object to the use of the SILs in the preliminary modeling analysis to determine whether a cumulative modeling analysis was required in the first place. In this case, LDEQ and Nucor actually conducted a cumulative modeling analysis. Thus, LDEQ has been made aware of the existing increment violations and can take appropriate measures to remediate the emissions contributing to those violations. The EPA guidance specifically instructs states to address known increment violations in such circumstances. *See* Emison memo at 2 (“[T]he State must also take the appropriate steps to substantiate the NAAQS or increment violation and begin to correct it through the SIP. The EPA Regional Offices’ role in this process should be to establish with the State agency a timetable for further analysis and/or corrective action leading to a SIP revision, where necessary. Additionally, the Regional Office should seriously consider a notice of SIP deficiency, especially if the State does not provide a schedule in a timely manner.”); NSR Manual at C.52 (“However, the agency must also take remedial action through applicable provisions of the state implementation plan to address the predicted violation(s).”).

For these reasons, the EPA denies these claims.

## **2. Nucor’s Air Modeling Uses Baton Rouge Airport Wind Data, Which Excludes Low Wind Speeds Necessary for Verifying Compliance with the NAAQS and Class II PSD Increments.**

*Petitioners’ Claims.* The Petitioners contend that Nucor’s use of five years of wind data from the Baton Rouge Airport in the modeling analysis was inconsistent with the EPA’s *Meteorological Monitoring Guidance for Regulatory Modeling Applications*. 2010 Petition at 17 (citing EPA-454/R-99-005, *Meteorological Monitoring Guidance for Regulatory Modeling Applications* (2000)). The Petitioners assert that the main problem with use of airport wind data is that any wind speed below three knots, or about 1.5 meters per second, is regarded as calm, which means that the effects of wind speeds lower than 1.5 meters per second will be excluded from the modeling analysis. *Id.* at 18. The Petitioners claim that while the airport data label any winds below 1.5 meters per second as calm, the EPA guidance states that wind speed measuring devices should have a starting threshold of 0.5 meters per second or less. *Id.* (citing

*Meteorological Monitoring Guidance for Regulatory Modeling Applications* at 1-1). The Petitioners explain that the worst case conditions for pollution modeling occur at low wind speeds (1.0 meters per second) because modeled impacts are inversely proportional to wind speed, and conclude that using airport data results in severely underestimated modeled impacts. *Id.* The Petitioners note that this concern is relevant for Nucor because its 24-hour PM<sub>10</sub> air modeling results are over 93 percent of the available PSD increment. *Id.* at 19. Furthermore, the Petitioners claim that these low wind speeds occurred during 23 percent of the hours collected from the airport wind data. *Id.* The Petitioners note that between the low wind speeds and another 8 percent of missing hours, the airport wind data only reflect 69 percent of the possible hours for the AERMOD modeling. *Id.* The Petitioners conclude that since the data were missing the “worse-case dispersion conditions,” the airport wind data were inadequate to provide the AERMOD model with the low wind speed hours that must be included for realistically verifying compliance with the NAAQS and PSD increments. *Id.* at 20.

These claims were re-raised in the 2012 Petition, Att. B at 17-20.

*EPA’s Response.* For the reasons provided below, the EPA denies these claims.

In its response to Petitioners’ comment, the LDEQ stated that the EPA-approved AERMOD model was used, following approved LDEQ modeling guidelines, and using 5 years of surface data from LDEQ recommended meteorological stations. LDEQ cited Appendix W § 8.3.4.1.a, to state that

treatment of calm or light and variable wind poses a special problem in model applications since steady-state Gaussian plume models assume that concentration is inversely proportional to wind speed. Furthermore, concentrations may become unrealistically large when wind speeds less than 1m/s are input to the model. Procedures have been developed to prevent the occurrence of overly conservative concentration estimates during periods of calms. These procedures acknowledge that a steady-state Gaussian plume model does not apply during calm conditions, and that our knowledge of wind patterns and plume behavior during these conditions does not, at present, permit the development of a better technique. Therefore, the procedures disregard hours which are identified as calm. The hour is treated as missing and a convention for handling missing hours is recommended.

40 C.F.R. Part 51, Appendix W § 8.3.4.1.a. LDEQ also stated that the use of airport data was based on studies and Louisiana modeling guidance updated and made public in 2006. *See* 2010 RTC at 249-250.

The Petitioners’ analysis in this claim does not address or consider LDEQ’s relevant analysis in the RTC. *See MacClarence*, 596 F.3d at 1132-33; *see also, e.g., Kentucky Syngas Order* at 41 (denying title V petition issue where petitioners did not acknowledge or reply to state's response to comments or provide a particularized rationale for why the state erred or the permit was deficient). In addition, the Petitioners rely on the EPA’s *Meteorological Monitoring Guidance for Regulatory Modeling Applications Guidance* to support their claim, which generally describes the collection of meteorological data for regulatory modeling applications, but it does not address the use of the meteorological data in AERMOD modeling in particular. The most

appropriate guidance on how to use meteorological data to conduct PSD modeling is found in Appendix W. In particular, the Petitioners did not address or consider Appendix W § 8.3, Meteorological Input Data, which provides “that model input data are normally obtained either from the NWS or as part of a site-specific measurement program” (see *id.* § 8.3.b), and did not cite any provision of Appendix W that invalidates meteorological data used for modeling based on the percentage of wind data that is deemed calm. See, e.g., Appendix W § 8.3.4, Treatment of Near Calms and Calms. While it may be true that using winds less than 1 m/s (calm winds) in AERMOD could hypothetically increase modeled impacts greater than 93 percent of the increment, at the time the analysis was performed (2009) and at the time the PSD permit was issued (May 24, 2010) Appendix W did not require impacts to be calculated using calm wind speeds; thus, the use of this wind data for modeling was consistent with Appendix W. Also, the Petitioners did not show that the wind data were inconsistent with any statutory or regulatory provision, or the EPA-approved modeling protocol, *Dispersion Modeling Protocol, PSD Permit Application for the Proposed Pig Iron Plant, St. James Parish, Louisiana* (Nucor Corp., March 12, 2009), EDMS Document ID 6322690 (hereafter “Modeling Protocol”), or that LDEQ’s approach was unreasonable. See, e.g., *MacClarence*, 596 F.3d at 1131 (“the Administrator’s requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive”); *Nucor II Order* at 7 (explaining that the EPA has looked at whether title V petitioners have provided the relevant citations and analyses to support its claim in determining whether it has a duty to object under CAA section 505(b)(2)). Thus, the Petitioners did not demonstrate that LDEQ failed to comply with its SIP-approved regulations governing PSD permitting or that it acted unreasonably in using the Baton Rouge wind data at the time of permitting. See, e.g., *In the Matter of Cash Creek Generation, LLC*, Order on Petition No. IV-2010-4 (June 22, 2012) (hereafter “2012 *Cash Creek Order*”) at 4-5.

For these reasons and for the reasons described in the discussion that follows, the EPA denies these claims.

**a. LDEQ’s Understanding of How AERMOD Treats Calm Hours is Incorrect**

*Petitioners’ Claims.* The Petitioners dispute LDEQ’s claim in response to Comment 129 that AERMOD can model calculated pollutant concentrations during calm wind hours. *Id.* at 20 (quoting what appears to be an earlier version of LDEQ’s response to Comment 129). The Petitioners assert that AERMOD treats calm and missing hours by setting “the concentration values to zero for that hour, and calculat[ing] the short term averages according to the EPA’s calm policy, as set forth in the Guideline.”” *Id.* at 21 (quoting EPA-454/B-03-001, *User’s Guide for the AMS/EPA Regulatory Air Model: AERMOD*, at 3-3 to 3-4 (2004)). The Petitioners then quote the EPA recommendations in § 8.3.4.2 of Appendix W, including: “For annual averages, the sum of all valid hourly concentrations is divided by the number of non-calm hours during the year. AERMOD has been coded to implement these instructions.”” *Id.* (quoting § 8.3.4.2 from the EPA’s Final Rule, *Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions*, 70 Fed. Reg. 68218, 68246 (Nov. 9, 2005)). The Petitioners then state that LDEQ’s misunderstanding of AERMOD has “serious permitting ramifications” since the Baton Rouge Airport data includes “many calm hours.” *Id.*

These claims were re-raised in the 2012 Petition, Att. B at 20-21.

*EPA's Response.* For the reasons provided below, the EPA denies these claims.

In its response to Petitioners' comment, the LDEQ stated that the LDEQ response to Comment 129 that the Petition references and quotes was a preliminary draft that was inadvertently made public, that it was an internal draft that had not been finalized or reviewed, and that it was not the final and official response. *See* LDEQ response to comment No. 260.C in the 2010 RTC at 250. Thus, LDEQ asserts that the response of the preliminary draft should not be relied on. *Id.* In addition, in the final response to this comment in the 2010 RTC. LDEQ provides a different explanation for the treatment of calm winds in Gaussian models, such as AERMOD, citing Appendix W. *See* 2010 RTC at 109 (referring to LDEQ response to comment No. 260.C at 249).

The Petitioners do not acknowledge or address that fact that LDEQ removed this statement from the final response to comments; nor do the Petitioners confront the explanation in LDEQ's response to comment that the quoted statement did not represent the final and official response. *See MacClarence*, 596 F.3d at 1132-33; *see also, e.g., Kentucky Syngas Order* at 41 (denying title V petition issue where petitioners did not acknowledge or reply to state's response to comments or provide a particularized rationale for why the state erred or the permit was deficient). In addition, the Petitioners have not demonstrated that the draft, un-reviewed response had any bearing on, or led to any errors in, the modeling analysis performed for the pig iron PSD permit. The Petitioners merely said that LDEQ's misunderstanding has "serious permitting ramifications," but did not identify a specific error or flaw that occurred with respect to the permit or the modeling analyses. This general and unsupported assertion does not meet the Petitioners' demonstration burden. *See, e.g., Kentucky Syngas Order* at 41; *see also Nucor II Order* at 7.

For these reasons, the EPA denies these claims.

**b. Replacing Standard (ASOS) [Automated Surface Observing Stations] Data with True Hourly-Average Winds Will Increase Modeled Impacts**

*Petitioners' Claims.* The Petitioners note that the AERMOD Implementation Workgroup had previously stated that using AERMOD with airport data would likely underestimate modeled impacts because of the high number of calm and missing hours in standard ASOS data, such as Nucor used. *Id.* at 22 (citing AERMOD Implementation Workgroup, *ASOS and Met Data Processing Subgroup, EPA R/S/L Modelers Workshop*, at 3-4 (2009)). The Petitioners state that these concerns are heightened for Nucor, since the 24-hour PM<sub>10</sub> modeled impacts were "very close to the allowable PSD increment." *Id.* at 23. The Petitioners additionally describe a method that the AERMOD Implementation Group has been developing to calculate hourly-averaged winds based on one-minute average ASOS data, which can then be used in AERMOD. *Id.* at 22-23. The Petitioners assert that using such hourly averaged wind data "invariably results in higher modeled concentrations than standard ASOS data" because they contain low wind speeds that are "most culpable for peak impacts." *Id.* at 23.

These claims were re-raised in the 2012 Petition, Att. B at 21-23.

*EPA's Response.* For the reasons provided below, the EPA denies these claims.

As noted above, in the 2010 RTC, LDEQ explained that the EPA-approved AERMOD model was used, following an approved LDEQ modeling guidelines and using data from LDEQ recommended meteorological stations, consistent with Appendix W. LDEQ also stated that the use of airport meteorological data was based on studies and Louisiana modeling guidance, updated and made public in 2006. *See* 2010 RTC at 249-250. Despite the Petitioners' claims, the Petition notes that the method to which it refers "is not currently available to the public." 2010 Petition at 23. Thus, it is not clear how such an approach could reasonably be expected to be used for Nucor's analysis. Furthermore, when the pig iron PSD permit was issued, AERMOD was not capable of handling one-minute data to replace low wind speed hours in the standard ASOS meteorological dataset. The tool to handle low wind speeds, a preprocessor to AERMET, called AERMINUTE, that can read 2-minute average ASOS winds (reported every minute) in the National Climatic Data Center (NCDC) DSI-6405 dataset (NCDC, 2006), and calculate hourly average wind speeds and directions, was developed in February 2011. *See* Memorandum from Tyler Fox, Group Leader, Air Quality Modeling Group, U.S. EPA, to Regional Modeling Contacts; *Subject: Use of ASOS meteorological data in AERMOD dispersion Modeling* (March 8, 2013).<sup>26</sup> The tool to handle low wind is currently available, but was under development at the time Nucor submitted its modeling; thus, it would have been unreasonable to expect Nucor to utilize this approach. The modeling was performed using meteorological data consistent with Appendix W and that had been approved for modeling use. Accordingly, the Petitioners did not demonstrate that LDEQ failed to comply with its SIP-approved regulations governing PSD permitting or that it acted unreasonably in not requiring the use of such data at the time of permitting. *See, e.g., 2012 Cash Creek Order* at 4-5.

In addition, the Petitioners did not demonstrate that the meteorological data they claim would have yielded more accurate results for AERMOD modeling was required by any regulatory or statutory provision, or relevant guidance, such as Appendix W, or the EPA-approved Modeling Protocol at the time the analysis was performed or the PSD permit was issued, or that LDEQ's decision to use different data lacked a reasoned basis at that time. *See, e.g., MacClarence*, 596 F.3d at 1131 ("the Administrator's requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive"); *Nucor II Order* at 7 (explaining that EPA has looked at whether title V petitioners have provided the relevant citations and analyses to support its claim in determining whether it has a duty to object under CAA section 505(b)(2)).

Finally, the Petitioners do not acknowledge or respond to any of the discussion or analysis in LDEQ's response to comments, and thus have not met their demonstration burden in this claim. *See MacClarence*, 596 F.3d at 1132-33; *see also, e.g., Kentucky Syngas Order* at 41 (denying title V petition issue where petitioners did not acknowledge or reply to state's response to comments or provide a particularized rationale for why the state erred or the permit was deficient).

For these reasons, the EPA denies these claims.

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<sup>26</sup> Available at [http://www.epa.gov/scram001/guidance/clarification/20130308\\_Met\\_Data\\_Clarification.pdf](http://www.epa.gov/scram001/guidance/clarification/20130308_Met_Data_Clarification.pdf).

**c. Replacing Standard ASOS Data with LDEQ's Measured Hourly-Average Winds Will Increase Modeled Impacts**

*Petitioners' Claims.* The Petitioners assert that LDEQ has air monitoring data which can be used in AERMOD and that includes low wind speeds, and they identify an air monitoring site that is designated as a surrogate surface station for modeling impacts in the Nucor region, but assert that Nucor did not use any surface data from this location. 2010 Petition at 24. The Petitioners then state that they performed a 24-hour PM<sub>10</sub> model for the Nucor facility, remodeling Nucor's permit application PM<sub>10</sub> emissions using revised meteorological data based on LDEQ's wind and temperature measures from a combination of sites. *Id.* at 25–26. The Petitioners present their modeled impacts and claim that their results show that “modeling Nucor's emissions with LDEQ surface winds will result in modeled impacts from about 1.77 to 2.96 times higher than the impacts modeled with Baton Rouge Airport wind data.” *Id.* at 29. Based on this modeling, the Petitioners conclude, “[w]ithout exception, [the] AERMOD analyses using LDEQ surface meteorological data show that Nucor's proposed project will substantially violate the 24-hour PM<sub>10</sub> PSD increment of 30 µg/m<sup>3</sup>,” in contrast to Nucor's analyses, which “do not identify any violations of the increments or standards.” *Id.* at 29. The Petitioners assert that LDEQ's permit approval is unacceptable because it used meteorological data that are unsuitable for determining compliance with the NAAQS and PSD increments. *Id.* at 30.

The Petitioners further assert that, in the 2010 RTC, LDEQ relied on the wrong section of Appendix W, § 8.3.4.1.a, and should instead have relied on § 8.3.4.1.b, which explains how AERMOD does not use wind speeds labeled as calm in the model. *Id.* at 30. They also contend that LDEQ's response is against the weight of the evidence, since the AERMOD Implementation Workgroup and the Petitioners' modeling analysis both show that AERMOD will under-predict air impacts when run with airport data. *Id.*

These claims were re-raised in the 2012 Petition, Att. B at 24-31.

*EPA's Response.* For the reasons provided below, the EPA denies these claims.

The Petitioners failed to demonstrate that the standard ASOS meteorological data used in Nucor's modeling was inconsistent with any specific statutory or regulatory requirement, such as Appendix W, relevant guidance, or the EPA-approved Modeling Protocol for Nucor. Further, the Petitioners did not identify a requirement for Nucor to use the data that the Petitioners stated should be used in the modeling. *See, e.g., MacClarence*, 596 F.3d at 1131 (“the Administrator's requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive”). Instead, Petitioners suggest an alternative modeling methodology, or alternative consideration of certain data, but do not identify the federal requirement making such an interpretation mandatory. *Nucor II Order* at 7 (explaining that the EPA has looked at whether title V petitioners have provided the relevant citations and analyses to support its claim in determining whether it has a duty to object under CAA section 505(b)(2)).

Furthermore, the issues raised by the Petitioners do not demonstrate that the modeling conducted by Nucor and LDEQ was inconsistent with the modeling tools and guidance available at the time the modeling analysis was submitted or the PSD permit was issued. The fact that Petitioners

contend that different results could be achieved from use of different data sets does not necessarily mean that the approach that Nucor took with respect to the meteorological data, which LDEQ approved, was technically unreasonable at the time the modeling was performed or when the pig iron PSD permit was issued. In fact, the EPA and LDEQ approved the Baton Rouge NWS (ASOS) meteorological data, as part of the Modeling Protocol approval process, as appropriate and representative. *See* Modeling Protocol at 8. The Modeling Protocol was approved on March 20, 2009, by the EPA and March 23, 2009, by LDEQ.<sup>27</sup> Further, Nucor and LDEQ used the Appendix W methodology associated with such data, as described in 40 C.F.R. Part 51, Appendix W § 8.3.4.1. While Petitioners suggest an alternative, they do not show that LDEQ’s analysis, or quoting of App. W, § 8.3.4.1.a, in the 2010 RTC, led to a substantive error in the permits or modeling analysis, or that App. W, § 8.3.4.1.b, would have required different data to be used. Thus, the Petitioners did not demonstrate that LDEQ failed to comply with its SIP-approved regulations governing PSD permitting or that it acted unreasonably, under the circumstances at the time, in accepting Nucor’s use of the Baton Rouge data. *See, e.g., 2012 Cash Creek Order* at 4-5.

For these reasons, the EPA denies these claims.

### **3. LDEQ Improperly Exempted Nucor from PSD Monitoring Requirements**

*Petitioners’ Claims.* The Petitioners claim that LDEQ failed to require Nucor to perform required pre- and post-construction monitoring. 2010 Petition at 31, 37. First, they claim that Nucor failed to meet the requirements of the CAA and the Louisiana PSD regulations because it failed to “gather any pre-construction air monitoring data prior to their permit application.” *Id.* at 31. In particular, the Petitioners contend that the CAA requires applicants to gather pre-construction monitoring data in the one year period prior to the date of a permit application, *id.* (quoting 42 U.S.C. § 7475(e)(2)), and contend that although Louisiana’s PSD regulations can allow for collection of preconstruction monitoring data for a period shorter than a year, they never allow for a period less than four months. *Id.* at 34 (quoting LAC 33:III.509.M.1.d). The Petitioners further claim that Louisiana’s PSD regulations at LAC 33:III.509.M require Nucor to collect preconstruction monitoring data for PM<sub>10</sub> and SO<sub>2</sub> because the permit application indicated that Nucor would exceed the PSD monitoring significance levels set forth in LAC 33:III.509.I for those pollutants. *Id.* at 32–37. The Petitioners claim that because Nucor failed to do such preconstruction monitoring, the PSD application was incomplete and LDEQ’s approval of it was improper. *Id.* at 34.

The Petitioners further assert that the availability of existing air quality monitoring data does not exempt Nucor from the pre- and post-construction monitoring requirements in LAC 33:III.509.M. 2010 Petition at 34. The Petitioners also take issue with statements in LDEQ’s response to public comments that cited provisions from Appendix W § 8.2, contending that Appendix W does not exempt Nucor from the monitoring requirements. *Id.* at 36-37.

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<sup>27</sup> EDMS Document ID 6332480 is a letter dated March 23, 2009 from LDEQ approving the protocol. The EPA electronic mail conditionally approving the protocol and response from the company are in EDMS Document ID 6439208 at 1-4.

Furthermore, the Petitioners claim that a statement in LDEQ's response to comments that ambient air quality data can be required if representative air quality data are not available misstates the law. *Id.* at 37 (citing 2010 RTC at 106, 250). The Petitioners note that Nucor submitted 2001-2005 LDEQ PM<sub>10</sub> and SO<sub>2</sub> data from East Baton Rouge with the permit application. *Id.* at 34, 37. The Petitioners claim this data falls short of the requirement for ambient air quality monitoring because they contend that LAC 33:III.509.M.1.d is clear that the data must be gathered within the year preceding the permit application, and that the permit application was submitted no earlier than 2008 and because they contend that LDEQ did not have authority to waive that requirement for Nucor. *Id.* at 37.

The Petitioners claim that “[p]ost-construction monitoring for PM<sub>10</sub> and SO<sub>2</sub> is essential” because LDEQ has already permitted numerous sources that are violating the NAAQS and PSD increments, as indicated by existing violations that were identified in Nucor's modeling. *Id.* at 37 (citing LAC 33:III.509.M.2).

Finally, the Petitioners claim that the required pre-application monitoring data was “not available at the April 15, 2010 public hearing for the Nucor project” in violation of the CAA. *Id.* at 31 (quoting 42 U.S.C. § 7475(e)(2)). The Petitioners further claim that the permit included with LDEQ's April 15, 2010 hearing notice was incomplete because it did not address the preconstruction monitoring requirements for PM<sub>10</sub> and SO<sub>2</sub>. *Id.* at 35.

These claims were re-raised in the 2012 Petition, Att. B at 31-38.

*EPA's Response.* For the reasons provided below, the EPA denies these claims.

To begin, the Petitioners have not demonstrated that Nucor's use of existing air quality monitoring data in lieu of collecting site-specific preconstruction data violated the applicable PSD requirements. Section 165(e)(2) of the CAA, 42 U.S.C. § 7475(e)(2), provides that the analysis of the ambient air quality at the proposed site and in areas which may be affected by emissions from the facility applying for a PSD permit “shall include continuous air quality monitoring data gathered for purposes of determining whether emissions from such facility will exceed the maximum allowable increases or the maximum allowable concentration permitted under this part” and further provides that “[s]uch data shall be gathered over a period of one calendar year preceding the date of application for a permit under this part unless the State, in accordance with regulations promulgated by the Administrator, determines that a complete and adequate analysis for such purposes may be accomplished in a shorter period.” Consistent with the EPA's regulations at 40 C.F.R. § 51.166(m) implementing this statutory provision, Louisiana's SIP-approved PSD regulations provide in relevant part that “the continuous air quality monitoring data that is required shall have been gathered over a period of at least one year and shall represent at least the year preceding receipt of the application, except that if the administrative authority determines that a complete and adequate analysis can be accomplished with monitoring data gathered over a period shorter than one year (but not to be less than four months), the data that is required shall have been gathered over at least that shorter period.” LAC 33:III.509.M.1.d. This language mirrors the corresponding provision in the EPA's regulations in the material respects. *See* 40 C.F.R. § 51.166(m)(1)(iv); *cf.* 40 C.F.R. § 52.21(m)(1)(vi).

None of these provisions, however, require every PSD permit applicant to independently collect its own pre-construction monitoring data before submitting the permit application. The EPA has not interpreted CAA § 165(e)(2) or the EPA's implementing regulations to mandate collecting new site-specific preconstruction monitoring data for each permit application, but rather has explained that, where the circumstances warrant, existing representative data from off-site locations or from times other than the year immediately preceding the permit application may be compiled by the permit applicant to satisfy the requirement for monitoring data. *In re Northern Michigan University Ripley Heating Unit*, PSD Appeal No. 08-02, slip op. at 56 (EAB Feb. 18, 2009) ("hereafter "*Northern Michigan Univ.*") at 62; *In re Hawaii Elec. Light Co.*, 8 E.A.D. 66, 97-98 (EAB 1998). The EPA has further explained that this understanding is supported by statements of congressional intent. *Northern Michigan Univ.* at 61-62 ("preconstruction, onsite air quality monitoring may be for less than a year if the basic necessary information can be provided in less time, or it may be waived entirely if the necessary data [are] already available" (quoting H.R. Rep. No. 95-294, at 171 (1977); "one-year monitoring requirement 'may be waived by the [s]tate'" (quoting H.R. Rep. No. 95-564, at 152 (1977) (Conf. Rep.)).

PM<sub>10</sub> and SO<sub>2</sub> are the only specific pollutants for which the Petitioners claim that Nucor was required to collect preconstruction monitoring data. LDEQ's response to comments indicated that representative air quality data may be used where available. *See* 2010 RTC at 106 ("Pre-construction ambient air quality monitoring can be required if the proposed source exceeds the monitoring de minimis concentrations or if representative ambient air quality data are not available.") (cited by 2010 RTC at 254, responding to the Petitioners' comment on this issue). Further, in response to a public comment that LDEQ must require Nucor to perform both pre- and post-construction air monitoring for PM<sub>10</sub> and SO<sub>2</sub>, LDEQ specifically explained that ambient monitoring data was available from monitors located in the area of the facility, that data from these monitors was "representative of air quality conditions at the facility's location," and that "[p]reconstruction monitoring requirements for PM<sub>10</sub> and SO<sub>2</sub> have been met by these monitors." 2010 RTC at 348-349. Thus, LDEQ concluded that it was "unnecessary to require new monitors at the site for these pollutants." *Id.*

The Petitioners do not address information provided in the Modeling Protocol (EDMS Document ID 6333698) or LDEQ's response in the 2010 RTC, explaining that the data Nucor used was representative. Further, Petitioners do not demonstrate that LDEQ's explanation or conclusion lacked a reasoned basis. *See, e.g., Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments and citing *MacClarence*, 596 F.3d at 1132-34). The Petition quotes a statement made by a commenter during the public comment period asserting that LDEQ had not made a determination that the data used in the air quality modeling was representative of the air quality at the proposed site and that such a determination would have been improper because the 2001-2005 Baton Rouge data was gathered 40 miles from the proposed site and is not representative of the proposed site. 2010 Petition at 35 (quoting Comment 124 and LDEQ's response). However, the Petition's critique of LDEQ's response to this comment does not focus on the representativeness of the data but rather asserts that LDEQ's response "fails to understand how background concentrations relate to the pre- and post-construction monitoring requirements," *id.* at 36, and that LDEQ's interpretations of certain provisions of § 8.2 of Appendix W are mistaken, concluding that "LDEQ cannot interpret Appendix W as exempting Nucor" from the monitoring requirements in LAC

33:III.509.M. *Id.* at 37. The Petition does not provide any rationale for why the data used was not representative, nor does the Petition address other parts of the response to comments and permit record (such as the Modeling Protocol) in which specific information was provided explaining what data was used as well as information supporting the use of such data.

The Petitioners claimed that LDEQ misstated the law in the 2010 RTC by explaining that ambient air quality data can be required if representative air quality data are not available. The Petitioners also challenged the 2001-2005 ambient monitoring data Nucor used by asserting that it does not comply with LAC 33:III.509.M.1.d because it was not gathered in the year prior to the permit application, which they claim was received no earlier than 2008. *See* 2010 Petition at 37; *cf.* pig iron PSD permit at (listing initial pig iron application date as May 12, 2008). The Petitioners have not supported their assertion because the relevant provision requires that the data “*shall represent at least the year preceding receipt of the application,*” LAC 33:III.509.M.1.d (quoted by 2010 Petition at 34) (emphasis added), but does not state that the data must be *gathered* during the year before the permit application. The Petitioners have not shown that the monitoring background data did not represent the year preceding the permit application. In addition, they have not demonstrated that the data failed to comply with the requirements of LAC 33:III.509.M.1.d, nor have they shown that LDEQ’s use of such data was unreasonable. In addition, the EPA notes that use of 2001-2005 data was consistent with the EPA-approved Modeling Protocol for the pig iron PSD permit. *See* Modeling Protocol at 10, 13.<sup>28</sup> The EPA notes that use of representative monitored data gathered over a number of years is in many cases reasonable and appropriate because data gathered only in a single year may be influenced by unusual events or emissions (e.g., exceptional events). Thus, a single year of site specific data are not necessarily more representative of the air quality that would be expected at the proposed site or more protective of air quality than representative data collected from another site or during a different time period. The EPA also notes that for similar reasons, the EPA recommends modeling with 5 years of meteorological data for a representative set of meteorological conditions, if the data are available. *See, e.g.,* Appendix W § 8.3.1.2 (2005). Notably, compliance with many of the NAAQS and PSD increment are based on a multi-year analysis approach in Appendix W (PM<sub>10</sub> increment, 1-hour NO<sub>2</sub>, 1-hour SO<sub>2</sub>), which further supports that evaluation of monitoring data using more than one year of data is within the normal demonstration of monitored compliance and therefore just as informative for background monitoring data.

Accordingly, the Petitioners did not demonstrate that Nucor’s use of existing ambient air quality monitoring data violated the applicable PSD requirements, and did not demonstrate that LDEQ’s acceptance of such data lacked a reasoned basis or failed to assure compliance with applicable requirements of the CAA. *See, e.g., 2012 Cash Creek Order* at 4-5.

The Petitioners have also not demonstrated that Nucor or LDEQ failed to provide information that was required at the time of the public hearing under CAA § 165(e)(2). Section 165(e)(2) states that the “results of such analysis shall be available at the time of the public hearing on the application” for a PSD permit, referring to the analysis of ambient air quality required by CAA § 165(e). The Petition does not assert that any results of such analysis were not available during the public comment period; nor does it assert that data used by Nucor was not available during

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<sup>28</sup> Available at EDMS, Doc. ID 6333698.

the relevant public comment period. 2010 Petition at 31. In fact, the Petition states that the 2001-2005 PM<sub>10</sub> and SO<sub>2</sub> monitoring data was submitted with Nucor's 2009 permit application and provides citations to portions of that application. *Id.* at 34, n.44. That application preceded the 2010 public comment period on Nucor's pig iron permits, which was public noticed on March 10, 2010. *See* pig iron PSD permit at 9; 2010 RTC at 1, n.1. Instead, the Petitioners' claim appears to be that failure to provide new, site-specific pre-construction monitoring data at the April 15, 2010 public hearing violated CAA § 165(e)(2). Because, as explained above, the Petitioners have not demonstrated that Nucor was required to collect new pre-construction monitoring data, they also have not demonstrated that Nucor or LDEQ were required to provide any such data during the public comment period or at the public hearing, nor that failure to do so failed to assure compliance an applicable requirement of the Act.

In the Petition (at 35), Petitioners contend that the April 15, 2010 hearing notice "remains silent on the PSD monitoring requirements for PM<sub>10</sub> and SO<sub>2</sub>. Further, Petitioners state that the permit fails to address the pollutants that did exceed the preconstruction monitoring level. Petition at 35. This information is not completely accurate. The Basis for Decision for the pig iron title V permit provides a lengthy explanation of the modeling analysis surrounding the PSD preconstruction requirements for the relevant pollutants. *See Basis for Decision, Part 70 Operating Permit No.2560-00281-VO and Prevention of Significant Deterioration Permit No. PSD-LA-740*, EDMS Document ID 2947527 (May 24, 2010)(hereafter "2010 Basis for Decision") at 17-22. The Petitioners do not explain how information in the permit is inconsistent with the outcome of the analysis described in the 2010 Basis for Decision. Additionally, the Petitioners do not identify or analyze any regulatory or statutory provision, or any guidance document, to support their contention that the permit must "address" certain pollutants that exceeded preconstruction monitoring levels (Petition at 35). *See, e.g., MacClarence*, 596 F.3d at 1131 ("the Administrator's requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive"); *Nucor II Order* at 7 (explaining that the EPA has looked at whether title V petitioners have provided the relevant citations and analyses to support its claim in determining whether it has a duty to object under CAA § 505(b)(2)). Nor do Petitioners explain why the lengthy analysis provided in the 2010 Basis for Decision is flawed or otherwise inconsistent with applicable requirements. Therefore, it is not clear whether this discussion is intended to raise additional deficiencies in the permit or public process (and if so, what the basis for those alleged deficiencies would be), or whether this discussion is simply intended as an extension of the Petitioners' points discussed above. As indicated above, preconstruction monitoring requirements were addressed during the permitting process, including in the EPA-approved Modeling Protocol, the 2010 Basis for Decision, the public comments, and in LDEQ's responses to those comments. *See* Modeling Protocol at 13; 2010 RTC at 348-349, 253-254. The Petitioners have not explained why the permit would have needed to include additional discussion of preconstruction requirements in order to be complete. Nor have the Petitioners provided any explanation of how the failure to include this information in that permit deprived them of a meaningful opportunity for participation in the permit proceedings, including how the alleged flaw resulted in, or may have resulted in, a deficiency in the contents of the permit. *See Noranda Order* at 11; *2012 Cash Creek Order* at 9. Further, the fact that commenters, including the Petitioners, were able to offer comments on LDEQ's approach to preconstruction monitoring, including for PM<sub>10</sub> and SO<sub>2</sub>, suggests that relevant information was available during the public comment period.

Finally, we consider the Petitioners' assertion that post-construction monitoring under LAC 33:III.509.M.2 is essential for PM<sub>10</sub> and SO<sub>2</sub> because of existing violations of the NAAQS and PSD increments. With respect to post-construction monitoring, the cited provision of Louisiana's PSD rules states that: "The owner or operator of a major stationary source or major modification shall, after construction of the stationary source or modification, conduct such ambient monitoring *as the administrative authority determines is necessary* to determine the effect emissions from the stationary source or modification may have, or are having, on air quality in any area." LAC 33:III.509.M.2 (emphasis added). *See also* 40 C.F.R. § 51.166(m)(2). This language provides LDEQ substantial discretion concerning whether to require post-construction monitoring for a particular source, including the discretion to require no post-construction ambient air monitoring at all. *See In the Matter of Pacific Coast Bldg. Prod. Inc.* (Order on Petition) (Dec. 10, 1999) at 9-10 (denying a title V petition claim based on similar language in an approved SIP and explaining that such language gave the permitting authority "full authority to require no ambient air monitoring as long as that determination was made in a manner that was not arbitrary, capricious or otherwise unlawful."). The Petitioners have neither asserted nor demonstrated that LDEQ acted arbitrarily, capriciously, or otherwise not in accordance with law in not requiring Nucor to conduct post-construction monitoring for PM<sub>10</sub> and SO<sub>2</sub> emissions. *See id.* The Petitioners have not explained why it was necessary for LDEQ to exercise its discretion to require post-construction monitoring for the pig iron process after Nucor had otherwise demonstrated that it would not significantly contribute to existing exceedances around other facilities.

For these reasons, the EPA hereby denies these claims.

#### **4. Nucor's Finding that Class I Area PM<sub>10</sub> Impacts are Insignificant Neglects Contributions from Secondary Particulate Formation.**

*Petitioners' Claims.* The Petitioners claim that Nucor was required to account for nitrate and sulfate formation in their PM<sub>2.5</sub> and PM<sub>10</sub> Class I area impacts modeling in the Breton National Wildlife Refuge (Breton NWR). 2010 Petition at 38. In particular, the Petitioners state that Nucor's Class I area PM<sub>10</sub> modeling found impacts below the proposed significance levels but that the modeling fails to address formation of sulfates and nitrates that it also must consider as PM<sub>10</sub>. *Id.* The Petitioners additionally assert that Nucor's emissions of the precursors SO<sub>x</sub> and nitrogen oxides (NO<sub>x</sub>) far outweigh its emissions of particulate matter (PM), and state that its emissions of PM<sub>10</sub> are much smaller than its emissions of sulfate and nitrate precursors (SO<sub>2</sub> and NO<sub>x</sub>). *Id.* at 38-39. Therefore, the Petitioners assert that Nucor has "failed to include what are likely the greatest contributors to its project's PM<sub>10</sub> and PM<sub>2.5</sub> Class I area impacts" and that "Nucor must reanalyze these project impacts, including the effects of sulfate and nitrate at Breton." *Id.* at 38. The Petitioners further state that Nucor ran CAMx for its ozone analysis and could have used the same model to calculate PM<sub>2.5</sub> and PM<sub>10</sub> impacts at Breton NWR. *Id.* at 39.

These claims were re-raised in the 2012 Petition, Att. B at 38-39.

*EPA's Response.* For the reasons provided below, the EPA denies these claims.

With respect to PM<sub>2.5</sub>, as LDEQ explained in its response to comments, the EPA's final rule for

implementation of NSR requirements for PM<sub>2.5</sub> did not require states with SIP-approved PSD programs, like Louisiana, to regulate SO<sub>2</sub> and NO<sub>x</sub> as precursors to PM<sub>2.5</sub> under PSD before May 16, 2011, when the period provided for states with SIP-approved programs to revise their regulations and incorporate the necessary requirements ended. 2010 RTC at 40, 354; *Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM<sub>2.5</sub>)*, 73 Fed. Reg. 28321, 28343 (May 16, 2008)(hereafter “the PM<sub>2.5</sub> NSR Implementation Rule”). In addition, referring to the PM<sub>10</sub> Surrogacy Policy, which is discussed in more detail below, LDEQ stated that its “current obligation” at the time of issuing the pig iron permits was only to demonstrate that PM<sub>10</sub> is a reasonable surrogate for PM<sub>2.5</sub> and further stated that a Class I PM<sub>2.5</sub> analysis was not required, but that sulfates and nitrates were calculated by CALPUFF (an air quality dispersion model) as part of the Air Quality Related Values analysis of visibility impacts. 2010 RTC at 354. Additionally, in discussing a PM<sub>2.5</sub> air dispersion modeling analysis submitted by Nucor on January 27, 2010 to address air quality impacts from proposed PM<sub>2.5</sub> emissions, LDEQ explained that monitor selection was then the only available method to account for secondary formation in the absence of the EPA guidance on how to address secondary formation of PM<sub>2.5</sub> and further stated that the Bayou Plaquemine monitor had been selected to account for secondary formation and transport of PM<sub>2.5</sub>. 2010 RTC at 190.

With respect to PM<sub>10</sub>, LDEQ explained in its response to comments that at that time, CALPUFF was deemed incapable of properly representing secondary particle formation for the purpose of estimating PM<sub>10</sub> and PM<sub>2.5</sub> impacts, so the U.S. Fish and Wildlife Service, the Federal Land Manager (FLM),<sup>29</sup> for the Breton NWR, accepted a CALPUFF analysis in which the PM<sub>10</sub> impacts are limited to the effect of emitted particulate matter and which does not include secondary particle formation. 2010 RTC at 354.

The only response that the Petitioners make to the discussion in LDEQ’s response to comments is to explain that the Petitioners did not say that CALPUFF is necessarily the best method to be used for assessing PM<sub>2.5</sub> impacts at Breton NWR, and that their point was that sulfate and nitrate impacts were occurring from Nucor’s emissions and “were being ignored for all NAAQS and PSD increment compliance ... analyses.” 2010 Petition at 39. The Petitioners additionally observed that Nucor could have used CAMx to calculate PM<sub>2.5</sub> and PM<sub>10</sub> impacts, which would include sulfate and nitrate impacts. *Id.* This discussion, however, fails to address salient points in LDEQ’s response to comments concerning the obligation to address secondary particulate matter (PM) impacts in PSD permitting. *See, e.g., Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state’s final decision, including response to comments, citing *MacClarence*, 596 F.3d at 1132-34). LDEQ correctly pointed out that the EPA did not require states to address secondary formation of PM<sub>2.5</sub> for purposes of PSD permitting before May 16, 2011. *See* PM<sub>2.5</sub> NSR Implementation Rule, at 28321, 28343. Nucor’s PSD permit for the pig iron process was issued before that date, on May 24, 2010, and the Petitioners have not identified or analyzed any provision of the approved SIP that required PSD permits in Louisiana

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<sup>29</sup> Federal Land Managers or FLMs are federal officials charged with responsibility for management of Class I areas, such as National Parks and Wildlife Refuges. 42 U.S.C. § 7475(d); 40 C.F.R. § 51.166(p). FLMs have an affirmative responsibility to protect air quality related values (including visibility) in Class I areas such as Breton NWR. Whenever construction of a new or modified source requiring a PSD permit may affect a class I area, the FLM must be notified and provided with information sufficient to evaluate whether the proposed construction will have an adverse impact on air quality related values in the Class I area. 40 C.F.R. §§ 51.166(p), 51.307.

to address secondary formation of PM<sub>2.5</sub> at the time the permit was issued.<sup>30</sup> In addition, the Petitioners have not addressed LDEQ's statement in the response to comments that a Class I analysis was not required for PM<sub>2.5</sub>, and have not provided any citations or analysis to support their assertion that Nucor's Class I analysis should have addressed PM<sub>2.5</sub>. *See, e.g., MacClarence*, 596 F.3d at 1131 ("the Administrator's requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive"); *Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's response to comments, citing *MacClarence*, 596 F.3d at 1132-34, and has looked to whether they have provided the relevant citations and analyses to support the claim).

The Petitioners also assert that nitrates and sulfates must be considered as PM<sub>10</sub>, but have not identified or analyzed any statutory or regulatory provision to support this statement. *See, e.g., MacClarence*, 596 F.3d at 1131 ("the Administrator's requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive"); *Nucor II Order* at 7 (explaining that the EPA has looked at whether title V petitioners have provided the relevant citations and analyses to support the claim in determining whether it has a duty to object under CAA § 505(b)(2)). In contrast to PM<sub>2.5</sub>, the EPA has not required SIPs to regulate secondary formation of PM<sub>10</sub> in PSD permitting. While the EPA's PSD regulations governing SIP-approved PSD permitting programs do identify precursors for PM<sub>2.5</sub>, they do not identify any such precursors for PM<sub>10</sub>. *See* 40 C.F.R. § 51.166(b)(49)(i)(b)-(c). Moreover, the Petitioners have not identified any provision of the CAA or the approved SIP that they claim requires consideration of formation of sulfates and nitrates as PM<sub>10</sub>. The Petitioners have also not addressed LDEQ's response that the FLM accepted a CALPUFF analysis for PM<sub>10</sub> that does not include secondary particle formation. *See, e.g., Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's response to comments, citing *MacClarence*, 596 F.3d at 1132-34). In addition, the Petition does not provide any factual information or analysis to show that Nucor's sulfate and nitrate emissions are impacting compliance with any NAAQS or PSD increment, including at Breton NWR.

For these reasons, the EPA hereby denies these claims.

## **5 Emissions Calculations That Nucor Submitted to LDEQ to Support Nucor's PSD Analysis are Unverifiable.**

*Petitioners' Claims.* The Petitioners claim that it was impossible to verify the numerous calculations for Nucor's emission inventory because its permit application included emission calculations and emission reporting tables in a PDF file, rather than as an unlocked Excel spreadsheet showing the equations and assumptions made by Nucor when preparing the application. 2010 Petition at 39. The Petitioners list four reasons why a PDF file without

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<sup>30</sup> The Petitioners cite a draft guidance document for demonstrating attainment of air quality goals for PM<sub>2.5</sub> and regional haze, but do not provide any analysis or explanation of how this document supports this claim. 2010 Petition at 38, n.50 (citing VISTAS, Draft Guidance for Demonstrating Attainment of Air Quality Goals for PM<sub>2.5</sub> and Regional Haze, Jan. 2, 2001, pp. 14-15). The referenced pages of this document provide guidance for states on using modeled results to determine whether an air quality goal is met, particularly on the recommended modeled tests for attainment of the two PM<sub>2.5</sub> NAAQS. These pages do not specifically discuss requirements for PSD permitting, and the Petitioners have provided no explanation of why they believe the recommendations in this guidance document are relevant to PSD permitting.

emission calculations is insufficient: (1) the public cannot verify or review the actual emission calculations applied in the permit application without checking the equations by hand, which could involve many thousands of individual calculations; (2) without “having the native spreadsheets, LDEQ could not itself have reviewed the facility emission calculations in any meaningful fashion” and emission calculation errors could adversely impact permit issuance for the Class I modeling impacts and the 24-hour PM<sub>10</sub> modeled air concentrations, which were over 93 percent of the allowable increment; (3) the name of the spreadsheet and worksheet, which appears in the footer of the PDF file, includes the extension “.XLS”, indicating that the calculations were performed with Excel; Nucor could have provided the Excel files to LDEQ and requesting reviewers but “has never made these Excel files available”; and (4) the “printout of the emission calculation spreadsheets provided by LDEQ are frequently difficult to read” and it is sometimes impossible to determine essential numbers. *Id.* at 39–40.

The Petitioners also claim that meaningful public review requires full transparency of an applicant’s modeling work. *Id.* at 40. The Petitioners contend that without the electronic spreadsheets used to perform the emission calculations, there is no meaningful opportunity for public comment. *Id.* The Petitioners point out that their review is limited by comment deadlines and state that the lack of an electronic version of the calculations forced them to spend an inordinate time attempting to read and recreate the calculations, which was a “roadblock to the public having the ability to understand and comment on the Nucor permit.” *Id.* at 41. Finally, the Petitioners point to a communication between Nucor’s consultant, ERM, and LDEQ in which the consultant noted an error in a calculation because the “formula was drawing from the incorrect cell. Fortunately, the result is an emissions decrease, if only slightly....” *Id.* (quoting “LDEQ\_Resp.\_Zen-Noh\_Doc.Request.pdf, p. 14/24”). According to the Petitioners, it is “impossible to find that error without having the actual Excel spreadsheet used.” *Id.*

These claims were re-raised in the 2012 Petition, Att. B at 39-41.

*EPA’s Response.* For the reasons provided below, the EPA denies these claims.

LDEQ’s response to comments on this point explained that LDEQ does not require or typically request electronic copies of the permit application, but rather scans hard copies of permit applications and other correspondence to make such information electronically available to the public through its EDMS system. 2010 RTC at 235. LDEQ further stated that it is “not impossible to verify the accuracy of the emissions calculations,” explaining that Nucor submitted “the emissions calculations, the origin or basis for the calculations, and all assumptions and/or variables which serve as inputs necessary to calculate potential emissions.” *Id.* at 236. LDEQ also said that its staff reviewed the calculations in detail and asked many questions directly referencing the calculations. *Id.* Further, LDEQ stated that the scanned version of the permit application is legible and that it is not impossible to determine essential numbers, and suggested that any person who could not decipher the electronic files and did not wish to refer to the hard copy available for public review, could have contacted LDEQ for assistance. *Id.* In regard to a quotation (“the source code needs to be open for public access and scrutiny to enable meaningful opportunity for public comment on new source permits, PSD increment consumption and SIPs”) which the comment attributed to the *Guideline on Air Quality Models*, LDEQ explains that the citation is incorrect, that the quoted passage is actually from a rule preamble, and that the citation

relates to the availability of the source code for dispersion models, not emissions calculations. *Id.* (citing 68 *Fed. Reg.* 18440 (Apr. 15, 2003)).

The Petitioners do not respond to LDEQ's explanation of this quotation or to the corrected citation. *See, e.g., Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments, citing *MacClarence*, 596 F.3d at 1132-34). The Petitioners respond to LDEQ's RTC by stating that the public "must have the available electronic emission calculations to have any chance of reviewing the calculations in the allotted time frame" and that LDEQ's response that it is "not impossible" to figure out the emissions calculations is a "poor excuse" for not providing the electronic calculations that Nucor could have easily emailed to LDEQ and reviewers. 2010 Petition at 41.

The EPA has recognized the importance of the legibility of the information provided in a title V permit application necessary to determine applicable requirements. *See In the Matter of the Huntley Generating Station*, Order on Petition No. II-2002-I (July 31, 2003) at 17-18 (noting that the EPA was unable to determine whether a final permit was in compliance with all applicable requirements where emission limits in the permits appended to the title V permit application were illegible and requiring the state upon reopening to provide the EPA and the public a legible draft of the underlying permits). The Petitioners, however, do not respond to LDEQ's statements in the response to comments that the scanned version of the application is legible and that anyone could have referred to the hard copy or contacted LDEQ for help deciphering the file if needed. *See, e.g., Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments, citing *MacClarence*, 596 F.3d at 1132-34). Moreover, the Petitioners have not pointed to any specific value or page that was illegible, and the EPA additionally notes that the version of the calculations in the permit application publicly available in EDMS generally appears legible, *see* EDMS Doc. ID 642067. Nor have the Petitioners identified any particular applicable requirement that could not be determined because of alleged difficulties in reviewing the PDF documents.

With respect to the Petitioners' claims that without the electronic emission calculations, a meaningful opportunity for public participation was not possible, it is not clear whether the Petitioners are referring to the opportunity for public participation provided for under title V or under PSD. For purposes of a title V petition, in order to show an error in the public process on a PSD permit incorporated into a title V permit, a petitioner must demonstrate that an alleged error in the public process deprived the public of an opportunity to meaningfully comment on the applicable PSD requirements. *See Noranda Order* at 11 (describing the standard for showing an error in the public notice for a PSD permit). Analogously, when a title V petition seeks an objection based on the unavailability of information during the public comment period in violation of title V's public participation requirements, the EPA has stated that the petitioner must demonstrate that the unavailability of the information deprived the public of the opportunity to meaningfully participate during the permitting process and that the EPA would generally look to whether the petitioner had demonstrated that the alleged flaws resulted in or may have resulted in a deficiency in the permit's content. *See, e.g., 2012 Cash Creek Order* at 9. The EPA further noted that where a permitting authority has explained its decision not to make information available during the public comment period, the petitioner bears the burden of demonstrating that the explanation is unreasonable. *Id.*

The Petitioners have not shown that they were deprived of a meaningful opportunity for participation under either standard. LDEQ explained that it does not require or typically request electronic submissions for permit applications, and it explained that Nucor submitted “the emissions calculations, the origin or basis for the calculations, and all assumptions and/or variables which serve as inputs necessary to calculate potential emissions.” 2010 RTC at 236; *see also* EDMS Document ID 42013758 (previously known as Document ID 6462061) (June 29, 2009 pig iron permit application, specifically Appendices B and C). The Petitioners do not show that LDEQ’s explanation is unreasonable or incorrect. *See 2012 Cash Creek Order* at 9. Further, the Petitioners have not demonstrated that the lack of the electronic emissions calculations in the materials submitted as part of Nucor’s application resulted in or may have resulted in a deficiency in permit content. *Id.* The Petition quotes one communication from Nucor’s consultant, which mentions an error in the calculation annual average emission rate from one emissions unit. 2010 Petition at 41 (quoting “LDEQ\_Resp.\_Zen Noh\_Doc.Request.pdf, p. 14/24”). However, the quotation from that communication in the Petition indicates that correcting the error led to a slight emissions decrease, and the Petitioners have not explained how this decrease resulted or may have resulted in a flaw in the permit.

Moreover, the Petition does not assert that the difficulties in reviewing the emissions calculations led to any specific difficulty in evaluating PSD requirements, and the Petitioners’ comments during the public comment period extensively addressed PSD issues, including Nucor’s air quality analysis. *See, e.g., Comments submitted on behalf of LEAN, Sierra Club, and O’Neill Couvillion on the Proposed Part 70 Operating Permit and Prevention of Significant Deterioration Permit, for Consolidated Environmental Management, Inc., Nucor Steel Facility*, (April 19, 2010)(EDMS Document ID 6756728) at 7-19, 21-38; *see also Addendum to Comments submitted on behalf of LEAN, Sierra Club, and O’Neill Couvillion on April 19 Regarding the Proposed Part 70 Operating Permit and Prevention of Significant Deterioration Permit, for Consolidated Environmental Management, Inc., Nucor Steel Facility* (May 3, 2010)(EDMS Document 4889042) at 1-5 (providing additional comments on Nucor’s air quality modeling and Class I area analysis). The Petitioners have not argued that they would have made any other comments had the Excel spreadsheets been made available during the public comment period. *See Noranda Order* at 13.

The crux of the Petitioners’ claim appears to be that it would be difficult to verify the volume of emissions calculations provided in the time allotted for public review without access to the Excel spreadsheets and that it would have been easy for Nucor to provide the data. *See 2010 Petition* at 39 (noting that Nucor provided 329 pages of calculations, with potentially hundreds individual calculations per page); *id.* at 41 (noting that it is not realistic review the calculations in the allotted time frame without the electronic emissions calculations). However, the Petition does not indicate whether the Petitioners sought additional time to review the calculations. The response to comments indicates that LDEQ extended the public comment period until May 3, 2010, 2010 RTC at 1, n.1, and it is possible that the Petitioners might have been able to obtain additional time for their review. Moreover, the Petitioners’ assertions that it would have been easy for Nucor to provide the electronic data does not establish that LDEQ was required to request or Nucor was required to submit data in electronic form during this permitting process or that either LDEQ or Nucor was required to provide information that was available in paper form to public commenters in electronic form. *See, e.g., MacClarence*, 596 F.3d at 1131 (“the Administrator’s

requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive”); *Nucor II Order* at 7 (explaining that the EPA has looked at whether title V petitioners have provided the relevant citations and analyses to support its claim in determining whether it has a duty to object under CAA § 505(b)(2)). Accordingly, the Petitioners have not demonstrated that the information that was available in the record was insufficient to allow for a meaningful opportunity to comment for title V or PSD purposes.

For these reasons, the EPA denies these claims.

#### **6. LDEQ Could Not Provide Modeling Input Files Necessary for Evaluating Nucor’s Class I Area Impact Modeling.**

*Petitioners’ Claims.* The Petitioners claim that LDEQ did not provide the Petitioners with certain modeling files that were used in Nucor’s modeling to assess air and air-quality related impacts on the Breton NWR Class I Area and that they requested from LDEQ. In particular, the Petitioners assert that LDEQ failed to provide requested files containing meteorological data and ozone data used by Nucor, specifically the “CALMET monthly VISTAS Domain 1 meteorological data files and the yearly VISTAS Domain 1 ozone data files used by Nucor.” 2010 Petition at 41–43, 44. The Petitioners claim that they sent a hard drive to LDEQ and received the data back from LDEQ on April 19, 2010, but that it contained CALMET meteorological data files that were not part of Nucor’s modeling analysis and did not contain any of the ozone data used by Nucor. *Id.* at 43. The Petitioners explain that they were able to obtain the appropriate VISTAS Domain 1 meteorological from the National Park Service (NPS), but not the three yearly ozone files. *Id.* at 44. The Petitioners further state that they requested the data files because they “need[ed] the exact data files modeled by Nucor in order to replicate their analyses.” *Id.* The Petitioners also claim that LDEQ did not appear to have ever obtained these files from Nucor, and that without them “LDEQ could not have replicated or independently evaluated the Class I modeling performed by Nucor.” *Id.* Additionally, the Petitioners claim that they had not yet finished their Class I modeling review because of the protracted effort to obtain the referenced data. In addition, the Petitioners note that a recent, undated LDEQ document indicates that the Fish and Wildlife Service (FWS) also “had difficulties reviewing Nucor’s Class I modeling.” *Id.* at 44–45 (citing “LDEQ\_Resp\_Zen-Noh\_Doc.Request.pdf, p.23-24/24” and quoting communications from Jill Webster, FWS, to Bryan Johnston).

These claims were re-raised in the 2012 Petition, Att. B at 41-45.

*EPA’s Response.* For the reasons provided below, the EPA denies these claims.

LDEQ’s response to comments on this point explained that the most recent Class I modeling has been available for public review since early 2009 and that the referenced data files are large files, so that the requestor must send LDEQ a hard drive to download the information. 2010 RTC at 352. LDEQ states that it received the Petitioners’ hard drive on April 13, 2010, that it was ready on April 15, 2010, and that the requested ozone files were included. *Id.* LDEQ states that there was no further response from the Petitioners, so it had no reason to believe that there were any deficiencies in the information. *Id.* With respect to the VISTAS meteorological data, LDEQ explained that because the files are large and that the data has been previously approved by the

FLM and the EPA, LDEQ did not require the data to be submitted. *Id.* LDEQ additionally states that the data was available from the FLM and that the Petitioners were aware of that. *Id.*

The Petition does not identify or analyze any specific regulatory, statutory, or other legal requirement that it alleges LDEQ failed to meet with respect to the Class I modeling data or with respect to the public review process. *See, e.g., MacClarence*, 596 F.3d at 1131 (“the Administrator's requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive”); *Nucor II Order* at 7 (explaining that the EPA has looked at whether title V petitioners have provided the relevant citations and analyses to support its claim in determining whether it has a duty to object under CAA § 505(b)(2)).

In addition, the Petitioners’ reply to LDEQ’s response to comments does not show that LDEQ’s approach failed to comply with its SIP-approved regulations governing PSD permitting or that it acted unreasonably. *See, e.g., 2012 Cash Creek Order* at 4-5. The Petitioners state that the response to comments reflects that LDEQ was aware that they did not have the proper data. 2010 Petition at 44. However, this assertion is contrary to LDEQ’s statement that “it had no reason to believe that there were any deficiencies or problems with the information provided.” 2010 RTC at 352. The Petition further states that the ozone files LDEQ provided were for the wrong analysis and were not the ozone files used by Nucor. 2010 Petition at 44. But there is no indication that LDEQ knew or should have known that the Petitioners believed the data provided was not the data they had requested. In addition, the Petition states that the Petitioners were concerned that the NPS data might be for different time blocks than Nucor modeled, which “may or may not” affect their efforts to replicate Nucor’s modeling. 2010 Petition at 44. As the Petition earlier states that the NPS sent the Petitioners “the appropriate VISTAS Domain 1 meteorological data files,” *id.*, it appears that the Petitioners obtained the meteorological data they sought.

The Petition also contends that the FWS also had difficulty reviewing Nucor’s Class I modeling. *Id.* at 44-45. (citing “LDEQ\_Resp.\_Zen-Noh\_Doc.Request.pdf, p.23-24/24” and quoting statements from Jill Webster from the FWS). The Petition does not contend that the Fish and Wildlife Service ultimately found the Class I area review inadequate or the Class I impacts unacceptable. To the contrary, a February 13, 2009 email from Jill Webster, which contains the same statements quoted in the petition, also indicates that Nucor’s impacts are acceptable. *See* Email from Jill Webster, FWS, to Brian Johnston, Subject: Breton Class I Impacts-Nucor, LA (Feb. 13, 2009), available at EDMS Doc. No. 2628621. LDEQ’s response to comments cites this email and its indication that Nucor’s impacts are acceptable and states that LDEQ “also repeated [the] public participation process, including notice to EPA, such that all interested parties could have an opportunity comment on Nucor’s Class I analysis.” 2010 RTC, No. 312, at 409. The Petition does not acknowledge or address these points in the state’s response. *See, e.g., Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state’s final decision, including response to comments, citing *MacClarence*, 596 F.3d at 1132-34).

For these reasons, the EPA denies these claims.

### C. The Permit Lacks Conditions Sufficient to Ensure Compliance with PSD Requirements

As originally presented in the 2010 Petition, the Petitioners raise five main claims about which the Petitions contend that the pig iron title V permit fails assure compliance with PSD requirements (Claims III.B – F), and these claims contain multiple subclaims. 2010 Petition at 45-67. These main claims will be addressed in order below. The initial part of Claim III begins with “III.A. Legal Background.” 2010 Petition at 45-48. The Petitioners state that a title V permit must identify all emission limits for the source, including enforceable emission limitations and standards and requirements to assure compliance with the permit terms and conditions. *Id.* at 45 (citing *Sierra Club v. EPA*, 536 F.3d 673, 674 (D.C. Cir. 2008), 42 U.S.C. § 7661(c)(a) & (c)). This section also includes a discussion of BACT (including top-down BACT, which the Petitioners contend Nucor and LDEQ used), and it contends that the PSD permitting process requires establishing federally enforceable limits to ensure that BACT determinations are implemented. *Id.* at 45. Accordingly, the Petitioners contend that BACT limits must be met ““on a continual basis at all levels of operations”” and must be ““enforceable as a practical matter.”” *Id.* at 46 (quoting the NSR manual at B.56). This section does not include any contentions that the permit is deficient and does not contain a separate request that the EPA object to the permit. As a result, the EPA does not interpret the statements in this section as separate petition claims that require a response but rather as background for the claims that follow and therefore is not responding to the statements made in this section.

The next section, Claim III.B, is entitled, “The Monitoring Frequency for Numerous Emission Units is not Adequate to Ensure Enforceability.” This section raises numerous contentions about inadequate monitoring for BACT limitations,<sup>31</sup> however, it appears that specific units to which

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<sup>31</sup> In Claim III.B, the Petitioners make the following contentions – many of which appear to be repeated in III.B.1-5 with additional specificity. Thus, the EPA is responding to Claim III.B and III.B.1-5, together.

*The Petitioners’ Claims in III.B may be summarized as follows:*

Petitioners initially contend generally that the PSD and title V permits do not meet the requirements under the CAA and Louisiana law to contain permit terms and conditions to ensure compliance with applicable limits. 2010 Petition at 48. They contend that the PSD permit for the pig iron process contains “no testing, monitoring, or record-keeping provisions” and therefore, “is fundamentally flawed.” *Id.* However, Petitioners do not state that this asserted flaw is a separate ground for an objection to the title V permit. Petitioners go on to state that monitoring and record keeping are found only in the “draft” title V permit and none of the “title V” monitoring is specifically directed at BACT limitations. *Id.* Petitioners explain that the BACT determinations are expressed as concentrations not emission rates, and as a result, the “draft permits” in effect contain no monitoring and record keeping for the BACT limitations. *Id.* Petitioners state that examples of this include control efficiencies for scrubbers and baghouses and TDS concentrations for cooling and quench towers. *Id.* For support, Petitioners cite to § 504(c) of the CAA, 42 U.S.C. § 7661(c) and *Sierra Club v. Whitman*, 536 F.3d 673 (D.C. Cir. 2008). Petitioners note that the testing provisions for all sources except for a select few are not enforceable because “compliance testing is either not required at all or is infrequent,” such as one stack test over the life of the facility. 2010 Petition at 49. The Petitioners argue that the absence of testing or infrequent (and ambiguous) testing renders BACT limits unenforceable as a practical matter and violates Section 504(c) of the CAA, 42 U.S.C. § 7661(c). Citing to the NSR Manual, Petitioners discuss their views on the “hierarchy” for monitoring in a permit and state that the monitoring in the “draft permits” do not comport with EPA guidance. *Id.* Petitioners further contend that except for the limited use of continuous emissions monitoring systems (CEMSs), all testing is by periodic stack tests which Petitioners contend measure “about 0.007%” of emissions from the facility over its lifetime. *Id.* Petitioners provide addition information regarding their views that stack tests do not reflect full emissions from the facility, including startup, shutdown and malfunction emissions. 2010 Petition at 50. The Petitioners explain that the compliance provisions must assure that BACT conditions are met on a “continual” basis and that the proposed testing is not “adequate to assure compliance with

Petitioners' contentions apply are detailed in Claim III.B.1-5. Since the EPA is responding directly to the specific claims on the specific units in III.B.1-5, the EPA is responding to Petition sections III.B and III.B.1-5 together, below.

These points were re-raised in the 2012 Petition, Att. B at 45-67.

### **1. The Title V Permit Requires no Testing for Many Point Sources Subject to BACT Limits.**

*Petitioners' Claims.* The Petitioners contend that the draft title V permit does not require "any testing" for BACT limits at 20 listed units. 2010 Petition at 51. The Petition includes PM<sub>10</sub> limits in tons per year (tpy) for each unit in parentheses. The Petition states that the title V permit must be modified to require at least an initial stack test for sources that vent to a baghouse and that larger sources of PM<sub>10</sub>, such as the Coke Battery 2 Quench Tower and the Sinter Plant Main Dedusting Baghouse Vent should be tested at least annually. 2010 Petition at 52. The Petition also states that surrogate monitoring should be required for vent sources with emissions under one ton per year. *Id.* The Petitioners state testing on one quench tower should not exempt the other quench tower from testing. *Id.* Petitioners then address parts of LDEQ's response to comment by stating that LDEQ's explanation "violates the NESHAPS." 2010 Petition at 53. For support, Petitioners state that LDEQ cannot rely on the use of compacted coal to satisfy the NESHAPS (and that also cannot be used to exempt Nucor from monitoring to determine compliance) and further state that the regulations cited for compliance do not require any testing. *Id.* Petitioners further state that the monitoring for opacity and visible emissions (citing conditions 78 and 79) cannot assure compliance with limits expressed as pounds per hour or tons per year. *Id.* In response to some changes made by LDEQ to the Coke Battery 2 Coke Quench Tower provisions, Petitioners contend that compliance with MACT testing requirements does not assure compliance with BACT limits. Petitioners conclude by stating that certain visible emissions conditions (Conditions 662, 655, 666, and 685) are ambiguous and cannot assure continuous compliance. *Id.*

These claims were re-raised in the 2012 Petition, Att. B at 51-54.

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any emission rate, especially the BACT determinations." *Id.* Specifically, Petitioners state that it is feasible to directly and continuously monitor filterable PM<sub>10</sub> CO, VOC, SO<sub>2</sub>, and NO<sub>x</sub> emissions from sources and to periodically monitor both PM<sub>10</sub> and PM<sub>2.5</sub>, as well as conduct more frequent stack testing. *Id.* Noting LDEQ's response to Petitioners' comments on the permits, that all emission limits, monitoring, recordkeeping, and reporting requirements of the title V permit for PM/PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, carbon monoxide (CO), and volatile organic compounds (VOC) are incorporated into the PSD permit, Petitioners simply state that LDEQ's response did not address their concerns. 2010 Petition at 51. The Petitioners state that many BACT limits are expressed in terms other than pounds per hour and tons per year and no monitoring or recordkeeping is required to assure these limits are met. *Id.* Petitioners also state that the title V permit's specific conditions are deficient because they lack any "responsive monitoring or recordkeeping," so the incorporation does not address their concerns. *Id.* However, the Petitioners do not contend that the incorporation of the terms of the title V permit into the PSD permit is inconsistent with the requirements of the SIP or title V or that the record contains insufficient justification to provide the basis for that incorporation. Thus, the Petitioners are not raising the same issue that was discussed in the objection granted in the *Zen-Noh Order* and LDEQ's response to that objection. *See Zen-Noh Order* at 10, 14-16; LDEQ's Response at 19-20.

*EPA's Response.* For the reasons provided below, the EPA grants in part and denies in part on these claims.

As a preliminary matter, the issue raised here regarding compacted coal and coal charging (2010 Petition at bottom of 52 - top of 53) is addressed in the EPA's response to Claim I.B as originally raised in the 2010 Petition, *supra*. Additionally, the EPA notes that the Petition discusses visible emissions monitoring conditions contained in the permit, and states that "Petitioners object" to those conditions. 2010 Petition at 54. To the extent the Petitioners are responding to LDEQ's mention of visible emissions monitoring in its RTC by asserting that LDEQ requires only visible emissions monitoring and the conditions are ambiguous and cannot assure continuous compliance, we note that below we have addressed the monitoring claims for each unit raised in the petition and thus are not separately discussing those issues here. However, to the extent that Petitioners intended to raise a separate claim based on these conditions, the EPA denies this issue on procedural grounds because it does not appear to have been raised in public comments to LDEQ. *See* 2010 RTC at 120, 214.<sup>32</sup> This procedural deny is supplemented by the discussion below.

#### *Rationale for Partial Grant*

For the reasons provided below, the EPA grants this claim as it regards the following units and the issues summarized above: COK-101, COK-201, COK-102, COK-202, COK-203, SIN-102, COK-104, COK-204, COK-112, COK-212, COK-113, COK-213, SIN-105, SIN-106, SLG-405, SLG-407, SLG-408, SLG-402, STC-101, and STC-210. During the public comment period, Petitioners provided comments to LDEQ raising concerns with the enforceability of certain emission limits associated with the above-identified units. Specifically, the comments raised with reasonable specificity the same issues described in the Petitions. 2010 RTC at 214.

The EPA has previously addressed monitoring claims raised in the title V petition context, and has recently provided the following legal framework regarding such claims. *See, e.g., In the Matter of United States Steel Corporation, Granite City Works*, Order on Petition No. V-2011-2 (December 3, 2012) (hereafter "*US Steel Order*") at 10-11.

As explained in the *US Steel Order*, section 504(c) of the CAA requires all title V permits to contain monitoring requirements to assure compliance with permit terms and conditions. 42 U.S.C. § 7661c(c). The EPA's Part 70 monitoring rules (40 C.F.R. § 70.6(a)(3)(i)(A) and (B) and 70.6(c)(1)) must be interpreted to carry out § 504(c) of the Act's directive. *Sierra Club v. EPA*, 536 F.3d 673 (D.C. Cir. 2008). As a general matter, permitting authorities must take three steps to satisfy the monitoring requirements in the EPA's Part 70 regulations. First, under 40 C.F.R. § 70.6(a)(3)(i)(A), permitting authorities must ensure that monitoring requirements contained in applicable requirements are properly incorporated into the title V permit. Second, if the

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<sup>32</sup> Pursuant to CAA § 505(b)(2), a petition "shall 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. § 7661d(b)(2). None of the comments submitted by any commenter raise the issue that Conditions 662, 655, 666, and 685 are ambiguous and cannot assure continuous compliance. Nor do Petitioners demonstrate that it was impracticable to raise this issue in comments, or that it arose after the close of the comment period.

applicable requirement contains no periodic monitoring, permitting authorities must add “periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit.” 40 C.F.R. § 70.6(a)(3)(i)(B). Third, if there is some periodic monitoring in the applicable requirement, but that monitoring is not sufficient to assure compliance with permit terms and conditions, permitting authorities must supplement monitoring to assure such compliance. 40 C.F.R. § 70.6(c)(1). *In the Matter of CITGO Refining & Chemicals Co.*, Order on Petition No. VI-2007-01 (May 28, 2009) (hereafter “*CITGO Order*”) at 6-7. As the EPA has explained, “[b]oth of these monitoring rules (40 C.F.R. §§ 70.6(a)(3)(i)(A) and (B) and 70.6(c)(1)) are designed to address the statutory requirement that ‘[e]ach permit issued under [title V] shall set forth . . . monitoring . . . requirements to assure compliance with the permit terms and conditions.’ CAA § 504(c), 42 U.S.C. § 7661c(c). Thus, in evaluating whether the permit contains monitoring sufficient to assure compliance under 40 CFR 70.6(c)(1), EPA believes it is appropriate to consider whether such monitoring is ‘sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit.’” *In the Matter of United States Steel Corporation, Granite City Works*, Order on Petition No. V-2009-03 (January 31, 2011) at 6.

Further, as explained in the *US Steel Order*, the rationale for the monitoring requirements selected by a permitting authority must be clear and documented in the permit record (*e.g.*, in the Statement of Basis). *See* 40 C.F.R. § 70.7(a)(5); *see also CITGO Order* at 7. Furthermore, permitting authorities do not have the discretion to issue a permit without specifying the monitoring methodology needed to assure compliance with applicable requirements in the title V permit. *In the Matter of Wheelabrator Baltimore, L.P.*, (Order on Petition) at 10 (April 14, 2010) (hereafter “*Wheelabrator Order*”). In the *Wheelabrator Order*, the permit condition in question required the source to develop a way to convert data in order to demonstrate compliance with PSD emission limits. *Id.* at 11. Both the establishment and approval by the permitting authority of this conversion method were to occur “outside of the title V permitting process.” *Id.* The EPA found this methodology “inconsistent with the requirements of § 504(c) of the Act to include – *in the title V permit* – monitoring to assure compliance with applicable requirements,” and instructed the permitting authority to revise the permit to explicitly include the conversion method that would assure compliance with the emission limits. *Id.* (emphasis in original.)

While it is not clear from the permit record that the numeric PM limits listed in parentheses in the 2010 Petition (*e.g.*, at 51-52) and taken from the Emission Rates for Criteria Pollutant Table (pig iron title V permit, “Emission Rates for Criteria Pollutants”) are “BACT” limits, LDEQ appears to refer to these limits as PSD-related limits in the 2010 RTC. 2010 RTC at 214-216. At a minimum, LDEQ appears to treat these limits as if they are federally enforceable limits, and if they are, they would need adequate periodic monitoring under title V. The following analysis is based on the position that these emission limits are federally enforceable limits. As a result, the analysis below anticipates that the limits identified by the Petitioners apply at all times.

*Units COK-101 and COK-201 Coke Battery 1 and 2 Coal Charging.* In addition to the EPA’s response to Claim I.B. in the 2010 Petition, *supra*, the EPA provides the following additional response. Petitioners assert that the “Title V permit does not require any testing to determine if BACT limits for these sources are met.” 2010 Petition at 51. In its response to similar comments during the state public comment period, LDEQ explained that BACT limits for Coke Battery 1

and 2 Coal Charging have been set at 0.0081 pounds (lb)/ton of dry coal charged, and that 40 C.F.R. § 63.309(k), which requires a performance test, will not be used to determine compliance with this emission limitation because it requires a ventilation stack, which will not exist at Nucor. 2010 RTC at 214-215. “Instead, compliance shall be determined with other applicable procedures described in 40 C.F.R. § 63.309(a)-(m) and 40 C.F.R. § 63.7300(a).” 2010 RTC at 214-215. The regulations at 40 C.F.R. § 63.309(a)-(m), excluding (k), require, among other elements, daily opacity observations and 40 C.F.R. § 63.7300(a) requires good air pollution control practices and an operation and maintenance plan. The permit itself references the Part 63 citations but provides no additional information regarding how that monitoring assures compliance with either numeric PM limit in the permit. *See, e.g.*, pig iron title V permit, unit EQT 0001-22 (Specific Requirements at 3). LDEQ’s response does not explain how the monitoring in the permit assures compliance with the numeric PM limits identified by the Petitioners. Specifically, LDEQ did not explain how the monitoring is “sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit.” 40 C.F.R. § 70.6(a)(3)(i)(B); *see also* 40 C.F.R. § 70.6(c)(1). As a result, the EPA grants this claim in the Petition and directs LDEQ to provide an explanation as to how the monitoring identified in the permit assures compliance with the numeric PM emission limit identified by the Petitioners for the above-referenced units, considering that the limits apply at all times. To the extent that LDEQ determines that the permit does not include the necessary monitoring requirements, the EPA directs LDEQ to include such requirements in the permit. *See, e.g., Wheelabrator Order* at 10.

*Units COK-102 and COK-202 Coke Pushing.* LDEQ’s response to issues raised during the public comments was that the BACT limit set for these units of 0.04 lb of filterable PM<sub>10</sub> per ton of coke pushed was the limit associated with the NESHAP for Coke Ovens: Pushing, Quenching, and Battery Stacks (40 C.F.R. Part 63, Subpart CCCCC). 2010 RTC at 215. Further, LDEQ explained that the performance testing and monitoring provisions “ensure compliance with the BACT limit.” *Id.* LDEQ’s response does not explain how the monitoring in the permit assures compliance with the numeric PM limits identified by the Petitioners. Specifically, LDEQ did not explain how the monitoring is “sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit.” 40 C.F.R. § 70.6(a)(3)(i)(B); *see also* 40 C.F.R. § 70.6(c)(1). Further, LDEQ has not explained how the cited MACT monitoring is sufficient to assure compliance with the BACT limit, consistent with title V. Thus, the EPA grants this issue and directs LDEQ to explain how the monitoring requirements in the permit are sufficient to assure compliance with the numeric PM emission limit identified by the Petitioners for the above-referenced units. To the extent that LDEQ determines that the permit does not include the necessary monitoring requirements, the EPA directs LDEQ to include such requirements in the permit. *See, e.g., Wheelabrator Order* at 10.

*Units COK-104 and COK-204 Coke Battery 1 and 2 Coke Handling.* LDEQ’s response to issues raised during the public comments was that the units are “controlled via baghouses and are subject to daily monitoring provisions.” 2010 RTC at 215. However, LDEQ’s response in the 2010 RTC does not explain how these monitoring requirements are related to the numeric PM limits identified in the Petition. Although there are monitoring requirements for both units COK-104 and 204 (pig iron title V permit, units EQT-0004 and 0010 and PCS-002), LDEQ’s response does not explain how compliance with the numeric PM limit will be calculated. LDEQ’s

response does not explain how the monitoring in the permit assures compliance with the numeric PM limits identified by the Petitioners. Specifically, LDEQ did not explain how the monitoring is “sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit.” 40 C.F.R. § 70.6(a)(3)(i)(B); *see also* 40 C.F.R. § 70.6(c)(1). The EPA therefore grants this issue and directs LDEQ to explain how these monitoring requirements assure compliance with the numeric PM emission limit identified by the Petitioners for the above-referenced units. To the extent that LDEQ determines that the permit does not include the necessary monitoring requirements, the EPA directs LDEQ to include such requirements in the permit. *See, e.g., Wheelabrator Order* at 10.

*Units COK-112, COK-113, COK-212, COK-213 Coke Battery 1 and 2 FGD Lime Silo Unloading and Coke Battery 1 and 2 FGD Waste Loading.* LDEQ’s response to issues raised during public comments was that the units are controlled via baghouses and are subject to daily monitoring provisions and that testing of these sources is not warranted because potential particulate emissions from these sources are 0.015 tpy (for COK-112 and 212) and 0.09 tpy (for COK-113 and 213). 2010 RTC at 215. As noted by LDEQ, the Permit does contain numerous testing requirements and some compliance demonstration information; however, neither the permit nor LDEQ’s response explain how the testing provided for in the permit assures compliance with the numeric PM emission limits identified by the Petitioners for the above-referenced units. *See, e.g., pig iron title V permit, units EQT-0005 and 0006.* LDEQ’s response does not explain how the monitoring in the permit assures compliance with the numeric PM limits identified by the Petitioners. Specifically, LDEQ did not explain how the monitoring is “sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the permit.” 40 C.F.R. § 70.6(a)(3)(i)(B); *see also* 40 C.F.R. § 70.6(c)(1). Thus, the EPA grants this issue and directs LDEQ to explain how the monitoring requirements in the permit assure compliance with the numeric PM emission limit identified by the Petitioners for the above-referenced units. To the extent that LDEQ determines that the permit does not include the necessary monitoring requirements, the EPA directs LDEQ to include such requirements in the permit. *See, e.g., Wheelabrator Order* at 10.

*Units SIN-102 Sinter Plant Main Dedusting Baghouse Vent.* LDEQ’s response to issues raised during public comments was that 40 C.F.R. Part 63, Subpart FFFFF, applies and that compliance with the 0.005 grains per dry standard cubic feet concentration and the 0.0482 lbs/ton finished sinter limit will be demonstrated per the performance testing and monitoring provisions of Subpart FFFFF “and additional stack testing requirements.” 2010 RTC at 215. In response, the Petition contends that MACT testing requirements do not assure compliance with BACT limits, which must be met on a continuous basis, among other points. 2010 Petition at 53. LDEQ’s simply points to Subpart FFFFF in the 2010 RTC but does not explain how testing and monitoring in that Subpart are sufficient to assure compliance with the numeric PM limit identified by Petitioners. For unit SIN-102, the permit itself includes numerous testing and monitoring provisions. *See pig iron title V permit, unit EQT-0032 (Specific Requirements at 37).* In the permit provisions associated with the emission limits identified by the Petitioners, for units EQT-0032-401 and 403, there does not appear to be any specific monitoring or compliance information. LDEQ’s response does not explain how the monitoring in the permit assures compliance with the numeric PM limits identified by the Petitioners. Specifically, LDEQ did not explain how the monitoring is “sufficient to yield reliable data from the relevant time period that

are representative of the source's compliance with the permit." 40 C.F.R. § 70.6(a)(3)(i)(B); *see also* 40 C.F.R. § 70.6(c)(1). Thus, the EPA grants this issue and directs LDEQ to explain how the monitoring requirements assure compliance with the numeric PM emission limit identified by the Petitioners for the above-referenced units. To the extent that LDEQ determines that the permit does not include the necessary monitoring requirements, the EPA directs LDEQ to include such requirements in the permit. *See, e.g., Wheelabrator Order* at 10.

*Units SIN-105, SIN-106, SLG-405, SLG-407, SLG-408, SLG-402, STC-101, and STC-210.* LDEQ's response to issues raised during public comments was that these sources are controlled via baghouses and are subject to daily monitoring provisions, and that due to low emissions, testing of these sources is not warranted. 2010 RTC at 215-216. LDEQ also references applicability of Subpart FFFFF. *Id.* As LDEQ's response does not explain how the monitoring in the permit assures compliance with the numeric PM limits identified by the Petitioners. Specifically, LDEQ did not explain how the monitoring is "sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit." 40 C.F.R. § 70.6(a)(3)(i)(B); *see also* 40 C.F.R. § 70.6(c)(1). The permit itself references various testing and monitoring requirements, including references to Subpart FFFFF, but does not clearly correlate these conditions with compliance with the numeric PM limits at these units. As a result, the EPA grants this issue and directs LDEQ to explain the specific permit monitoring requirements that will result in information to assure compliance with the numeric PM limits identified by Petitioners. To the extent that LDEQ determines that the permit does not include the necessary monitoring requirements, the EPA directs LDEQ to include such requirements in the permit. *See, e.g., Wheelabrator Order* at 10.

*Unit COK-103 and COK-203 Coke Battery 2 Coke Quench Tower.* With regard to the quench towers, the Petition raises two separate claims. In the first claim, the Petitioners repeat statements made during the public comment period regarding testing for the two similar quench towers. 2010 Petition at 52. Petitioners explain that just because the two quench towers are similar does not mean that both towers do not need to be tested. In the second claim, Petitioners discussed LDEQ's response to their comments on the testing for the quench towers where LDEQ pointed to monitoring, recordkeeping and reporting requirements in 40 C.F.R. Part 63, Subpart CCCCC. For the reasons described here, and consistent with the other issues discussed in this section, the EPA denies the Petition as to the first claim and grants the petition as to the second claim.

With regard to the first claim, LDEQ's response to issues raised during public comments was that "a testing requirement identical to that associated with Coke Battery 1 Coke Quench Tower has been added to the permit" and annual testing is not required because Subpart CCCCC has additional monitoring, recordkeeping and reporting requirements. 2010 RTC at 215. Thus, it appears that testing for units COK-103 and COK-203 no longer differ in the ways that resulted in Petitioners' claim in the Petition. *Id.* Further, Petitioners appear to acknowledge this change (Petition at 53) but do not raise any further issues regarding that specific change to the permit. The Petition reiterates LDEQ's response and then provides no further additional information demonstrating that the permit is not in compliance with the CAA. 2010 Petition at 53. LDEQ appears to have made changes to the permit in light of Petitioners' comments, but Petitioners did not consider the responsive changes or demonstrate how such changes were inadequate to ensure

that the permit was in compliance with the Act. *See, e.g., MacClarence*. For these reasons, the Petition is denied as to this claim.

With regard to the second claim, The permit terms, and LDEQ's RTC points to 40 C.F.R. Part 63, Subpart CCCCC (and specific provisions therein), but does not explain how those provisions are sufficient to assure compliance with the numeric PM emission limit. Specifically, LDEQ did not explain how the monitoring is "sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit." 40 C.F.R. § 70.6(a)(3)(i)(B); *see also* 40 C.F.R. § 70.6(c)(1). Thus, the EPA grants this issue and directs LDEQ to explain how the monitoring requirements in the permit assure compliance with the numeric PM emission limit identified by the Petitioners for the above-referenced units. To the extent that LDEQ determines that the permit does not include the necessary monitoring requirements, the EPA directs LDEQ to include such requirements in the permit. *See, e.g., Wheelabrator Order* at 10.

#### *Rationale for Partial Deny*

*General Statements Regarding Monitoring.* Throughout this section of the Petition (2010 Petition at 45-54), Petitioners appear to be raising "general" issues not necessarily specific to the Nucor permits – but general assertions regarding monitoring. For example, the Petition makes blanket statements regarding stack testing (Petition at 50). To the extent that this portion of the Petition makes general assertions and does not identify an issue upon which the EPA could object to the Nucor permit, the EPA is not obligated to respond to such general assertions. Pursuant to CAA § 505(b)(2), the Administrator "shall issue an objection...if the petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of" the CAA. 42 U.S.C. § 7661d(b)(2). To the extent that the Petitioners are simply stating their positions on legal, policy, or technical points without specifically demonstrating that the Nucor permit fails to assure compliance with the Act, such issues do not warrant a response by the EPA. *See also MacClarence v. EPA*, 596 F.3d 1123 (9<sup>th</sup> Cir. 2010) (upholding the EPA's finding that an unsupported general assertion failed to demonstrate that the permit is not in compliance with the Act and stating "(the Administrator's requirement that [a title V petitioner] support his allegations with legal reasoning, evidence, and references is reasonable and persuasive)"); *see also Nucor II Order* at 7. In addition, we note that many of these general statements directly repeat what was said in the corresponding public comments, and to the extent that the Petitioners have failed to address the response that LDEQ provided in the 2010 RTC, these assertions would not satisfy the Petitioners' demonstration burden. *See Nucor II Order* at 7 (explaining that the EPA expects title V Petitioners to engage with the state's final decision, including response to comments, citing *MacClarence*, 596 F.3d at 1132-34). The EPA has provided a unit-by-unit substantive response above, and granted on numerous monitoring related issues.

In addition, the Petitioners assert that an initial stack test is required to confirm emission calculation assumptions for sources that vent to a baghouse, that annual stack testing and surrogate monitoring must be conducted for the large sources of PM<sub>10</sub>, and that surrogate monitoring must be performed for the vent sources below 1 ton per year. 2010 Petition at 52. However, the Petitioners do not cite or analyze any statutory or regulatory provisions that would require those specific forms of testing or monitoring for those units. *See, e.g., MacClarence*, 596 F.3d at 1131 ("the Administrator's requirement that [a title V petitioner] support his allegations

with legal reasoning, evidence, and references is reasonable and persuasive”); *Nucor II Order* at 7 (explaining that the EPA has looked at whether title V petitioners have provided the relevant citations and analyses to support its claim in determining whether it has a duty to object under CAA section 505(b)(2)). Accordingly, the aspect of the claim is denied. While we are granting on numerous monitoring-related issues, as explained above, we are not determining that the forms of monitoring cited on page 52 of the Petition are necessarily required for the emissions units identified by the Petitioners.

For these reasons, the EPA grants in part and denies in part these claims.

## **2. The Title V Permit Requires No Testing for Many Non-Point Sources Subject to BACT Limits**

*Petitioners’ Claims.* In the petition on the pig iron process, the Petitioners identify claims raised in context of pig iron process units that they contend include non-point source emissions that are not subject to emission limits, testing or record keeping requirements in the title V permit. 2010 Petition at 54-55. Petitioners state that the permit is unlawful without such conditions. 2010 Petition at 55. With regard to units FUG-101 and FUG-102, Petitioners contend that LDEQ failed to respond to their comments regarding the enforceability of certain conditions that apply to those sources. 2010 Petition at 55. Petitioners then discuss “storage piles” generally (no unit citations provided) and contend that LDEQ’s response to issues raised in the comment period was “unsupported and incorrect.” 2010 Petition at 56. Petitioners cite to rules and practices of the South Coast Air Quality Management District (SQAMD) in California for support that LDEQ’s responses were incorrect. Petitioners take particular issue with LDEQ’s statement that Nucor’s storage piles cannot feasibly be covered and Petitioners offer several reasons as to why they believe such a statement is incorrect. 2010 Petition at 56-57. First, Petitioners suggest that LDEQ should have developed a plot plan to enclose the piles. 2010 Petition at 56. Second, Petitioners suggest that the California rules reached a different conclusion. 2010 Petition at 56-57. Third, Petitioners suggest that emissions from roadways and storage piles are underestimated and that control efficiencies are unenforceable. *Id.* With regard to the Dust Management Plan (DMP), Petitioners contend that it is not adequate to ensure that the dust control efficiencies used to estimate emissions, model ambient impacts and satisfy BACT are met and that monitoring is “not a substitute for assuring that emissions do not exceed the assumed levels.” *Id.* Petitioners provide three bases for this contention involving weekly monitoring being inadequate, and triggers for responses being very high, and again, citing to a SQAMD report. *Id.* at 57-58. Finally, in response to LDEQ’s statement that direct measurement of emissions from paved and unpaved roads is not technically feasible, the Petitioners state that such a demonstration must be “on the record.” *Id.*

These claims were re-raised in the 2012 Petition, Att. B at 54-58.

*EPA’s Response.* For the reasons provided below, the EPA denies these claims.

In response to Petitioners’ comments regarding non-point (fugitive) source monitoring, LDEQ provided unit-by-unit information responsive to Petitioners’ comments and highlighted existing monitoring in the permit that Petitioners did not reference. 2011 RTC at 160-163. Specifically,

LDEQ explained, “Nucor’s Dust Management Plan requires actual monitoring of dust during both the construction and operation of the facility with deposition gauges, portable monitors, and visual inspections. This plan also includes quantifiable action levels and prescribes corrective actions. LDEQ has determined these work practice standards meet BACT for fugitive particulate emissions. See also LDEQ Response to Comment No. VII.45 for our response.” *Id.* at 160-163 (response to comment VII.46). The permit itself and the Dust Management Plan<sup>33</sup> (compliance with which is a condition of the permit - *see* pig iron title V permit, condition 937, at 91 of 93) include numerous conditions to monitor emissions from each of the units identified in the Petition at 54.

The Petition generally asserts that specific emission limits, testing and recordkeeping of emission inputs must be added to the permit. Although section III.A. of the petition (beginning on page 45) includes a broad legal background, the Petitioners do not apply that legal background to this section such that it is apparent that there is a legal basis for the specific objections requested by the Petitioners to the permits. The Petition simply lays out a general legal overview, and then specific facts, without any analysis connecting the two. *See, infra*, Section II “Statutory and Regulatory Framework.”

As noted earlier in this Order, the EPA has looked at a number of criteria in determining whether the petitioner has demonstrated noncompliance with the Act. *See Nucor II Order* at 7. With regard to these issues in the Petitions, the EPA concludes that the Petitioners have not met their burden of demonstrating that the permit is not in compliance with the Act, or that LDEQ lacked a reasoned basis for the work practices standards and related compliance conditions related to fugitive dust sources in the permit. Notably, although Petitioners cite to 15 separate units in the Petition (at page 54), the remainder of the discussion is focused on only a few of those units (except for the enclosure discussion). LDEQ provided a unit-specific response in the 2010 RTC, the vast majority of which is not referenced or discussed by Petitioners at all. 2010 RTC at 216-218, and 339. Further, instead of identifying applicable requirements that apply for this permit, Petitioners instead rely on a SCAQMD rule and staff report, neither of which are applicable requirements for Nucor or LDEQ. 2010 Petition at 56. Petitioners do not explain why they should apply, or why it would be informative in this circumstance, despite these items clearly not being applicable requirements in Louisiana, as well as the significant air quality and climatological differences between Southern California and Louisiana. Petitioners focus in the Petition on LDEQ’s statement that enclosing the piles would be infeasible; however, the Petitioners do not demonstrate that LDEQ’s statement in the 2010 RTC was unreasonable in light of requirements applicable to Nucor and Louisiana. While it is clear that the Petitioners might prefer the fugitive dust management approach of the SCAQMD rule and report for the Nucor facility, Petitioners do not explain why LDEQ’s analysis is unreasonable under the applicable requirements that actually apply to the Nucor facility.

In addition, some of Petitioners’ contentions appear simply inaccurate. For example, Petitioners contend that the DMP is unenforceable, but the document is specifically referenced in the pig iron title V permit, (Condition 937 at 91), and includes specific, enforceable requirements. *See, e.g.*, Section 9.0 - 12.0 of the DMP (EDMS Document ID 6462271, page 269-300)<sup>34</sup>. As to the

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<sup>33</sup> See EDMS Document ID 6462271 (June 29, 2009), at 269.

<sup>34</sup> The EPA notes that the DMP is attached to the DRI title V permit at 61-92 and the DRI PSD permit at 84-115.

claim that the DMP is not adequate to ensure that 90-95 percent control efficiencies are met, Petitioners do not respond to statements made by LDEQ regarding that issue – which addressed technical information regarding AP-42<sup>35</sup> and provided a reasoned basis for LDEQ’s conclusions. 2010 RTC at 163-166. Finally, it does not appear that the specific concerns in the petition about the DMP (e.g., that monitoring only occurs weekly with a handheld monitor and that the thresholds are very high) were raised with reasonable specificity during the comment period. *See, e.g.*, 2010 RTC at 102. Nor is there any demonstration in the Petitions that it was impracticable to do so or that the grounds arose after the comment period. Thus, to the extent that the Petitioners are raising a separate issue on the DMP, rather than simply addressing LDEQ’s RTC on this point, this claim is also denied on procedural grounds. CAA § 505(b)(2), 42 U.S.C. § 7661d(b)(2).

With regard to Petitioners’ statements regarding work practice standard and BACT, the applicable statute and regulations define BACT, in general, as an “emissions limitation (including a visible emissions standard)” and provide that if there are “technological or economic limitations on the application of measurement methodology to a particular emissions unit that would make the imposition of emission standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement” for BACT.<sup>36</sup> Thus, Petitioners’ statement that specific emission limits must be added to the permit does not address or analyze these provisions and does not demonstrate that the conditions for imposing a work practice standard are not met here. Notably, Petitioners cite to no applicable requirement for support of that statement. 2010 Petition at 55. Also, since fugitive sources, by definition, do not emit through stacks, vents, or other functionally equivalent openings, as an engineering matter, there would be no structure available to allow for a stack test or other direct measurement technique (e.g., Reference Test Method 5<sup>37</sup> or PM Continuous Emission Monitoring System – PM CEMS) to be conducted for such emissions units. The Petitioners did not cite or discuss any applicable requirements or guidance or describe any engineering or other factors that could lead a permitting authority or the EPA to provide different compliance provisions in a permit for these emission units. Further, Petitioners do not appear to recognize that information provided in this permit includes state-of-the-art ambient monitoring for fugitive emissions, such as additional monitoring and deposition gauges that can be conducted when there is no stack or equivalent structure available. *See, e.g.*, 2010 RTC at 163-166.<sup>38</sup> The permit imposes specific monitoring for fugitive emissions sources through the requirements of the DMP and LDEQ explains in the 2010 RTC how that monitoring is intended to provide for information from which numeric ambient emission levels can be calculated and application of work practices assured. *See, e.g.*, 2010 RTC at 165. These are all points raised by LDEQ in the 2010 RTC, which Petitioners state are inadequate, but Petitioners provide no further explanation as to why LDEQ’s reasoning is flawed as to that monitoring or how the permit fails to assure compliance with an applicable requirement.

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<sup>35</sup> AP-42 refers to an EPA document, *Compilation of air Pollutant Emissions Factors*, available at <http://www.epa.gov/ttnchie1/ap42/>.

<sup>36</sup> *See* CAA § 169(3), 42 U.S.C. § 7479(3); *see also* 40 C.F.R. § 51.166(b)(12), LAC 33:III.509.B.

<sup>37</sup> *See, e.g.*, 40 C.F.R. Part 60, Appendix A. Hereafter we refer to this as “Test Method 5.”

<sup>38</sup> In addition, the EPA notes that the DMP now includes ambient dust monitoring requirements (deposition gauges and visible inspection) in § 11.1 (See DMP attached to the DRI title V permit).

Concerning haul roads and storage piles, the Petitioners contend that the work practice standards selected by LDEQ are not adequate to ensure that control efficiencies are actually met. For example, Petitioners appear to suggest that handheld monitors of “unknown quality” used by a person of “unknown skill” would not be reliable. 2010 Petition at 57. In response to comments, LDEQ explained that in addition to the monitoring,<sup>39</sup> the DMP applies during construction and operation of the facility, and requires actual monitoring of dust with deposition gauges, portable monitors, and visual inspections. *See* §§ 9.0 - 12.0 of the DMP. The record also shows that these haul roads are required as BACT to be paved, where practicable, watering and sweeping are required on paved roads, along with reduced speed limits. *See* Permit No. 2560-0081-V0 at 71. Unpaved roads are required as BACT to utilize water sprays or dust suppression chemicals and reduced speeds of 15 mph will be enforced. *Id.* For storage piles, the Petitioners focus on enclosing such piles without explaining why the existing conditions to control emissions from the piles are inconsistent with applicable requirements. Thus, Petitioners make various claims but do not explain how the permit fails to assure compliance with the applicable requirements in light of LDEQ’s response and the permit terms and conditions, including the DMP.

The EPA concludes that the Petitioners have not met their burden of demonstrating that the conditions in the permit are not in compliance with the Act, or that LDEQ lacked a reasoned basis for the work practice standards and associated compliance conditions established in the title V permit for the listed fugitive emission units. For these reasons, the EPA denies these claims.

### **3. Testing Once Over Facility Lifetime Is Inadequate**

*Petitioners’ Claims.* The Petitioners provide a list of seven emission units<sup>40</sup> and eleven applicable permit conditions for which they claim the permit requires only an initial stack test. 2010 Petition at 58. Petitioners state that such testing is not consistent with ensuring that limits are met on a continuous basis. *Id.* Petitioners additionally assert that the monitoring provisions mentioned in LDEQ’s RTC do not measure emissions and thus do not assure compliance with emission rates expressed in pounds per hour such as those used in air quality monitoring. *Id.* at 59. Petitioners do not agree with using MACT or Compliance Assurance Monitoring (CAM) to assure compliance with PSD emission limits because they are separate statutory programs. *Id.* With regard to using parameters in monitoring, Petitioners assert that such monitoring is not adequate unless the permit explicitly requires this monitoring and makes it enforceable, and states that an exceedance of an indicator is a violation of the underlying requirement. 2010 Petition at 60.

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<sup>39</sup> The handheld monitors referenced in the Nucor permit record represent a state-of-the-art monitoring device intended to provide real-time, numeric data for fugitive emissions. These monitors are considered to provide more reliable data than other fugitive monitoring devices. Petitioners do not explain why they believe such devices are not reliable. A later revision of the DRI permit revised the DMP to remove the deposition gauges and replace them with fenceline ambient monitors. *See* “Technical Review Comments, EDMS Document ID 916627. The fenceline monitors are another kind of ambient monitor for fugitive dust.

<sup>40</sup> The EPA recognizes that the pig iron title V permit has been modified since the Petitions. To the extent that none of the current Nucor title V permits any longer contain an emission unit identified by the Petitioners that is subject to a “grant” in this Order, LDEQ could respond to the “grant” in this Order associated with a unit by simply explaining that the unit no longer exists at the Nucor facility and identifying the permitting action that eliminated that unit from the Nucor permits.

These claims were re-raised in the 2012 Petition, Att. B at 58-60.

*EPA's Response.* For the reasons provided below, the EPA grants these claims.

In response to comments, LDEQ explained that the Petitioners' contention ignores the other provisions applicable to these sources. 2010 RTC at 219. For example, LDEQ points out that the coke battery process area units (COK-110 and 210) are subject to 40 C.F.R. Subparts L and CCCCC, which regulate particulate emissions and require additional monitoring recordkeeping and reporting. *Id.* Slag baghouse vents (SLG-403 and 409) are controlled via baghouses subject to CAM. Slag Mill process area units (SLG-103 and 203) are subject to monitoring and recordkeeping for flow rate and slag diverted during each event and required to keep records of such, as well as opacity limits and daily monitoring under 40 C.F.R. Part 63, Subpart FFFFF. *Id.* The PCI mill vent (PCI-101) is subject to 40 C.F.R. 60, Subpart Y and baghouse monitoring conditions and it regulates particulate matter and contains additional monitoring, recordkeeping and reporting. *Id.* While LDEQ's response identifies additional monitoring, recordkeeping and reporting, it does not explain how the monitoring in the permit for each of these units assures compliance with the emissions limits in the permit – as was discussed earlier in response to Petition Claim III.B.1. The EPA therefore grants the Petition on this issue and directs LDEQ to explain how the monitoring, recordkeeping and reporting included in the permit are adequate to assure compliance with the numeric emission limits in the permit. As discussed previously in response to Petition Claim III.B.1., the EPA's understanding is that these federally enforceable limits apply at all times. As the EPA is seeking additional clarification from LDEQ regarding how the monitoring in the permit for each of these units assures compliance with the emissions requirements in the permit, the EPA is not addressing the Petitioners' additional statements relating to NESHAP, CAM, or parametric monitoring. However, the EPA notes that it has addressed similar monitoring claims in prior title V orders. *See, e.g., In the Matter of Wisconsin Pub. Serv. Corp. JP Pulliam Power Plant*, Order on Petition No. V-2012-01 (Jan. 7, 2013) at 13-15 (“Whether a permit contains adequate monitoring to assure compliance is fact-specific, depending on all of the relevant monitoring provisions in each title V permit. The fact that certain indicator ranges in one title V permit must be enforceable to assure compliance with an applicable requirement in that permit does not necessarily speak to whether indicator ranges in other title V permits must be enforceable.”). As LDEQ considers this issue, if LDEQ determines that the permit does not include the necessary monitoring requirements, the EPA directs LDEQ to include such requirements in the permit. *See, e.g., Wheelabrator Order* at 10. For these reasons, the EPA grants these claims.

#### **4. Testing Every 2.5 or 5 Years Is Inadequate**

*Petitioners' Claims.* The Petitioners provide a list of 11 emission units and 22 permit conditions for which they claim that the draft title V permit only requires testing initially and then every five years. 2010 Petition at 60. Petitioners claim that it is feasible to “monitor” pollutants from these sources more frequently than once every five years. *Id.* at 61. The Petition lists two additional units and four additional conditions for which they claim the permit requires testing only every 2.5 years and state that clarification is needed to understand the timing for the testing. *Id.* Again, Petitioners claim that more frequent monitoring is feasible for these units. *Id.* For both

sets of emission units, the Petitioners state that unless LDEQ modifies the permit to require monitoring sufficient to assure compliance at these sources, the permit will be unlawful. *Id.*

These claims were re-raised in the 2012 Petition, Att. B at 60-61.

*EPA's Response.* For the reasons provided below, the EPA denies these claims.

In its response to comments, LDEQ pointed out specific testing requirements that do apply to the identified units in the response to comments. 2010 RTC at 220-221. Specifically, LDEQ clarified that “Nucor must test the sources in question *every* 2.5 or 5 years, not just twice.” *Id.* Further, LDEQ then provided a unit-by-unit response detailing the monitoring and testing applicable to the various units identified by Petitioners. LDEQ pointed out that most of these units are subject to additional monitoring, recordkeeping and reporting requirements under 40 C.F.R. Part 63, Subparts Y, CCCCC, FFFFF, and D. 2010 RTC at 221. Further, LDEQ pointed out that the MEROS System Vent Stack (unit SIN-101) is subject to SO<sub>2</sub> continuous emission monitoring among other monitoring. *Id.*; *see also* pig iron title V permit at 31 (unit EQT-0031).

The claim, in one sentence, references the response to comments (on the frequency of testing), but provides no substantive response to LDEQ’s statements. In particular, the Petitioners provide no reply to LDEQ’s unit-by-unit response explaining the monitoring for the identified units. In addition, Petitioners appear to simply reiterate their testing frequency claim without regard to LDEQ’s clarifying explanation in the 2010 RTC. Petitioners’ claims appear focused on the performance testing and do not appear to consider any of the other testing and monitoring for the identified sources. Petitioners’ claims begin with a discussion of “testing” and conclude by finding that the “monitoring” is inadequate – without consideration of the monitoring required at each of the identified units. Instead, these claims are conclusory in nature and do not provide the EPA with any information indicating the specific basis for the objection, such as an explanation of why the Petitioners believe more frequent testing or monitoring would be required for these emission units. *See, e.g., Murphy Oil Order* at 12 (denying a title V petition claim where petitioners did not cite any specific applicable requirement that lacked required monitoring). As discussed earlier, the burden is on the petitioner to address the permitting authority’s final decision, and the permitting authority’s final reasoning (including the RTC). *See, e.g., MacClarence*, 596 F.3d at 1132-33; *Nucor II Order* at 7. For these reasons, the Petitioners fail to explain how LDEQ’s rationale was deficient or how the permit fails to assure compliance with an applicable requirement. For these reasons, the EPA denies these claims.

## **5. Continuous Emission Monitoring System (CEMS) Requirements Are Unclear**

*Petitioners' Claims.* The Petitioners contend that certain draft title V permit conditions related to CEMS requirements for Coke Battery Flue Gas desulfurization (FGD) stacks and the sinter plant FGD stacks are “unclear as to whether the CEMS data will be used to determine compliance and if so, exactly how and with what limitations.” 2010 Petition at 61. The Petitioners provide a specific example of the SO<sub>2</sub> CEMS condition for the Coke Battery 1 and 2 FGD Stacks (Conditions 216 and 245) and claim that the permit conditions regarding CEMS are unclear whether inlet and outlet concentrations be monitored, which they assert is required to determine compliance with the SO<sub>2</sub> control efficiency used as BACT. *Id.* at 62. Petitioners also state that

the permit is silent as to whether the CEMS data will be used to determine compliance with any emission limits, or be reported to the agency, contending that the CEMS data should be used to determine compliance with all relevant emissions limits and submitted quarterly in an electronic file and reported to LDEQ. *Id.* Petitioners contend that all required emissions limits must be clearly mandatory. *Id.* Petitioners contend that the provision associated with the CEMS for the MEROS System Sinter Vent Stack (Condition 325) are ambiguous because it requires continuous recordkeeping by CEMS, rather than monitoring on a specific timeframe. *Id.* at 62-63. Finally, Petitioners assert that LDEQ's response to the comments was not on point because it "failed to show how the CEMS data will be used to determine continuous compliance with the SO<sub>2</sub> emission rates in the Criteria Pollutant Emission Rate table." *Id.* at 63.

These claims were re-raised in the 2012 Petition, Att. B at 61-63.

*EPA's Response.* For the reasons provided below, the EPA denies these claims.

In response to comments, LDEQ provided direct answers to the Petitioners' claims. 2010 RTC at 222-223. Specifically, LDEQ explained that "CEMS data will be used to determine compliance with all relevant SO<sub>2</sub> emission limits and conditions." *Id.* As part of this response, LDEQ also cited the EPA's Credible Evidence Rule, 62 *Fed. Reg.* 8314 (Feb. 24, 1997) and General Conditions under LAC, including certain requirements relating to recordkeeping and reporting. LDEQ provided cross-references to the LAC provisions and permit conditions responsive to Petitioners' claims, pointing out specific answers and responding to inaccurate statements made by Petitioners. 2010 RTC at 223. LDEQ also responded to Petitioners' statement about the CEMS for the MEROS System Sinter Vent Stack (unit SIN-101), stating that emissions must be monitored once every fifteen minutes per LAC 33:III.1511.A. 2010 RTC at 223. As noted by LDEQ, the CEMS and other monitoring for the units identified by Petitioners will provide sufficient information to determine compliance with the limits.

Petitioners' claims do not appear to respond to the direct and reasoned responses provided by LDEQ in the 2010 RTC; rather, Petitioners reference the response by saying it is "not on point." 2010 Petition at 63. This statement is simply inaccurate – LDEQ directly responds to Petitioners' claims in the 2010 RTC and provides additional explanation regarding the issues identified by Petitioners. Petitioners additionally state that LDEQ "failed to show how the CEMS data will be used to determine continuous compliance with the SO<sub>2</sub> emission rates in the Criteria Pollutant Emission Rate table." *Id.* However, they do not explain why LDEQ's statements, including the statement in the RTC that "CEMS data will be used to determine compliance with all relevant SO<sub>2</sub> emission limits and conditions," 2010 RTC at 222, are inadequate to address this concern. Further, Petitioners do not cite or analyze any applicable requirements for support of their specific claims regarding monitoring and CEMS. As discussed earlier, the burden is on the petitioner to address the permitting authority's final decision, and the permitting authority's final reasoning (including the RTC). *See, e.g., MacClarence*, 596 F.3d at 1132-33; *Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments and has looked to whether they have provided relevant citations and analyses to support the claim). Accordingly, the Petitioners fail to explain how LDEQ's rationale was deficient or how the permit fails to assure compliance with an applicable requirement. For these reasons, the EPA denies these claims.

## 6. Filter Manufacturer's Certifications

*Petitioners' Claims.* The Petitioners state that BACT for PM<sub>10</sub> and PM<sub>2.5</sub> for many sources was determined to be fabric filter baghouses designed to meet a particular control efficiency, and contend that the draft title V permit does not require any testing to demonstrate that the BACT control efficiency (and sometimes corresponding grain loadings) are met each day but rather requires only a filter manufacturer's initial certification. 2010 Petition at 63. Petitioners explain that baghouse performance can degrade over time and that operations can modify the performance of the baghouse. *Id.* Citing to the NSR Manual, Petitioners conclude that a vendor certification does not assure continuous compliance with a BACT limit expressed as a control efficiency. *Id.* Petitioners contend that testing would verify compliance but the draft title V permit does not require any testing to verify the baghouse control efficiencies, except for some units for which initial outlet testing using the EPA's Test Method 5 is provided. *Id.* at 64. Petitioners state that simultaneous testing at both the baghouse inlet and outlet would be required to verify compliance with the control efficiency. *Id.* Petitioners then identify 23 permit conditions which Petitioners state rely only on a manufacturer's certification for compliance with the control efficiency. *Id.* Petitioners recognize that some of these units must also undergo testing under the EPA's Test Method 5, but Petitioners appear to contend this is not adequate to determine control efficiency because it does not measure either PM<sub>10</sub> or PM<sub>2.5</sub>. *Id.*

These claims were re-raised in the 2012 Petition, Att. B at 63-65.

*EPA's Response.* For the reasons provided below, the EPA denies these claims.<sup>41</sup>

In response to comments, LDEQ explained that the permit requires Nucor to maintain purchase orders or manufacturer certifications showing that the installed filters meet the manufacturer's specifications for particulate matter removal efficiency, or the Minimum Efficiency Reporting Value (MERV) rating, as applicable. 2010 RTC at 225. Further, LDEQ explained the basis for its BACT decision by pointing to an EPA-issued PSD permit in which compliance with a permit condition was demonstrated by certification of the engine manufacturer. *Id.* LDEQ also explained why a MERV rating is not the equivalent of a traditional vendor guarantee because it represents the worst case performance, it can assure performance when a maximum particle count must be maintained over the filter's entire life. *Id.* Finally, LDEQ notes that additional monitoring is associated with the baghouses – such as daily visible emissions monitoring, baghouse (including gasket) inspections every six months, and good air pollution control practices. *Id.* The EPA additionally notes that the Permit itself includes numerous parameter monitoring requirements for the units identified by Petitioners, including monitoring for temperature, pressure drop, and visible emissions – all parameters which provide information regarding the operations of a baghouse. *See, generally, EPA Air Pollution Control Cost Manual, Sixth Edition, EPA/452/B-02-001, January 2002, Section 6 Particulate Matter Controls, Chapter 1 Baghouse Controls and Filters, Section 1.2.6, Fabric Filtration Theory (available online at <http://www.epa.gov/ttn/catc/dir1/cs6ch1.pdf>).*

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<sup>41</sup> Petitioners' claims as to the adequacy of Test Method 5 measurements to ensure that the baghouse is performing at the BACT level for PM<sub>10</sub> and PM<sub>2.5</sub> are addressed in the response to Claim III.E below.

In the Petition, Petitioners do not acknowledge LDEQ's response nor address why LDEQ's response in the 2010 RTC is unreasonable or why the monitoring and inspection measures described in the permit fail to assure compliance with the BACT requirement for control of PM with baghouses. In addition, while Petitioners focus on the need for requirements for inlet and outlet testing of control efficiency, this would not necessarily provide information concerning the proper operation and maintenance of the filters that would be superior to that gained from the provisions in the permit for parameter monitoring of pressure drop and visible emissions, and regular inspection of filter conditions to check for bag leaks and filter condition. The Petition neither discusses LDEQ's response nor provides any citation to or analysis of any relevant requirements to support the contentions. As discussed earlier, the burden is on the petitioner to address the permitting authority's final decision, and the permitting authority's final reasoning (including the RTC). *See, e.g., MacClarence*, 596 F.3d at 1132-33; *Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments and has looked to whether they have provided relevant citations and analyses to support the claim). For these reasons, the Petitioners fail to explain how LDEQ's rationale was deficient or how the permit fails to assure compliance with an applicable requirement. For the reasons described above, the EPA denies these claims.

#### **7. There Is Inadequate Monitoring for PM<sub>10</sub> or PM<sub>2.5</sub>.**

*Petitioners' Claims.* Petitioners contend that the permit lacks adequate monitoring to assure compliance with the PM<sub>10</sub> and PM<sub>2.5</sub> BACT analyses. 2010 Petition at 65. Pointing to numerous monitoring provisions in the permit, Petitioners state that all of the monitoring provisions in the draft title V permit require the use of the EPA's Test Method 5 to determine compliance with the PM<sub>10</sub> and PM<sub>2.5</sub> limits. *Id.* Petitioners explain that Test Method 5 is not adequate because it excludes condensable particulate matter, which is a component of both PM<sub>10</sub> and PM<sub>2.5</sub>, and because it measures all sizes of particulate matter. *Id.* Petitioners state that the draft title V permit therefore requires no testing for any PM<sub>10</sub> and PM<sub>2.5</sub> BACT limits and seem to indicate that the permit should require use of the EPA's Test Methods 201, 202 and Other Test Method (OTM) 27. *Id.* Further, Petitioners contend that LDEQ failed to respond to Petitioners' PM<sub>10</sub> comment and state that the permit does not include a requirement to test condensables for PM<sub>10</sub>. *Id.* at 66.

These claims were re-raised in the 2012 Petition, Att. B at 65-66.

*EPA's Response.* For the reasons provided below, the EPA denies these claims.

As a preliminary matter, many of the Petitioners' statements in this part of the Petition appear to be inaccurate. For example, Petitioners state that "the draft permit requires no testing for any BACT limits for PM<sub>10</sub> or PM<sub>2.5</sub>." 2010 Petition at 65. However, the permit itself includes numerous monitoring and testing requirements associated with PM. For example, the permit includes monitoring for visible emissions, pressure drop, and other parameters to assure that PM control devices are functioning effectively. *See, e.g.,* pig iron title V permit (COK-100), ARE-0001.

With regard to Petitioners' contention that LDEQ "failed to respond" to Petitioners PM<sub>10</sub> "argument," and citing to the 2010 RTC (LDEQ Response 258.E) (2010 Petition at 66), the information in the RTC appears to directly contravene Petitioners' contention. In the 2010 RTC

at 226-228, LDEQ provides a response to Petitioners' comments. In response to comments, LDEQ explained that due to the surrogacy demonstration it provided for PM<sub>10</sub> being a surrogate for PM<sub>2.5</sub>, LDEQ "believes it is reasonable for Nucor to assume all particulate matter emissions constitute PM<sub>10</sub>." 2010 RTC at 226. LDEQ also noted that Nucor may use other methods with prior approval from LDEQ. *Id.* Apart from the surrogacy issue that is addressed elsewhere in this Order, the Petitioners do not address the substantive points that LDEQ made in the RTC regarding monitoring for PM<sub>10</sub>, but rather simply state that PM<sub>10</sub> includes filterable and condensable components and that the permit only requires testing of the filterable component by Test Method 5, "which overestimates," but is silent as to the requirement to test condensables for PM<sub>10</sub>. 2010 Petition at 66.

As discussed earlier, the burden is on the petitioner to address the permitting authority's final decision, and the permitting authority's final reasoning (including the RTC). *See, e.g., MacClarence*, 596 F.3d at 1132-33; *Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments and has looked to whether they have provided relevant citations and analyses to support the claim). The language in the Petition appears to essentially be a copy of the comments submitted to LDEQ, with no substantive engagement with LDEQ's response, which includes citations to applicable legal requirements and explains the basis for the approach in the pig iron permit and why it was not required to address condensable PM at the time the pig iron permit was issued.

With regard to condensable PM, LDEQ explained the status of the applicable requirements, quoting from excerpts from both final and proposed rulemakings, which explain why Nucor was not obligated to include condensable PM in its analysis of compliance with the PM limits in the pig iron title V permit. 2010 RTC at 226 (citing to the PM<sub>2.5</sub> NSR Implementation Rule and the EPA's proposed rule titled, "*Methods for Measurement of Filterable PM<sub>10</sub> and PM<sub>2.5</sub> and Measurement of Condensable Particulate Matter Emissions from Stationary Sources*," 74 *Fed. Reg.* 12970 (March 25, 2009)). The Petition, however, fails to address the statements by LDEQ in the RTC explaining that the EPA will not require "states to address condensable PM in establishing enforceable emissions limits for either PM<sub>10</sub> or PM<sub>2.5</sub> in NSR permits until the completion of a transition period, currently scheduled to end on January 1, 2011," which is after the pig iron permits were issued. 2010 RTC at 226.

For the above reasons, the Petitioners fail to explain how LDEQ's rationale was deficient or how the permit fails to assure compliance with an applicable requirement. For these reasons, the EPA denies these claims. As is discussed below, the EPA is also denying in part (and granting in part on a separate issue) the Petition on the issues raised by Petitioners regarding PM<sub>10</sub> and PM<sub>2.5</sub> surrogacy with respect to the pig iron permit.

## **8. Cooling Tower BACT Limits Do Not Assure Compliance.**

*Petitioners' Claims.* Petitioners raise two main issues associated with the cooling tower total dissolved solids (TDS) concentration. 2010 Petition at 66. Petitioners contend that they commented that cooling water with a TDS concentration of less than 500 parts per million (ppm) was feasible. *Id.* Additionally, Petitioners contend that LDEQ did not respond to the substance of this comment and that the BACT determination is therefore deficient. *Id.* Second, Petitioners

contend that the title V permit fails to assure that the cooling tower BACT limits are enforceable. *Id.* Petitioners explain that LDEQ did respond to these comments, and even made changes to the permit in response to the comments, but that the changes fall short of what Petitioners contend was necessary. *Id.* With regard to Conditions 846, 849, and 855, Petitioners now contend that these should state, “BACT is the use of a cooling tower equipped with a 0.0005 percent efficient drift eliminator,” rather than “mist eliminating baffles.” 2010 Petition at 67. With regard to enforceability, Petitioners contend the permit should be modified to require at least an initial test to confirm the drift efficiency, mandatory maintenance and work practice standards to assure the BACT drift efficiency is met, and continuous flow rate monitoring, and that these values should be used in the calculation to determine compliance rather than vendor guarantees, stating that ““vendor guarantee[s] alone are not sufficient justification that a control option will work.”” *Id.* (quoting the NSR Manual at B.20).

These claims were re-raised in the 2012 Petition, Att. B at 66-67.

*EPA’s Response.* For the reasons provided below, the EPA and denies these claims.

LDEQ responded to these issues in two portions of the response to comments document. First, in response to Comment No. 115, LDEQ explained that it conducted a top-down BACT analysis to reach the BACT related determinations associated with the cooling towers. 2010 RTC at 101. LDEQ also explained that its analysis of a lower TDS, which was informed by additional information submitted by Nucor (which is cited to in the 2010 RTC), did not result in any changes to the previous BACT determination. *Id.* The additional information, titled, “Addendum to Part 70 and PSD Permit Application,” and dated January 6, 2009, discusses the BACT analysis for the TDS on pages 7-8 (EDMS Document ID. No. 6271972) (hereafter referred to as “Addendum”). This document explains Nucor’s position that the BACT analysis was based on a fundamental design of the facility – that it would be a zero wastewater discharge facility. Addendum at 7. Specifically, Nucor explained, “[i]n considering BACT for the coke quench towers, control options were identified within the constraints of the zero-discharge facility design. The nature of this facility-wide water system prohibits the use of quench water with a TDS concentration below 1,100 ppm. The concentration of dissolved solids in the water may be reduced by water treatment, but such treatment creates a concentrated water blow downstream, which must be discharged. Additionally, fresh make-up water requirements of the tower increase.” *Id.* at 7-8. Nucor then concluded that it “considers the requirement for use of an ultra-low TDS quench water, or the use of a once-through quench water system, to be technically infeasible within the constraints of the fundamental facility design.” *Id.* at 8.

In a later portion of the 2010 RTC (in response to Comment No. 258.F), LDEQ provided additional information responsive to Petitioners’ comments. 2010 RTC at 228. Specifically, LDEQ explained that BACT limitations such as those suggested by the commenter (e.g., exhaust gas concentration or percent reduction) are not appropriate due to technical aspects of the particulate emissions at issue. *Id.* at 228-229. LDEQ also explained that it would add conditions to the permit, in response to Petitioners’ comments asking LDEQ to provide for more clarity surrounding the established design drift efficiency, compliance, and monitoring. *Id.* Among other things, LDEQ included additional monitoring involving the circulating water rate and also additional recordkeeping. *Id.*

The record shows that LDEQ did provide a response to the Petitioners' comment about a 500 ppm TDS limit on the cooling water. In the RTC, LDEQ stated that it had done a top-down BACT determination which led to the selection of "a combination of less than or equal to 1,000 milligrams per liter TDS concentration in the cooling water and drift eliminators employing a drift maximum of 0.0005%" as BACT. 2010 RTC at 101. LDEQ further stated that "Nucor submitted additional explanation regarding the use of a lower TDS value specifically addressing collateral environmental impacts," and then stated that "LDEQ's review of the additional information concluded that the original determination of BACT was correct." *Id.* Thus, LDEQ did respond to Petitioners' comment about a 500 ppm TDS limit on cooling water. Moreover, while LDEQ's response to the comment is not as clear or detailed as it could be, the basis for LDEQ's conclusion can reasonably be discerned from the response. *See, Alaska Dep't of Env'tl. Conservation v. EPA*, 540 U.S. 461, 497 (2004) (a decision of "less than ideal clarity" should be upheld "if the agency's path may reasonably be discerned") (quoting *Bowman Transp., Inc. v. Arkansas-Best Freight System, Inc.*, 419 U.S. 281, 285-286 (1974)). As discussed above, the information submitted by Nucor explained that achieving a lower TDS level in the quench water would have collateral environmental impacts. This option would require treatment of the quench water to remove TDS and thus produce a discharge of wastewater that was otherwise avoided by Nucor's zero-discharge design. The discharge of water would also require additional consumption of fresh water to make up for the water lost to the discharge. LDEQ's response shows that the agency considered the additional information submitted by Nucor on collateral environmental impacts and then determined the original BACT determination was correct on the basis of this information. The Petitioners do not provide any information or analysis to demonstrate that this response, or LDEQ's determination, is deficient or unreasonable.

With regard to the remaining issues raised in this portion of the Petition, the EPA denies those issues. In the remaining issues of the Petition, Petitioners take issue with specific changes made by LDEQ to the permit, but fail to cite to or analyze any relevant requirement indicating that the changes now requested by Petitioners are required to assure compliance with an applicable requirement. In addition, Petitioners do not address all the changes made by LDEQ in response to the comments, including particularly relevant ones. For example, the Petitioners continue to raise the need for continuous monitoring of circulating water flow rate (2010 Petition at 67), but do not discuss the monitoring in the permit for the cooling water. *See, e.g.*, modified pig iron title V permit, unit EQT-0060, condition 746. While the EPA understands that the Petitioners may prefer different wording or conditions, Petitioners have not demonstrated that the permit as drafted fail to assure compliance with an applicable requirement. For example, as to the drift efficiency, Petitioners state that the title V permit should include "mandatory maintenance and work practice standards to assure the BACT drift efficiency is maintained" but do not acknowledge or address LDEQ's change to the permit to require that the cooling tower drift eliminators be maintained consistent with the manufacturer's recommendation as described in the operating manual for the cooling tower, including a requirement to maintain a log of maintenance activity performed on the drift eliminators as well as the additional monitoring on the cooling water. 2010 RTC at 229.

Similarly, the Petitioners state that the vendor guarantees alone do not assure compliance over the lifetime of the equipment and state that the title V permit should contain "continuous flow rate monitoring," but they do not acknowledge or address LDEQ's explanation that "[u]se of the

design cooling tower circulating water rate will result in conservative emission estimates and negates the need to monitor this parameter.” *Id.* The Petition does not provide information demonstrating that LDEQ’s response or approach was deficient or unreasonable, or that the permit fails to assure compliance with a requirement of the Act. As discussed earlier, the burden is on the petitioner to address the permitting authority’s final decision, and the permitting authority’s final reasoning (including the RTC). *See MacClarence*, 596 F.3d at 1132-33; *See Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state’s final decision, including response to comments and has looked to whether they have provided relevant citations and analyses to support the claim).

For these reasons, the EPA denies claims.<sup>42</sup>

## **V. EPA DETERMINATIONS ON ISSUES ORIGINALLY RAISED BY THE PETITIONERS ON MODIFIED PIG IRON AND DRI PERMITS FROM THE 2011 PETITION**

### **A. The EPA Must Object to the Title V Permit For the Pig Iron Process Because the Permit Fails to Apply MACT Standards for the Topgas Boilers**

These claims are addressed above. *See* Petitioners’ Claims and the EPA Response (deny) in Section IV.A.1, *supra* at 11-13. *See* 2011 Petition at 7; 2012 Petition, Att. C at 7; *Public Comment Response Summary, Part 70 Operating Permit 3086-VO and Prevention of Significant Deterioration (PSD) Permit PSD-LA-751, and Part 70 Operating Permit Modification 2560-0028-VI*, January 27, 2011, EDMS Document ID 7806737 (hereafter the “2011 RTC”), 2011 RTC at 8.

### **B. The EPA Must Reject the Permits Because LDEQ Failed to Include Emission Limits for PM<sub>2.5</sub>**

*Petitioners’ Claims.* The Petitioners contend that LDEQ failed to include limits for PM<sub>2.5</sub> emissions in either the title V permit for the pig iron process or the PSD permit for the DRI process and failed to provide an appropriate analysis for PM<sub>2.5</sub>. The Petitioners state that the EPA

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<sup>42</sup> In addition, with respect to the 2010 Petition as a whole, the EPA notes that the Petitioners have generally incorporated by reference comments offered by certain commenters during the public comment period into the 2010 Petition. 2010 Petition at 1. The EPA notes that the scope of the intended incorporation is not clear because the Petitioners state that they “incorporate by reference their comments” but several commenters are named in the preceding sentences, including Sierra Club and LEAN, to whom this reference could refer. *Id.* In addition, the mere incorporation of comments into the Petition, without any attempt to explain how these comments relate to the argument in the Petition and without any attempt to address the state’s final permitting decisions and the reasoning supporting those decisions, including any response to comments by the state, is not sufficient to meet the demonstration standard. *See MacClarence*, 596 F.3d at 1132-33; *see generally Nucor II Order* at 7 (discussing demonstration burden). The Petitioners do not assert that LDEQ failed to respond to the incorporated comments, nor do they point to any flaw in any of LDEQ’s responses. The EPA also notes that this Petition states that it “adopt[s] and incorporate[s] by reference, as if fully set forth herein, the comments, facts, and arguments set forth in the Petition for EPA Objection filed by Zen-Noh Grain Corporation on June 25, 2010.” 2010 Petition at 1, 4. To the extent that Petitioners have incorporated by reference Zen-Noh’s 2010 Petition, the EPA has already responded to that petition, granting an objection in the *Zen-Noh Order*, and LDEQ has issued a response to the EPA’s objection. Thus, the EPA need not further address Zen-Noh’s 2010 Petition in this Order.

must object to the title V permit for each plant for the failure to include such limits as they are applicable requirements for PSD. 2011 Petition at 8-9. The Petitioners state that LDEQ concluded that PM<sub>10</sub> is an adequate surrogate for PM<sub>2.5</sub>, but failed to provide a case-specific demonstration that the use of PM<sub>10</sub> as a surrogate is reasonable under the facts and circumstances of the permits. *Id.* at 9. The Petitioners explain that in 1997, the EPA set forth an interim policy that allowed permitting authorities to use PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> where it proved administratively impracticable to address PM<sub>2.5</sub> due to technical and information deficiencies, but that in 2008, the EPA announced that the technical difficulties has been largely resolved. *Id.* at 9. For support, Petitioners explain that in 2009, the EPA issued an order that permitted the continued use of the PM<sub>10</sub> surrogate policy where the permit applicant provided a case specific demonstration that such use is reasonable under the facts and circumstances of the case. *Id.* at 9 (citing *LG&E Order* at 42, 44. In order to use the PM<sub>10</sub> surrogate policy, the Petitioners explain that the demonstration must include: “(1) a showing of sufficient correlation between the plant’s PM<sub>10</sub> and PM<sub>2.5</sub> emissions so as to provide ‘confidence that the statutory requirements will be met for PM<sub>2.5</sub> using the controls selected through a PM<sub>10</sub> NSR analysis’ and (2) a showing ‘that the degree of control of PM<sub>2.5</sub> by the control technology selected in the PM<sub>10</sub> BACT analysis will be at least as effective as the technology that would have been selected of a BACT analysis specific to PM<sub>2.5</sub> had been considered.’” *Id.* (citing *LG&E Order* at 45). For additional support, the Petitioners cited to several court decisions addressing surrogacy, as well as statements by the EPA. *Id.* (citing *LG&E Order* at 42, 44; *National Lime Assoc. v. EPA*, 233 F.3d 625, 637 (D.C. Cir. 2000); *Mossville Envtl. Action Now v. EPA*, 370 F.3d 1232, 1242–43 (D.C. Cir. 2004); Letter from Stephen L. Johnson to Paul Cort (Jan. 14, 2009) at 3).

These claims were re-raised in the 2012 Petition, Att. C at 8-10.

*EPA’s Response.* For the reasons provided below, the EPA grants in part and denies in part these claims.

The EPA issued the first PM<sub>2.5</sub> NAAQS in a 1997 revision to the suite of particulate matter NAAQS. 62 *Fed. Reg.* 39852 (July 28, 1997). That same year, the EPA issued a memorandum outlining what came to be known as the PM<sub>10</sub> Surrogate Policy, wherein sources would be allowed to use implementation of a PM<sub>10</sub> program as a surrogate for meeting PM<sub>2.5</sub> NSR requirements until certain technical difficulties could be resolved. *See* Memo from J. Seitz to EPA Division Directors, *Interim Implementation for the New Source Review Requirements for PM<sub>2.5</sub>* (Oct. 23, 1997). In the PM<sub>2.5</sub> NSR Implementation Rule, the EPA acknowledged that many of the technical difficulties associated with implementing NSR for the PM<sub>2.5</sub> NAAQS had been largely resolved. *Id.* at 28, 340. However, in order to permit states sufficient time to adopt the revisions promulgated in the 2008 rule, the EPA explained that states with SIP-approved NSR permitting programs could continue to implement the PM<sub>10</sub> surrogate policy during the SIP development period. *Id.* at 28, 340-41.<sup>43</sup>

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<sup>43</sup> In May 2011, the EPA issued a final rule repealing the federal grandfathering provision that allowed sources permitted pursuant to the federal PSD program to rely on the PM<sub>10</sub> Surrogate Policy. 76 *Fed. Reg.* 28646. In the preamble to that rulemaking, the EPA also explained that “the 1997 PM<sub>10</sub> Surrogate Policy may not be used for any state PSD permits after the 3 years allowed for SIP development (ending May 16, 2011). With the end of the 1997 PM<sub>10</sub> Surrogate Policy in SIP-approved states on May 16, 2011, and the repeal of the grandfather provision in this final action, the 1997 PM<sub>10</sub> Surrogate Policy may not be relied on for any pending or future applications.” *Id.* at 28,648. The permits in this case were issued before the final repeal of the PM<sub>10</sub> Surrogate Policy.

The Petitioners correctly point out that the EPA issued guidance in 2009 in the *LG&E* Order which further clarified the use of the PM<sub>10</sub> Surrogate Policy. In that order, the EPA explained that “[a]pplicants and state permitting authorities seeking to rely on the PM<sub>10</sub> Surrogate Policy should consider [applicable court opinions regarding the use of surrogacy] in determining whether PM<sub>10</sub> serves as an adequate surrogate for meeting the PM<sub>2.5</sub> requirements in the case of the specific permit application at issue.” *LG&E* Order at 43. The EPA further explained its belief 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).” *Id.* The EPA concluded that the cases addressing PM surrogacy in particular “demonstrate the need for permit applicants and permitting authorities to determine whether PM<sub>10</sub> is a reasonable surrogate for PM<sub>2.5</sub> under the facts and circumstances of the specific permit at issue, and not proceed on a general presumption that PM<sub>10</sub> is always a reasonable surrogate for PM<sub>2.5</sub>.” *Id.* at 44.

The EPA continued by suggesting two steps that could be used as a possible approach to making an appropriate surrogacy demonstration for the use of PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub>. First, the EPA explained that the source or permitting authority should establish in the permit record a strong statistical relationship between PM<sub>10</sub> and PM<sub>2.5</sub> emissions from the proposed unit in order to demonstrate confidence that the statutory requirements will be met for PM<sub>2.5</sub> using the controls selected through a PM<sub>10</sub> analysis. *Id.* at 45. The EPA explained that this step should give reasonable consideration to “whether and how the PM<sub>2.5</sub>:PM<sub>10</sub> ratio may vary with source operating conditions, including variations in the fuel rate and in control equipment condition and operation.” *Id.* Second, the EPA explained that the source or permitting authority should demonstrate “that the degree of control of PM<sub>2.5</sub> by the control technology selected in the PM<sub>10</sub> BACT analysis will be at least as effective as the technology that would have been selected if a BACT analysis specific to PM<sub>2.5</sub> emissions had been conducted.” *Id.* The Petitioners correctly identified these factors, but they are incorrect to state that these factors are mandatory. Rather, the EPA explained that:

these two steps are not intended to be the exclusive list of possible demonstrations that a source or permitting authority would make to show that PM<sub>10</sub> is a reasonable surrogate for PM<sub>2.5</sub>. Sources and permitting authorities are encouraged to carefully consider the case law and the limits of the Surrogate Policy to determine what information and analysis would need to be included in the permit application and record before relying on the Surrogate Policy.

*Id.* at 46.

The Petitioners challenge the adequacy of the surrogacy demonstration made with respect to two different permits evaluated by LDEQ. The EPA will consider each permit in turn.

#### *The Modified Pig Iron Permit*

The EPA denies the Petitioners’ claims as to the modified title V permit for the pig iron process. The Petitioners’ objections as to this permit apply to provisions in the pre-existing pig iron title V permit that LDEQ did not change in the final modified title V permit. In particular, the BACT

analysis and surrogacy demonstration made as to the pig iron process are not related to the title V permit modification action. The EPA interprets its regulations to limit the scope of petitions to object in modification actions to issues that are directly related to the permit modification action. *See In the Matter of Wisconsin Public Service Corporation – Weston Generating Station*, Order responding to Petition number V-2006-4, 11-17 (Dec. 19, 2007) (“*Weston Order*”). Because the Petitioners’ petition on this claim is not directly related to the permit modification action, the EPA denies the petition on this issue. As the EPA explained in the *Weston Order*, the EPA interprets its Title V regulations at 40 C.F.R. Part 70 to limit petitions on significant modifications to issues directly related to those modifications. *Id.* “Therefore, in evaluating a petition objecting to a significant modification permit, EPA will determine based on the facts whether the issues raised by the petitioner are directly related to the permit modification action.” *Id.* at 17.

In this case, the record shows that the final modified title V permit for the pig iron process did not include any changes to the requirements for PM<sub>2.5</sub> or PM<sub>10</sub> contained in the NSR permit previously issued by LDEQ. Rather, in the modified title V permit, some units were eliminated entirely; permitted rates were changed for others to reflect (a) the elimination of those units, (b) changes in material throughput from the addition of the DRI units, and (c) the addition of SCR; and some units were transferred to the DRI permit. *See* modified pig iron title V permit, (Air Permit Briefing Sheet at 3). LDEQ explained in response to comments, its view that the modified title V permit reflects a significant decrease in PM<sub>10</sub> and PM<sub>2.5</sub> emissions, and did not propose new physical changes or changes in the method of operation of the pig iron process. 2011 RTC at 53; *see also* modified pig iron title V permit, (Air Permit Briefing Sheet at 3). Thus, in this permit modification, LDEQ did not revisit the BACT analysis and the surrogacy demonstration conducted for PM<sub>10</sub> and PM<sub>2.5</sub> in the previously-issued NSR permit. Accordingly, the Petitioners’ objection is not directly related to the modified title V permit.

In their petition, the Petitioners contend the modified title V permit for the pig iron process did not include PM<sub>2.5</sub> emission limits, but did not explain how this issue directly relates to the permit modification action. Therefore, the Petitioners have failed to demonstrate that this claim is appropriately raised at this time, and the EPA therefore denies these claims.

#### *The DRI Permit*

The EPA grants the Petitioners’ claims as to the title V permit for the DRI process. The final permit contains an analysis of the appropriate control technology for both PM<sub>2.5</sub> and PM<sub>10</sub>. However, the emissions limits derived from this analysis are expressed only in terms of PM<sub>10</sub>. We note that Petitioners are not challenging the choice of control technology; rather, their claim is that the permit should also contain limits expressed in terms of PM<sub>2.5</sub> emissions. We are granting this claim because LDEQ has neither included PM<sub>2.5</sub> BACT emissions limits in the DRI permits nor provided a reasonable explanation for the use of the PM<sub>10</sub> emission limits as surrogates for compliance with PM<sub>2.5</sub> requirements.

As an initial matter, the EPA is unable to discern from the permitting record whether or not LDEQ intended to rely upon the PM<sub>10</sub> Surrogate Policy in the final DRI PSD permit. At one point in the permitting record, LDEQ acknowledged that the *LG&E Order* stated that, in order to

use the PM<sub>10</sub> Surrogate Policy, permit applicants and permit authorities should determine whether PM<sub>10</sub> is a reasonable surrogate for PM<sub>2.5</sub> under the specific facts and circumstances of the permitting action. *See Basis for Decision, Part 70 Operating Permit No. 3086-VO and Prevention of Significant Deterioration Permit No. PSD-LA-751*, EDMS Document ID 7806731, (January 27, 2011)(hereafter “2011 Basis for Decision”) at 15. LDEQ then stated that it had “addressed PM<sub>2.5</sub> emissions directly by determining the best available control technology for PM<sub>2.5</sub> and determining the proposed source’s impact on currently monitored PM<sub>2.5</sub> concentrations in relation to the current PM<sub>2.5</sub> NAAQS.” *Id.* This might suggest that LDEQ determined that it would not use the PM<sub>10</sub> Surrogate Policy in the final permit but instead address BACT for PM<sub>2.5</sub> directly. However, at another point in the permitting record LDEQ stated that “the PM<sub>10</sub> Surrogate Policy has been used to address PM<sub>2.5</sub> emissions” and that “additional research was performed in order to address BACT for PM<sub>2.5</sub>.” *See* DRI PSD permit at 12. LDEQ does not further describe this additional research or its role in the BACT analysis that followed.

The EPA commented on the draft title V and PSD permits, noting that “LDEQ’s record should justify why PM<sub>10</sub> is an adequate surrogate for PM<sub>2.5</sub> in this case.” 2011 RTC at 55-56. In response, LDEQ noted that “Nucor provided a top-down BACT analysis for PM<sub>2.5</sub> and the requisite modeling analyses to demonstrate that the facility’s emissions will not result in violations of the annual and 24-hour PM<sub>2.5</sub> NAAQS. As discussed during LDEQ’s conference call with EPA on December 14, 2010, LDEQ has agreed to include PM<sub>2.5</sub> limitations in the final permits.” *Id.* Accordingly, LDEQ’s response suggests that it did not intend to rely on the PM<sub>10</sub> Surrogate Policy in the final permit but that it would instead include PM<sub>2.5</sub> BACT emission limits.

The record demonstrates that Nucor conducted separate top-down BACT analyses for each unit at the DRI process for both PM<sub>10</sub> and PM<sub>2.5</sub>. *See* the permit application for the pig iron process, *Nucor Steel Louisiana Direct Iron Reduction Facility Part 70 Initial Permit and Authorization to Construct and PSD Permit Application*, Section 3.0 (August 2010)(EDMS Document ID 6952414). The state concluded in these analyses that the same control technology was appropriate for both PM<sub>10</sub> and PM<sub>2.5</sub> at each unit. *See id.* LDEQ subsequently conducted a combined BACT analysis for both PM<sub>10</sub> and PM<sub>2.5</sub> for each unit that resulted in the same conclusions regarding the appropriate BACT technology for each unit. *See* the DRI PSD permit (Preliminary Determination Summary) at 11-72; Specific Conditions at 76-78. The Petitioners have not raised specific objections to the BACT technology chosen for each unit as a result of these analyses. However, the EPA agrees with the Petitioners that the BACT emission limits associated with these units only address PM<sub>10</sub> as there are no emission limits listed for PM<sub>2.5</sub>. *See* Specific Conditions at 79-80.

Section 165(a)(4) of the CAA prohibits construction of a new or modified major source unless it “is subject to the best available control technology for each pollutant subject to regulation under the” Act. The Act further defines “best available control technology” in relevant part to mean an “emission limitation based on the maximum degree of reduction of each pollutant subject to regulation under the” Act which is emitted from the source. CAA § 169(3). Thus, in order to satisfy the statutory requirement, it is not sufficient for LDEQ to only identify the appropriate BACT technology for each pollutant. Rather, the permitting agency must also determine the appropriate emission limitation for each pollutant that would constitute BACT, including

emission limitations for both PM<sub>10</sub> and PM<sub>2.5</sub>.<sup>44</sup> As explained in the *LG&E Order*, a permitting authority may only use the PM<sub>10</sub> BACT determination to satisfy the PM<sub>2.5</sub> requirements if an appropriate surrogacy demonstration has been made.

If LDEQ does not include a BACT emission limitation for PM<sub>2.5</sub> as required by the statute, LDEQ must provide a reasonable surrogacy demonstration. However, the EPA was unable to identify such a demonstration in the record. The record does not contain a specific discussion that is described as LDEQ's basis for concluding that PM<sub>10</sub> is an adequate surrogate for PM<sub>2.5</sub> in the context of this particular permit. The record explains that the EPA has allowed states to continue using PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub>, but does not appear to explain why it is appropriate to use PM<sub>10</sub> as a surrogate for PM<sub>2.5</sub> in this case at this facility. The record does seem to reflect one element of the surrogacy demonstration that the EPA recommended in the *LG&E Order*. Nucor conducted a top-down BACT analysis for PM<sub>2.5</sub> that showed the control technology selected through the PM<sub>10</sub> BACT analysis is "physically the same as what is selected through the PM<sub>2.5</sub> BACT analysis." See, *LG&E Order* at 45. However, the permitting record contains no further discussion of the relationship between PM<sub>10</sub> and PM<sub>2.5</sub> emissions from the DRI process such as whether and how the PM<sub>2.5</sub>:PM<sub>10</sub> ratio may vary with source operating conditions at each unit. While LDEQ asserts, for example, that "[c]ompliance with the limit for PM is deemed compliance with the BACT limit for both PM, PM<sub>10</sub>, and PM<sub>2.5</sub>," 2011 RTC at 92-94,<sup>45</sup> such statements are conclusory without further explanation regarding the relationship between PM<sub>10</sub> and PM<sub>2.5</sub> emissions at the DRI process. There is no other explanation as to why PM<sub>10</sub> would serve as an adequate surrogate for PM<sub>2.5</sub> in this case.

For the foregoing reasons, the EPA grants the Petitioners' claims as to the DRI title V permit. The EPA directs LDEQ to either include PM<sub>2.5</sub> BACT emission limitations or provide an appropriate demonstration, consistent with court decisions referenced in the *LG&E order* that PM<sub>10</sub> is a reasonable surrogate for PM<sub>2.5</sub> under the facts and circumstances of this permit.

### **C. The Limit For Natural Gas Consumption Is Not the BACT for GHG Emissions from the DRI Process**

*Petitioners' Claims.* The Petitioners contend that neither LDEQ's DRI PSD permit nor Nucor's GHG BACT analyses contain any documentation for certain statements in Step 4 of the BACT analysis (including the conclusions that natural gas consumption is the most relevant parameter that can be measured and that minimization of natural gas consumed is the most effective means

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<sup>44</sup> In response to several comments, LDEQ disagrees with a commenter's assertion that "the permits are insufficient because LDEQ must establish BACT for every pollutant and that PM<sub>10</sub> and PM<sub>2.5</sub> are separate pollutants." See, e.g., 2011 RTC at 91-92. LDEQ continues to explain that "[t]he commenter is in error. The pollutant is particulate matter; PM<sub>10</sub> and PM<sub>2.5</sub> are merely indicators of the pollutant." *Id.* (citing *Prairie State*. While the *Prairie State* order does explain that PM<sub>10</sub> and PM<sub>2.5</sub> are both indicators of particulate matter, the EPA does not agree to the extent LDEQ suggests that this fact absolves the permitting authority of the requirement to set emission limitations for both indicators. The PSD BACT requirement applies to "each regulated NSR pollutant." 40 C.F.R. § 51.166(j)(2). Under the EPA's regulations, PM<sub>2.5</sub> and PM<sub>10</sub> are separate regulated NSR pollutants. 40 C.F.R. § 51.166(b)(49)(i); 73 *Fed. Reg.* 28321, 28324 (May 16, 2008) ("this action addresses PM<sub>2.5</sub> as a regulated NSR pollutant"); 75 *Fed. Reg.* 64864, 64871 (Oct. 20, 2010) ("the promulgation of a NAAQS for PM<sub>2.5</sub> established a NAAQS for an additional pollutant"); *LG&E Order* at 42-46.

<sup>45</sup> In response to the comment, LDEQ does not explain where in the permit it is stated that compliance with the BACT limit applies to both PM<sub>10</sub> and PM<sub>2.5</sub> and the EPA is unable to locate such a condition.

of reducing GHG generation). 2011 Petition at 11 (quoting statements from the BACT analysis in the proposed DRI PSD permit that was provided in the public notice in advance of the public hearing (citing EDMS Doc. ID 7731649<sup>46</sup>, p. 107)). The Petitioners further contend that neither the PSD permit nor Nucor's GHG BACT analysis contain any documentation for the conclusion that the limit selected (13 MMBtu/tonne<sup>47</sup> DRI produced) is BACT. *Id.* at 11, 12.<sup>48</sup>

The Petitioners further claim that the GHG BACT determination is inadequate for several reasons, including that the PSD Permit incorrectly identifies this limit not for the entire facility but rather for the Reformer/Main Flue Gas Stack (DRI 108) in Train #1 of the DRI process and that the Title V Permit fails to state that this is a BACT limitation for GHG. *Id.* at 11–12.<sup>49</sup>

These claims were re-raised in the 2012 Petition, Att. C at 11-12.

*EPA's Response.* For the reasons explained below, the EPA denies these claims. Issues raised under the Petition headings Claim IV.A and Claim IV.B of the 2011 Petition and Attachment C of the 2012 Petition are addressed below.

In response to concerns raised in public comments about the amount of documentation in the record, LDEQ explained that “limited data is currently available regarding control of greenhouse gases.” 2011 RTC at 25. LDEQ explained that the EPA's GHG Permitting Guidance was released after Nucor submitted its DRI GHG BACT analysis on October 22, 2010, and that LDEQ's review of Nucor's submittal occurred in large part without the benefit of that guidance. *Id.* LDEQ further noted that the EPA's technical white paper for the iron and steel industry on control techniques or measures to reduce GHG emissions does not address such controls or measures for facilities that produce DRI, except as an emerging technology. *Id.* LDEQ also stated that the iron and steel sector is not addressed in the EPA's Greenhouse Gas Mitigation Strategies Database, nor are relevant data included in the EPA's RACT/BACT/LAER Clearinghouse. *Id.* Elsewhere in the response to comments, LDEQ notes that its GHG BACT limit is “likely the first of its kind.” 2011 RTC at 35.

The Petitioners do not acknowledge or address LDEQ's response explaining the limitations in the available data for documentation. *See, e.g., Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments, citing *MacClarence*, 596 F.3d at 1132-34). Moreover, Nucor submitted an addendum to its DRI permit application to support its GHG BACT analysis. *See Nucor's Direct Reduced*

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<sup>46</sup> EDMS Document ID 7731649 is identified as “Material associated with the proposed permit for Public Review; Nucor -DRI Permit #3086-VO & PSD-LA-751 (November 24, 2010)(hereafter “Public Hearing Materials”).

<sup>47</sup> “MMBtu/ tonne” means one million British thermal units per metric ton. A metric ton is about 2,204.6 pounds.

<sup>48</sup> Although part of this claim is presented under Claim IV.A, it is related to issues raised under Claim IV concerning documentation of conclusions underlying the BACT determination, so we are addressing these claims together here.

<sup>49</sup> In addition to these allegations, two other problems with the GHG BACT determination are briefly asserted in this claim: (1) the limit for natural gas consumption for DRI production is considerably higher than reported in the literature; (2) this limit is not supported by the values for natural gas consumption used by Nucor for calculation of criteria pollutant emissions from the DRI facility. 2011 Petition at 12. The Petitioners provide further argument and elaboration of the first point under Petition heading of Claim IV.A and, thus, that point is addressed as part of the discussion of that claim below. Similarly, the Petitioners provide further argument and elaboration of the second point under the Petition heading of Claim IV.B and, thus, that point is addressed as part of the discussion of that claim below.

*Facility GHG BACT Analysis*, October 22, 2011, EDMS Document ID 7718227. LDEQ also set forth reasoning to support the GHG BACT determination in the permit record for the PSD permit, including in the Preliminary Determination Summary and in the RTC, and the limits are included in the final permits, along with a statement that this limit reflects BACT for GHG carbon dioxide equivalent (CO<sub>2</sub>e) emissions, as explained below. See DRI title V permit, at 32 (Specific Requirements 380, 383-384, 386-387); *see also* DRI PSD permit at 47-50, 80. This claim does not provide any explanation of why additional documentation would be needed to support LDEQ's GHG BACT determination or analysis. The Petitioners have not demonstrated that the quoted statements in the BACT analysis lack a reasoned basis or are clearly incorrect. Thus, with respect to the documentation provided for the GHG BACT limit, the Petitioners have not shown LDEQ failed to comply with its SIP-approved regulations governing PSD permitting or that the state's exercise of discretion under such regulations was unreasonable or arbitrary. *See, e.g., 2012 Cash Creek Order* at 4-5.

The Petitioners contend that the PSD Permit incorrectly identifies the GHG BACT limit not for the entire facility but rather for the Reformer/Main Flue Gas Stack (DRI 108) in Train #1 of the DRI process. 2011 Petition at 12. LDEQ's Response to Comments agrees that the BACT limit would be more appropriately attributed to the entire facility and that the "permit will be modified accordingly." 2011 RTC at 38 (referenced by 2011 RTC at 31, which responds to the comment raising the specific claim in the Petition). In the Specific Requirements of the final DRI title V permit, the GHG BACT limit no longer appeared under the requirements for DRI Unit No. 1 Reformer Main Flue Gas Stack (DRI 108), but instead appeared under requirements for the "DRI Facility - Direct Reduction Iron Facility" (unit UNF 0002). DRI title V permit, Specific Requirement 384, at 32 (placing the GHG BACT limit under UNF 0002); *see also id.*, Specific Requirements 380, 383, 386-387 at 32-33 (GHG BACT recordkeeping and monitoring requirements under UNF-002); *compare* Specific Requirements 90-105 at 8-9 (requirements for DRI 108). This change is reflected in a later modification of the DRI PSD permit, *see* Permit No. PSD-LA-751(M-1), Specific Requirement 229, as well as a later modification of the DRI title V permit, *see* Permit No. 3086-V2, Specific Requirement 444. Thus, this point is moot. *See Chevron Order* at 6 (denying title V petition as moot where the permit had been corrected). Moreover, the Petitioners do not acknowledge or reply to LDEQ's response and these changes to the permits, nor do they provide any explanation why these changes would not address their concerns. *See, e.g., Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments, citing *MacClarence*, 596 F.3d at 1132-34).

The Petitioners contend that the title V permit fails to state that the limit is a BACT limit for GHG but provide no additional detail or explanation for this point. 2011 Petition at 12. In the 2011 RTC, LDEQ explained that it was apparent that the limit was established to limit GHG (CO<sub>2</sub>e) emissions when the BACT limit in the proposed title V permit was read with the PSD permit, but additionally stated that the final title V permit would note this fact. 2011 RTC at 32. Specific Requirement 384 of the final DRI title V permit states: "BACT for greenhouse gas (CO<sub>2</sub>e) emissions: Limit Natural gas <= 13 MM BTU (HHV) per tonne of Direct Reduced Iron (DRI) produced." *See* DRI title V permit, Permit No. 3086-V0, Specific Requirement 384, at 32; *see also id.*, Specific Requirements 380, 383, 386-387 at 32-33 (recordkeeping and monitoring requirements labeled as "BACT for greenhouse gas (CO<sub>2</sub>e) emissions"). Thus, this point is

moot based on the changes that LDEQ made to the final title V permit. *See Chevron Order* at 6 (denying title V petition as moot where the permit had been corrected). Furthermore, the Petitioners do not acknowledge or reply to LDEQ's response and these changes to the permit, nor do they provide any explanation why these changes would not address their concerns. *See, e.g., Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments, citing *MacClarence*, 596 F.3d at 1132-34).

For these reasons and for the reasons described in the discussion that follows, the EPA hereby denies these claims.

### **1. Lower Natural Gas Consumption for DRI Production Is Reported in the Literature**

*Petitioners' Claims.* The Petitioners challenge the GHG BACT limit of 13 MMBtu per tonne DRI produced, claiming that lower values for natural gas consumption are reported in the literature for other DRI facilities and other DRI production processes. 2011 Petition at 12. The Petitioners include a table summarizing reported values for natural gas consumption and electricity consumption (where available) for two other DRI facilities (one in the US and one in Australia) and for other DRI processes, and contend that Nucor's value of 13 MMBtu per tonne DRI produced is considerably higher than these reported values, which range from 7.3 to 11.55 MMBtu per tonne DRI produced. *Id.* at 12-13. The Petitioners contend that the Essar Minnesota Steel facility, which was then under construction and expected to be operational in 2012, is estimated to have a natural gas consumption value of 7.3 to 8.2 MMBtu per tonne DRI. *Id.* at 14. The Petition states that this facility was to be the first fully-integrated mine through steel-making facility in North America and its DRI production would be 56 percent of Nucor's proposed DRI process. *Id.* The Petitioners conclude that 13 MMBtu per tonne of DRI is clearly not BACT. *Id.*

These claims were re-raised in the 2012 Petition, Att. C at 12-14.

*EPA's Response.* For the reasons explained below, the EPA denies these claims.

The Petitioners have not demonstrated that LDEQ's BACT analysis lacked a reasoned basis or was flawed. LDEQ's response to comments explained that the Petitioners' comments on this point did not provide enough information to determine if the process-specific natural gas consumption rates were comparable to Nucor's. 2011 RTC at 34. LDEQ notes that natural gas consumption increases with increasing metallization and carbon content of the product, and that it could not assess from the information submitted whether products of the same metallization and carbon content were being compared. *Id.* LDEQ additionally notes that the references cited do not substantiate that the performance claims are achievable over extended periods and appear to exclude startup, shutdown and off-spec production. *Id.* Also, LDEQ notes that it is not clear if the natural gas combustion rates are based on higher or lower heating value (generally a 10 percent difference), and that Nucor uses higher heating value. *Id.* In addition, LDEQ quoted statements from the EAB reflecting that a permitting authority has some discretion in determining whether a particular control efficiency provides an appropriate basis for a BACT determination and emission limitation, and to consider factors such as whether the technology is

relatively unproven or whether the available data demonstrate whether the emission rate at issue has been achieved over the long term. *Id.* at 34-35 (quoting *In re Newmont Nev. Energy Inv., LLC*, 12 E.A.D. 429, 442 (EAB 2005)).

The Petitioners do not acknowledge or address LDEQ's response to comments. *See, e.g., Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments, citing *MacClarence*, 596 F.3d at 1132-34). For example, the Petitioners have not responded to LDEQ's point that the comment did not provide sufficient information to determine if the values for natural gas consumption were comparable to the value used for Nucor's on material parameters.

In addition, the Petitioners' claim disregards the fact that BACT determinations are case-by-case, site-specific determinations. *See* CAA § 169(3); L.A.C. 33:III.509.B (definition of "Best Available Control Technology"). As noted by LDEQ, the EPA has long recognized that permitting authorities "retain 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.'" *In Re Pio Pico Energy Center*, PSD Appeal Nos. 12-04 through 12-06, Slip. Op. at 78 (Aug. 2, 2013) (quoting *In re Newmont Nev. Energy Inv., LLC*, 12 E.A.D. 429, 442 (EAB 2005)). Thus, the mere fact that a lower value for natural gas consumption has been calculated and reported for another facility or another type of DRI process in the literature does not establish that LDEQ lacked a reasoned basis in establishing an enforceable emissions limit that must be met on a continuous basis for Nucor as it did. The Petitioners do not demonstrate that the "lower values" reported in literature for these facilities were enforceable emissions limitations imposed by a permit or other legal requirement. The Petitioners have not provided any analysis to demonstrate that the reported levels they cite from the literature were achievable on a consistent basis by the facilities in question. Nor have they provided any analysis to demonstrate that these levels would be appropriate for Nucor and achievable on a continuous basis at the facility at issue here. *See Spurlock Order* at 21 (denying title V petition claim challenging a BACT determination where the petitioner provided examples of lower limits established at similar sources throughout the country but failed to provide any analysis to demonstrate that these BACT limits were appropriate for the particular unit at issue in the petition). Thus, the Petitioners have failed to establish that LDEQ's GHG BACT determination lacked a reasoned basis, or is otherwise not in compliance with the applicable CAA requirements. *Id.*

For these reasons, the EPA hereby denies these claims.

## **2. The Sum of Values for Natural Gas Consumption Used by Nucor for Calculation of Criteria Pollutant Emissions From the DRI Process is Less Than Half the BACT Limit**

*Petitioners' Claims.* The Petitioners contend that the GHG BACT limit should be lower than the limit LDEQ imposed of 13 MMBtu per tonne DRI produced. 2011 Petition at 16. In support of this contention, the Petitioners present calculations that they claim show that "natural gas consumption on a per unit basis" for the DRI process is lower than 13 MMBtu per tonne DRI. *Id.* Those calculations appear to be based on multiplying the maximum (average) firing rates that

Nucor used for a number of emissions units in its calculations for criteria pollutant emissions by the maximum annual hours of operation for those units, using these figures to estimate total annual gas consumption for the DRI process, and then dividing that total by the maximum annual production of DRI. *Id.* 15-16. The Petitioners contend that according to those calculations, “unless there are other major natural gas-consuming processes that the permits did not disclose, BACT for natural gas consumption as a parameter for GHG emissions for the facility is 6.0 MMBtu/tonne of DRI.” *Id.* at 16.

Noting LDEQ’s statement in the RTC that the Petitioners’ calculations, which were also provided during the comment period, did not account for the generation of reducing gas, the Petitioners state that LDEQ failed to “provide an estimate of how much reducing gas is required to determine the total natural gas consumption.” *Id.* at 16. The Petitioners also claim that based on information from MIDREX typical natural gas consumption would range from 9.3 MMBtu per tonne of DRI at the lower end of metallization and carbon content to 10.6 MMBtu per tonne of DRI at the higher end of metallization and carbon content. *Id.* The Petitioners state that these values are on the same order of magnitude discussed in the Petitioners’ comments and far below the natural gas consumption of 13 MMBtu per tonne DRI with unspecified metallization and carbon content. *Id.* Finally, the Petitioners contend that the GHG BACT limit of the 13 MMBtu per tonne DRI is not supported, *id.* at 16, and that “LDEQ must provide product and raw material specifications backed by vendor information and demonstrate how it derived the 13 MMBtu/tonne DRI natural gas consumption figure.” *Id.* at 17.

The claims were re-raised in the 2012 Petition, Att. C at 15-17.

*EPA’s Response.* For the reasons explained below, the EPA denies these claims.

In response to the Petitioners’ calculations and estimates presented during the comment period to argue that the GHG BACT limit should be 6.0 MMBtu per tonne of DRI, LDEQ responded that the comment did not “account[] for the fact that natural gas is not only used as a fuel, but also to generate reducing gas.” 2011 RTC at 36. LDEQ further explained that at high temperatures natural gas dissociates into a reducing gas rich in CO and hydrogen, which are the primary reductants for the DRI process. *Id.*

LDEQ’s Response to Comments provides an explanation for why the Petitioners’ estimate of natural gas consumption of 6.0 MMBtu per tonne DRI in the comments was different from the level imposed as BACT—that natural gas is consumed to generate reducing gas, in addition to firing combustion sources to produce process heat. *Id.*; *see also* the DRI PSD Permit, at 9 (“Reducing gas is generated initially from natural gas, which is heated and reformed in the reformer at an elevated temperature.”). In responding to LDEQ’s points, the Petitioners do not show that the calculations supporting their estimate include natural gas used to generate reducing gas. Thus, the Petitioners have not shown that their calculations or estimates include all the natural gas included in LDEQ’s value. *See, e.g.*, the DRI PSD permit, at 50 (“natural gas is consumed in the DRI process as both a raw material (for the formation of reducing gas) and as a fuel (for heating to reaction temperatures). All sources of natural gas consumption at the Reformer should be included in the analysis.”). Instead, the Petitioners provide additional estimates of typical natural gas consumption based on information from MIDREX, a vendor of

DRI units, which are substantially higher than the 6.0 MMBtu per tonne DRI estimate and which are more in the range of the value used by LDEQ. Also, to the extent that the Petitioners intended to contend that the GHG BACT limit must be directly related to emissions of GHG or criteria pollutant at Nucor, the EPA notes that the BACT limit for GHG at Nucor is an energy efficiency limit based on MMBtu/ tonne of DRI produced for which compliance can be assured without calculating the emissions of either GHG or criteria pollutants (instead compliance is determined based on records of actual natural gas consumption and tonnes of DRI produced). DRI title V permit, Specific Requirement 387, at 33.

With respect to the Petitioners' contention that LDEQ must provide additional product and material specifications and demonstrate how it derived the 13 MMBtu per tonne DRI natural gas consumption figure, the Petitioners' appear more focused on forwarding their calculations than demonstrating that LDEQ's evaluation was flawed. The Petitioners have not identified or analyzed any statutory or regulatory provision, nor any guidance, to support their contention that the information they identified must be provided, in addition to the explanation LDEQ provided in the record. *See, e.g., Nucor II Order* at 7 (explaining that the EPA has looked at whether title V petitioners have provided the relevant citations and analyses to support its claim in determining whether it has a duty to object under CAA § 505(b)(2)). In addition, LDEQ also explained in response to comments concerning the amount of documentation for the GHG BACT limit in the record that there was at the time limited data concerning control of greenhouse gas emissions, including techniques to reduce GHG emissions from facilities that produce DRI. *See* 2011 RTC at 24-25. This claim of the Petition does not acknowledge or address that point in LDEQ's response. *See, e.g., Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments, citing *MacClarence*, 596 F.3d at 1132-34). The Petitioners have not shown LDEQ failed to comply with its SIP-approved regulations governing PSD permitting or that the state's exercise of discretion under such regulations was unreasonable or arbitrary. *See, e.g., 2012 Cash Creek Order* at 4-5.

In sum, the Petitioners have not demonstrated that LDEQ's GHG BACT determination lacked a reasoned basis, or is otherwise not in compliance with the applicable CAA requirements. *See, supra*, at 5, "Raising PSD Issues in a Petition." For these reasons, the EPA hereby denies these claims.

#### **D. The Permits Must Specify Procedures for Estimating GHGs**

*Petitioners' Claims.* The Petitioners claim that "[t]he PSD permit must clearly specify the procedure for making the mass balance calculation for carbon in the DRI production process." 2011 Petition at 17 (citing the EPA's *Review of Proposed Title V Permits for Florida Power & Light* (1997), Enclosure 3, at 2) (*Florida Power & Light Letter*). The Petitioners further allege that Specific Requirement #82 in the proposed DRI part 70 permit provided in the public notice requires calculating DRI production rates and natural gas consumption using the provisions of both Subpart C and Subpart Q from the GHG Mandatory Reporting Rule, and that the provision is inadequate, asserting that Subpart Q "does not provide a calculation procedure for DRI production and the reference is therefore moot." *Id.* at 17 (citing Specific Requirements #81 and #82 in EDMS Document ID 7731649 (hereafter "Public Hearing Materials")). The Petitioners

conclude that the “EPA must require LDEQ to develop a calculation procedure for DRI production and present it for public review.” *Id.*

The Petitioners additionally contend that this calculation should account for the considerable variation in pipeline-grade natural gas for carbon content and heating values, as well as CO<sub>2</sub>-fuel efficiency coefficients. *Id.* at 17-18 (citing Energy Information Administration, *Emissions of Greenhouse Gases in the United States 1987–2002*, Fig. A-1; U.S. Dep’t of Energy, Voluntary Reporting of Greenhouse Gases Program, Fuel Emission Coefficients). Therefore, the Petitioners assert that Nucor should use “facility-specific values for carbon content and heating value” to determine GHG emissions from natural gas combustion wherever possible. *Id.* at 18. The Petitioners claim that such information should be available from suppliers of the fuel or Material Data Safety Sheets for the purchased fuel, and should be confirmed with fuel analysis. *Id.*

With respect to LDEQ’s response to comments, the Petitioners assert that the LDEQ’s response did not lay out the procedure for estimating GHG emissions or specify the CO<sub>2</sub>-fuel efficiency coefficient for pipeline natural gas, as discussed in Petitioners’ comments. *Id.* at 18–19.

These claims were re-raised in the 2012 Petition, Att. C at 17-19.

*EPA’s Response.* For the reasons explained below, the EPA denies these claims.

LDEQ’s response to comments explained that the monitoring provisions associated with the BACT limit did not require quantification of CO<sub>2</sub> emissions from the facility, and that, therefore, performing a mass balance calculation and monitoring parameters such as carbon content of the natural gas and DRI product is not necessary. 2011 RTC at 35-38 (cited by 2011 RTC at 38-39, which reflects LDEQ’s response to the comment raising the issues in this claim). It additionally stated that the only necessary parameters to monitor compliance with the 13 MMBtu/tonne DRI BACT limit were the amount of natural gas consumed by the process, including its heating value, and the amount of DRI product produced. *Id.* LDEQ also explained that requiring quantification of CO<sub>2</sub> emissions from the facility is the role of the GHG Reporting Rule under 40 C.F.R. 98. *Id.* LDEQ additionally stated in the response to comments that it was deleting Specific Requirements 82 and 235 from the proposed permit and replacing them with requirements for: (1) monitoring the total DRI natural gas and energy consumption, (2) recordkeeping of total DRI natural gas and energy consumption, (3) recordkeeping of total DRI production, and (4) determining compliance with the GHG BACT limit. *Id.*

Although the Petitioners state that LDEQ’s response “does not lay out a procedure for estimating GHG emissions,” the Petitioners do not address LDEQ’s point in the response to comments that such a procedure is not required to determine compliance with the GHG BACT limit, which is expressed in terms of MMBtu/tonne DRI. The only citation that the Petition provides for the assertion that a procedure for calculating carbon is required is a letter from the EPA Region 4 objecting to title V permits issued to Florida Power and Light. *Florida Power & Light Letter*, Enc. 3 at 2. In this letter, the EPA Region 4 stated that a particular condition in the permit must be revised to specify the procedure for calculating the sulfur content of the oil where there was ambiguity in the permit language that could allow for two different methods of determining compliance with the annual average sulfur content limit, one of which was not appropriate for

showing the limit would be met. The Petitioners do not provide any explanation of why Nucor's GHG BACT limit, which is based on MMBtu/tonne DRI, would merit analogous treatment as the permit condition in Florida Power & Light's permit, which limited the weight percent of sulfur in oil. *See id.* The Petition does not provide any other legal citation or analysis to support the assertion that a procedure for estimating GHG emissions was needed; nor do the Petitioners provide any explanation as to why LDEQ's statements in the response to comments are unreasonable or how the permit fails to comply with the Act. *See, e.g., Nucor II Order* at 7 (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments, citing *MacClarence*, 596 F.3d at 1132-34, and has looked to whether they have provided relevant citations and analyses to support the claim).

The Petitioners also do not address the changes that LDEQ made to the permit. For example, Specific Requirement 82 in the proposed DRI title V permit required Nucor to track DRI production and natural gas consumption "using a mass balance approach similar to Subpart Q for iron and steelmaking from the promulgated Mandatory Reporting of Greenhouse Gases rule." Public Hearing Materials at 37-38. LDEQ deleted that specific requirement, however, and replaced it with other requirements for monitoring, recordkeeping, and compliance demonstration. *See* DRI title V permit, DRI title V permit, Specific Requirements at pp. 7-8 (reflecting deletion of requirement to use an approach similar to Subpart Q), and pp.32-33 (reflecting addition of new requirements); *see also* 2011 RTC at 39. To the extent that the Petitioners believed that a mass balance calculation or other procedure for estimating GHG emissions was needed because of Specific Requirement 82 as it appeared in the proposed DRI title V permit, any such argument would be moot because that provision and its requirements were removed from the final DRI title V permit. For the same reason, the Petitioners' arguments relating to the inadequacies of Specific Requirement 82 and referring to Subpart Q are also moot. In addition, the Petitioners do not acknowledge or address the changes that LDEQ made to the permit or reply to LDEQ's explanation in the 2011 RTC of the permit changes it had made. *See, e.g., Nucor II Order* (explaining that the EPA expects title V petitioners to engage with the state's final decision, including response to comments, citing *MacClarence*, 596 F.3d at 1132-34).

With respect to the CO<sub>2</sub> fuel efficiency coefficients, both the Petition and the comments submitted on behalf of the Petitioners stated that facility specific values for carbon content and heating value should be used to determine GHG emissions because CO<sub>2</sub> fuel efficiency coefficients vary for pipeline natural gas. 2011 Petition at 18; *Comments on the Draft PSD Permit and Draft Title V Permit Best Available Control Technology Analyses for Greenhouse Gas Emissions for the Nucor Direct Reduced Iron Facility and Pig Iron Facility*, Submitted by Pless Environmental, Inc. via the Tulane Environmental Law Clinic (Jan. 3, 2011)(EDMS Document ID 7781475)(hereafter "2011 Pless Comments") at 23-24. The 2011 Petition also contends that LDEQ's response to comments "does not specify the CO<sub>2</sub> fuel efficiency coefficient for pipeline natural gas, as discussed in Petitioners' comments." 2011 Petition at 19. The Petitioners' comments, however, do not state that a CO<sub>2</sub> fuel efficiency coefficient should be established for pipeline natural gas. *See 2011 Pless Comments* at 23-24.<sup>50</sup> The discussion in the

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<sup>50</sup> The Petition does not cite or identify any particular discussion in the Petitioners' comments to support the claim; however, the discussion of CO<sub>2</sub> efficiency limits on p. 24 of the 2011 Pless Comments appears to be the intended discussion because it appears identical to the discussion originally presented in the 2011 Petition and because it is

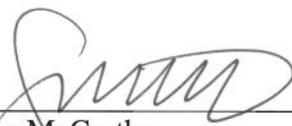
2011 Petition and the comments of the CO<sub>2</sub> fuel efficiency coefficients is in the context of determining GHG emissions, and neither document provides any other reason why such a coefficient would be needed. *Id.* As explained above, the Petitioners have not demonstrated that quantification of GHG emissions was required in order to assure compliance with the GHG BACT limit, expressed in terms of MMBtu/tonne DRI, and have not identified or analyzed anything that would have required LDEQ to establish a procedure for estimating GHG emissions. *See, e.g., Nucor II Order* at 7 (explaining that the EPA has looked at whether title V petitioners have provided the relevant citations and analyses to support its claim in determining whether it has a duty to object under CAA § 505(b)(2)). Nor have they demonstrated that LDEQ's decision not to establish such a procedure was unreasonable or otherwise not in compliance with the applicable CAA requirements. *See, e.g., 2012 Cash Creek Order* at 4-5.

For these reasons, the EPA hereby denies these claims.<sup>51</sup>

## VI. CONCLUSION

For the reasons set forth above and pursuant to CAA § 505(b)(2) and 40 C.F.R. § 70.8(d), I hereby grant in part and deny in part, as described herein, issues originally raised in the 2010 Petition and the 2011 Petition, which were re-raised in the 2012 Petition. As explained more fully above, this order in conjunction with the June 19, 2013 Order responds to LEAN and Sierra Club's petitions requesting that the EPA object to certain title V permits issued to Nucor.

Dated: 1/30/14

  
Gina McCarthy  
Administrator

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the only discussion of CO<sub>2</sub> efficiency limits that the EPA located in the 2011 comments submitted by counsel for the Petitioners at Tulane Environmental Law Clinic.

<sup>51</sup> The EPA also notes that the 2011 Petition states that it “adopt[s] and incorporate[s] by reference Zen-Noh Grain’s petition asking the EPA to object to the modified title V permit for the pig iron plant and the initial title V permit for the DRI plant.” 2011 Petition at 2. To the extent that Petitioners have incorporated by reference Zen-Noh’s 2011 Petition, the EPA has already responded to that petition, granting an objection in the *Zen-Noh Order*, and LDEQ has issued a response to the EPA’s objection. Thus, the EPA need not further address Zen-Noh’s 2011 Petition in this Order.