

**BEFORE THE ADMINISTRATOR  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

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In the Matter of the Title V Air Quality	)	
Permits and PSD Permit for	)	
	)	
CONSOLIDATED ENVIRONMENTAL	)	
MANAGEMENT, INC. - NUCOR STEEL,	)	<b>Permit Nos. 3086-V0,</b>
LOUISIANA	)	<b>PSD-LA-741, and</b>
to construct and operate a Direct Reduced	)	<b>2560-00281-V1</b>
Iron and Pig Iron manufacturing facility	)	
located in Convent, St. James Parish, Louisiana	)	
	)	
Issued by the Louisiana Department of	)	
Environmental Quality	)	

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PETITION TO OBJECT TO  
TITLE V AND PSD PERMITS FOR DRI MANUFACTURING PROCESS AND  
MODIFIED TITLE V PERMIT FOR PIG IRON MANUFACTURING PROCESS  
AT THE NUCOR STEEL – LOUISIANA FACILITY

**INTRODUCTION**

Pursuant to section 505(b)(2) of the Clean Air Act, 42 U.S.C. § 7401, et seq. (“CAA” or “Act”), and 40 C.F.R. § 70.8(d), Zen-Noh Grain Corporation (“Zen-Noh”) petitions the Administrator of the United States Environmental Protection Agency (“EPA”) to object to the air quality permits issued to Consolidated Environmental Management, Inc. – Nucor Steel Louisiana (“Nucor”) by the Louisiana Department of Environmental Quality (“LDEQ”), including title V permit no. 3086-V0 and PSD Permit No. PSD-LA-741, authorizing construction and operation of a direct reduced iron (“DRI”) manufacturing process, and modified title V permit no. 2560-00281-V1, authorizing construction and operation of a pig iron manufacturing process, both processes to be located at Nucor’s facility near Convent, St. James Parish, Louisiana. EPA’s statutory 45-day review period for the title V permits ended on March 4, 2011; therefore, this

petition is timely filed within 60 days after the expiration of EPA's review period. *See* 42 U.S.C. § 7661d(b)(2).

## STATUTORY AND REGULATORY FRAMEWORK

Title V of the Act, 42 U.S.C. §§ 7661-7661f, requires each state to develop and submit to EPA an operating permit program to meet the requirements of title V and EPA regulations implementing title V, which are published in 40 C.F.R. Part 70 ("Part 70"). 42 U.S.C. § 7661d(b)(2). LDEQ prepared and submitted a Part 70 operating permit program, codified in LAC 33:III.507, which was approved by EPA and became effective on October 12, 1995. 40 C.F.R. Part 70, App. A. Any person wishing to construct a new major stationary source of air pollutants in Louisiana must apply for and obtain a Part 70 permit before commencing construction. 42 U.S.C. § 7661b(c); LAC 33:III.507.C.2.<sup>1</sup> If the source will be a major source, or result in a significant emissions increase, of a regulated new source review ("NSR") pollutant, the owner or operator must also obtain a prevention of significant deterioration ("PSD") permit issued by LDEQ pursuant to LAC 33:III.509, an EPA-approved regulation in the Louisiana State Implementation Plan ("SIP") that implements the preconstruction permit requirements of 42 U.S.C. § 7475. *See* 42 U.S.C. §7661a(a) ("Nothing in this subsection shall be construed to alter the applicable requirements of this chapter [the CAA] that a permit be obtained before construction or modification."); 40 C.F.R. § 52.970 (identifying EPA approved regulations in the Louisiana SIP); LAC 33:III.509.A.

One of the primary purposes of the title V permit program is to "enable the source, States, EPA, and the public to understand better the requirements to which the source is subject, and whether the source is meeting those requirements." 57 Fed. Reg. 32250, 32251 (July 21, 1992).

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<sup>1</sup> Permits issued pursuant to title V of the Act are referred to interchangeably as "title V" permits and "Part 70" permits.

Thus, a title V permit issued by LDEQ must “incorporate all federally applicable requirements for each emissions unit at the source,” LAC 33:III.507.A.3, and include “enforceable emission limitations and standards, . . . and such other conditions as are necessary to assure compliance with applicable requirements of this chapter [the CAA], including the requirements of the applicable [SIP].” 42 U.S.C. § 7661c(a). Federally applicable requirements that must be incorporated into a title V permit include standards and other requirements in the SIP, terms and conditions in a PSD permit, new source performance standards (“NSPS”) promulgated pursuant to section 111 of the Act, and emission standards for hazardous air pollutants (“NESHAP” or “MACT”) promulgated pursuant to section 112 of the Act. 40 C.F.R. § 70.2; LAC 33:III.502.A. A Part 70 permit cannot impose new substantive air quality control requirements or “relax any applicable requirements, including those contained in the SIP.” 57 Fed. Reg at 54, 59-60).

Section 505(b) of the Act, 42 U.S.C. § 7661d(b)(1), provides that “[i]f any permit contains provisions that are determined by the Administrator as not in compliance with the applicable requirements of this chapter . . . the Administrator shall . . . object to its issuance.” If EPA does not object within 45 days after a permit has been proposed, any person may petition EPA (within 60 days of the expiration of the 45-day period) to take such action. A petition must be based on “objections to the permit that were raised with reasonable specificity during the public comment period . . . (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.” § 7661d(b)(2). EPA “*shall* issue an objection” if the petitioner demonstrates that the permit is not in compliance with the requirements of the Act or SIP. *Id.* (emphasis added); *see also* 40 C.F.R. § 70.8(c)(1). The duty to object is *not* discretionary, *New York Public Interest Research Group, Inc. v. Whitman*, 321

F.3d 316, 332-33 (2nd Cir. 2003), and applies whether the petitioner demonstrates violations of either substantive or procedural requirements. *Sierra Club v. Johnson*, 436 F.3d 1269, 1280 (11th Cir. 2006). Where a petition is based on violations of PSD or the SIP, EPA will generally look to see whether the petitioner has shown that the state permitting authority did not “(1) follow the required procedures in the SIP; (2) make PSD determinations on reasonable grounds properly supported on the record; [or] (3) describe the determinations in enforceable terms.” *In the Matter of Louisville Gas and Electric Company, Trimble County, Kentucky, Part 70/PSD Air Quality Permit # V-02-043 Revisions 2 and 3, Order Responding to Issues Raised in April 28, 2008 and March 2, 2006 Petitions, and Denying in Part and Granting in Part Requests for Objection to Permit*, August 12, 2009, at 5.

## **BACKGROUND**

Petitioner, Zen-Noh, is a Louisiana corporation that operates a grain export facility on the banks of the Mississippi River near Convent, St. James Parish, Louisiana. Zen-Noh’s Convent elevator is the fastest loading grain elevator in North America and the largest and most efficient grain export elevator in the world, annually shipping in excess of 12,000,000 tons of American grain overseas. Zen-Noh provides food and animal feed to people around the world.

In May 2008, Nucor submitted an application for PSD and Part 70 permits, pursuant to LAC 33:III.507 and LAC 33:III.509, to authorize construction and operation of a pig iron manufacturing process on a 4,000+ acre site (the “Site”) adjacent to Zen-Noh’s Convent elevator. In the May 2008 application, Nucor proposed to construct a 6 million ton per year pig iron manufacturing process, consisting of two coke oven batteries, two blast furnaces, a sinter plant, two material loading/unloading docks, and support processes. LDEQ issued draft permits in October 2008, to which Zen-Noh, United States Fish & Wildlife, EPA and others submitted

comments. Among other things, Zen-Noh commented that Nucor should consider producing direct reduced iron instead of pig iron and should consider installing selective catalytic control (“SCR”) systems to reduce nitrogen oxide (“NOx”) emissions from sources in the pig iron process, including the coke ovens, blast furnaces, power boilers and sinter plant. Zen-Noh also commented that LDEQ should make emissions and modeling information available for public review and comment. Zen-Noh eventually filed a lawsuit in the United States District Court for the Eastern District of Louisiana, *Zen-Noh Grain Corp. v. Leggett, et al.*, Case No. 09-282, Section R, to prevent LDEQ from issuing final permits before complying with the public participation requirements in 42 U.S.C. § 7475. The Court dismissed the lawsuit because LDEQ promised to post the requested information on LDEQ’s Electronic Data Management System (“EDMS”) and to provide another opportunity for public comment.

On June 26, 2009, Nucor submitted a revised application for the proposed pig iron manufacturing process, incorporating a number of changes in response to public comments and additional information requested by LDEQ after Zen-Noh filed the above-referenced lawsuit (*see* Exhibit 10). The June 26, 2009 was a complete application, including a new application form and new certifications. *Id.* LDEQ issued draft permits for public review and comment on March 10, 2010 (*see* Exhibit 11). Zen-Noh submitted comments on the draft permits on April 19, 2010 (*see* Exhibit 12) and May 3, 2010 (*see* Exhibit 13) (the public comment period was extended in response to Zen-Noh and others’ requests). Again, Zen-Noh commented that Nucor should consider manufacturing DRI instead of pig iron and installing SCR. *Id.* On May 24, 2010, LDEQ issued final PSD Permit No. PSD-LA-740 (*see* Exhibit 14) and final Part 70 Permit No. 2560-00281-V0 (*see* Exhibit 15) (collectively, the “2010 Permits), with a Basis for Decision and Public Comments Response Summary (*see* Exhibit 16), authorizing construction and operation

of the pig iron manufacturing process. LDEQ did not require Nucor to construct a DRI process instead of the pig iron process because the DRI process has different safety concerns, is more expensive because it uses natural gas instead of coal, produces a “lower quality product” known as sponge iron, and is “an unproven technology that has never produced the quantity of high-quality iron necessary to meet Nucor's objectives of securing iron supplies for their Electric Arc Furnace mills” (*see id.*, pp. 9-10, 118).<sup>2</sup> LDEQ adopted Nucor’s determination that SCR would be technically infeasible and did not require Nucor to install SCR for the pig iron sources (*see id.*, pp. 111, 119, 125-26, 129, 131; *see also* Exhibit 10, Vol. 1, pp. 70-71, 131-32, 143).

On August 20, 2010, Nucor submitted an application for PSD and Part 70 permits, pursuant to LAC 33:III.507 and LAC 33:III.509, to authorize construction and operation of a 5.0 million ton per year DRI manufacturing process at the Site, with two 2.5 million tons per year DRI units (*see* Exhibit 20, p. 17). Support processes, such as material loading/unloading, handling and storage, would be shared with the pig iron process but transferred from the pig iron permits to the DRI permits by way of a future application (*see id.*). On September 24, 2010, Nucor submitted an addendum to the August 20 application, identifying specific equipment to be transferred from the pig iron permits to the DRI permits, including the iron ore unloading dock, several storage piles, conveyors and paved and unpaved roads (*see* Exhibit 18, pp. 1, ). This list was revised in a second addendum, dated October 22, 2010, because some of the sources identified in the first addendum will not be necessary to operate the DRI process (*see* Exhibit 19, p. 1).

On October 14, 2010, Nucor submitted an application to modify Permit Nos. PSD-LA-740 and 2560-00281-V0, in which Nucor proposed to eliminate blast furnace #2 and associated emission sources (because with the DRI process, Nucor would not need both blast furnaces), and

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<sup>2</sup> References are to the electronic (pdf) page number, for exhibits throughout this petition.

to install SCR control devices on nine emissions sources in the pig iron process, including the coke ovens, sinter plant, blast furnace, power boilers and PCI mill (*see* Exhibit 20, pp. 7-8). On October 28, 2010, Nucor submitted an addendum to the Part 70 permit minor modification application, in which Nucor proposed to eliminate emission sources associated with the coke oven battery heat recovery steam generating (“HRSG”) unit bypass vents (*see* Exhibit 21, p. 1).

On November 24, 2010, LDEQ issued draft PSD and Part 70 permits for the DRI process and a draft Part 70 permit modification for the pig iron process, for public comment (*see* Exhibits 22 and 23). Zen-Noh timely submitted comments to the initial DRI permits and pig iron permit modification on January 3, 2011 (*see* Exhibits 8 and 9, with attachments). LDEQ issued final PSD Permit No. PSD-LA-751 (*see* Exhibit 1) and final Part 70 Permit No. 3086-V0 (*see* Exhibit 2) for the DRI process, and final modified Part 70 Permit No. 2560-00281-V1 (*see* Exhibit 3) for the pig iron process, on January 27, 2010 (collectively, the “2011 Permits”). LDEQ also issued the Basis for Decision for both sets of permits (*see* Exhibits 4 and 5), the Public Comments Response Summary (*see* Exhibit 6), and a stay of effectiveness of the pig iron permit modification (*see* Exhibit 7). The stay bars construction of the pig iron process until the pending litigation relating to the pig iron permits is finally adjudicated or settled.

EPA’s 45-day review of the 2011 Permits expired on March 4, 2011. EPA did not object to the issuance of the permits, but EPA did submit comments on January 7, 2011 (*see* Exhibit 24) and March 4, 2011 (*see* Exhibit 25). This Petition is timely filed before the close of the 60-day period for public petitions to EPA to object to the issuance of the 2011 Permits.

Zen-Noh also filed a timely petition on June 25, 2010 (the “2010 Petition”) (*see* Exhibit 26), for EPA to object to the issuance of the 2010 Permits. EPA did not respond to the 2010 Petition, and on November 19, 2010, Zen-Noh filed a complaint against EPA in the United States

District Court for the Eastern District of Louisiana, pursuant to 42 U.S.C. § 7605, *Zen-Noh Grain Corp. v. Jackson*, Case No. 10-CV-4367, Section R. Litigation of that case has been stayed pending submission of this petition. Zen-Noh incorporates the arguments and evidence presented in Zen-Noh's January 3, 2011 comments to the 2011 Permits (Exhibit 8 and Attachments thereto), and the objections presented in the 2010 Petition (Exhibit 26), in their entirety as part of this Petition. Zen-Noh also incorporates by reference the objections and exhibits presented by the Sierra Club and the Louisiana Environmental Action Network in their petition to EPA to object to the issuance of the 2011 Permits.

### **GROUNDS FOR OBJECTION**

**Issue 1: Permitting construction of the DRI process and pig iron process as separate projects unlawfully circumvents the requirements of PSD and the Louisiana SIP.**

The CAA prohibits the construction of a new major source unless the source has obtained a PSD permit. 42 U.S.C. § 7475(a)(1). The Act requires three basic prerequisites to the issuance of a PSD permit: (1) the source must be subject to best available control technology ("BACT"), (2) the air quality impacts of the source must be evaluated and demonstrated not to cause a violation of any national ambient air quality standard ("NAAQS"), and (3) the public must be given an opportunity to participate in the process. § 7475(a)(2)-(8). The purposes of requiring this review are, among other things, "(1) to protect public health and welfare from any actual or potential adverse effect which . . . may reasonably be anticipated to occur from air pollution, notwithstanding attainment and maintenance of all national ambient air quality standards; . . . (3) to insure that economic growth will occur in a manner consistent with the preservation of existing clean air resources; . . . and (5) to assure that any decision to permit increased air pollution is made only after careful evaluation of all the consequences of such a

decision and after adequate procedural opportunities for informed public participation in the decisionmaking process.” 42 U.S.C. § 7470.

The Louisiana SIP-approved PSD regulation requires a PSD permit applicant to demonstrate, using approved air quality models, “that allowable emission increases from the proposed source” would not cause or contribute to a violation of any NAAQS or maximum allowable increase over the baseline concentration (i.e., a “PSD increment”). LAC 33:III.509.K-L. If the modeled air quality impact from the new source is below a set threshold for each pollutant set by EPA, the “significant impact level” or “SIL,” LDEQ does not require the applicant to conduct a “full” NAAQS review, which would include modeling the impacts of the other sources in the area. Similarly, the applicant must also conduct preconstruction ambient air quality monitoring for each regulated NSR pollutant, LAC 33:III.M, unless the modeled impact of the emissions increase from the new source alone are below the “significant modeling level” for each pollutant. LAC 33:III.509.L.5.

Although LDEQ issued PSD permits for the pig iron process and DRI process, and determined that both processes would be subject to BACT, LDEQ nonetheless allowed Nucor to circumvent the air quality impact analysis prerequisites by permitting the pig iron and DRI processes separately. For example, LDEQ did not require Nucor to perform the air quality impact modeling -- for NAAQS review and preconstruction monitoring applicability -- for all emission sources in the aggregate facility. Instead, for sulfur dioxide (“SO<sub>2</sub>”) and particulate matter (“PM<sub>10</sub>” and “PM<sub>2.5</sub>”), Nucor modeled only emissions from the DRI process, and found them to be below the SIL. Modeling performed on behalf of Zen-Noh and submitted to LDEQ demonstrates that if LDEQ had required Nucor to model the aggregate emissions, a full NAAQS

analysis would have been required for SO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>, and that the combined facility would cause a violation of the NAAQS for these pollutants (*see* Exhibit 8, pp. 65-100).<sup>3</sup>

This approach does not comply with the procedures required in the SIP, LAC 33:III.509.K-M. Before LDEQ can determine whether an applicant has complied with the air quality impact analysis requirements, LDEQ must determine what is the “source,” because LAC 33:III.509.K requires the analysis to evaluate increased emissions from a “source,” not a “project.” The SIP defines “stationary source” as “any building, structure, facility, or installation that emits or may emit any pollutant subject to regulation under this Section.” LAC 33:III.509.B. “Building, structure, facility or installation” means

all of the pollutant-emitting activities that belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control), except the activities of any vessel. Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same Major Group (i.e., which have the same first two-digit code) as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement (U. S. Government Printing Office stock numbers 4101-0066 and 003-005-00176-0, respectively).

*Id.* These definitions are essentially identical to the definitions in 40 C.F.R. § 5.166(b). *See MacClarence v. Johnson*, 596 F.3d 1123, 1126-27 (9th Cir. 2010).

The DRI and pig iron processes clearly are a single “source.” They both have SIC code 3312, “Steel Works, Blast Furnaces, and Rolling and Finishing Mills” (*see* Exhibit 2, p. 21, and Exhibit 3, p. 43). Both are owned by and under the control of Nucor. And both will be located on the Site. The “emission increases” that should have been modeled pursuant to LAC

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<sup>3</sup> In addition to failing to model aggregate emissions from the two processes, Nucor incorrectly calculated emissions from a number of sources, including paved and unpaved roads and the dock operations (*see* Exhibit 8, pp. 80-85; Exhibit 9, pp. 6-11), and used incorrect meteorological data and incorrect modeling protocol (*see* Exhibit 8, pp. 100-107). If LDEQ had required Nucor properly to calculate and model emissions, the aggregate emissions from the DRI and pig iron processes will cause violations of the 1-hour SO<sub>2</sub> NAAQS (*id.*, pp. 65-80), the PM<sub>10</sub> PSD increment and the PM<sub>10</sub> and PM<sub>2.5</sub> NAAQS (*id.*, pp. 85-100). Zen-Noh incorporates these comments in there entirety herein as additional grounds for EPA to object to the issuance of the 2011 Permits.

33:III.509.K are the aggregate emissions from both of these “new emission units.” See LAC 33:III.509.B (defining “new emission unit”).

Over the years, EPA has developed a set of guidance memoranda for determining whether permit applications for putatively “different” sources and projects are in fact an attempt to circumvent PSD requirements. See, e.g., 72 Fed. Reg. 19567, 19570 – 71 (April 15, 2010) (describing aggregation policy in effect as to multiple projects); *MacClarence*, 596 F.3d at 1126-27 (describing aggregation policy as to sources with multiple units). This policy is described in detail in Zen-Noh and EPA’s comments on the need to aggregate emissions from the DRI and pig iron processes for PSD permitting purposes.

Zen-Noh commented:

**Permitting construction of the pig iron and DRI manufacturing processes as separate projects unlawfully circumvents the requirements of Title I of the Clean Air Act.** Title I, Part C of the Clean Air Act (“Prevention of Significant Deterioration”), 42 U.S.C. §§ 7470-7477, and regulations promulgated to implement Title I, including 40 C.F.R. §§ 51.165 & 52.21 and LAC 33:III.509 (collectively, “PSD”), provide that a permit for construction of a major source of air pollutants may be issued only upon a demonstration that potential emissions from construction or operation of the source will not cause or contribute to a violation of any national ambient air quality standard (“NAAQS”) or PSD increment. See, e.g., 42 U.S.C. § 7475(a)(3). PSD also requires “an analysis of any air quality impacts projected for the area as a result of growth associated with [the] facility.” 42 U.S.C. § 7475(a)(6). These requirements are incorporated in the Louisiana state implementation plan (“SIP”), which requires the applicant to demonstrate that allowable emissions from a proposed source, in conjunction with all other applicable emissions increases or reductions and secondary emissions, will not cause or contribute to a violation of any NAAQS or PSD increment. See LAC 33:III.509.K. The air quality impact analysis must be made available for public review and comment at the public hearing on the application. 42 U.S.C. § 7475(a)(2) & (e)(3)(C). Moreover, the operating permit program under Title V of the Clean Air Act, 42 U.S.C. § 7661a-7661f, and regulations promulgated pursuant to Title V, including 40 C.F.R. Part 70 and LAC 33:III.507 (collectively, “Part 70”), does not authorize a source or permit authority to circumvent the requirement to provide an air quality impact analysis for public review and comment. See *Sierra Club v.*

*Dairyland Power Coop.*, No. 10-cv-303-bbc, 2010 U.S. Dist. LEXIS 112817 (W.D. Wis. Oct. 22, 2010) (holding that a citizen suit alleging failure to comply with BACT and air quality impact analysis requirements under PSD is not a collateral attack on the facility's Part 70 permit).

EPA has identified a number of factors that should be considered to determine whether two projects or sources should be aggregated for preconstruction permitting purposes. A primary factor to consider is whether the permit applications are submitted simultaneously or within a short period of time. *See* John B. Rasnic, "Applicability of New Source Review Circumvention Guidance to 3M-Maplewood, Minnesota," June 17, 1993 ("Maplewood Memo"). When a company submits two preconstruction permit applications for a site within an 18-month span, EPA considers this to be strong evidence of an intent to circumvent the full scope of preconstruction review. *Id.* The same is true when the second application is submitted before construction of the initial project commences. "An application for a change to an application or permit for a source not yet in operation would generally prompt reanalysis of the proposed project as if the original application had been submitted in that form." Revised Policy on Permit Modifications and Extensions, July 5, 1985 (the "1985 Policy"), pp. 8-9, 13. These changes should be "handled as part of the initially permitted project, rather than as new projects." *Id.*, p. 9. The basis for this policy is EPA's concern that otherwise a source would not be subject to the full review required by PSD, including BACT, air quality impact analysis and public participation. *Id.*, pp. 9, 14-15. The proposed change may require revision to the existing analyses and, in some cases, performance of new analyses. *Id.*, p. 14. "The criteria for requiring additional review elements will be whether the original new source or major modification application underwent all of the review which would have applied had the application been submitted in its revised form originally." *Id.*

Other factors that evidence an intent to circumvent PSD review, and thus indicating that two sources should be aggregated for preconstruction permitting purposes, include: (1) statements by representatives of the source about the source's plans for operation, *see* Maplewood Memo; (2) whether managers or workers will be shared between the facilities, Richard R. Long, "Response to Request for Guidance in Defining Adjacent with Respect to Source Aggregation," May 21, 1998 ("Long Memo"); (3) whether the location of the new facility chosen primarily because of its proximity to the existing facility, to enable the operations to be integrated; (3) whether materials will be routinely transferred between the facilities, *id.*; and (4) whether one facility will produce a product that requires further processing at the other facility, *id.* (finding that two noncontiguous foundries should be aggregated for PSD purposes because all the casting from both foundries were coated, packaged and shipped at

one of the foundries); *see also* Cheryl L. Newton to Donald Sutton, March 13, 1998 (finding that two facilities -- one consisting of a coke oven and blast furnace, and the other of a basic oxygen furnace and strip mill -- should be aggregated for PSD purposes even though they were separated by Lake Calumet, landfills, I-94 and a river, because of their "close proximity of the sites, along with the interdependency of the operations and their historical operation as one source").

All these factors evidence the intent to circumvent the air quality impact analysis requirements for the pig iron and DRI manufacturing processes. The pig iron PSD permit was resubmitted (in substantially revised form) in June 2009. *See* EDMS Doc. 47485821 (the "Basis for Decision"). The DRI permit application was submitted 14 months later, in August 2010. Construction of the pig iron plant had not commenced when the DRI application was submitted and, in fact, has not commenced yet. Then, in October 2010 -- two months after submitting the DRI permit application -- Nucor submitted an application to make a major modification to the pig iron process. This modification, which will include elimination of a blast furnace and addition of selective catalytic reduction ("SCR") control technology on NOx sources in the pig iron process, will reduce NOx emissions from the pig iron process but in return will cause a *very* significant increase in sulfuric acid mist ("SAM") emissions. According to Nucor, it is proposing to undertake this modification for the sole purpose of maintaining the viability of the overall Nucor Steel Louisiana project. This chain of events illustrates that the DRI and pig iron processes are intertwined.

In addition to the temporal factor, both processes will be owned and operated by Consolidated Environmental Management, Inc. (a subsidiary of Nucor) and located on the same property in Convent. *See* EDMS Doc. 7731641, pp. 372, 378; EDMS Doc. 7731649, pp. 404, 409. John Farris will be the on-site manager and Jeff Braun will be the on-site contact for air pollution control for both processes. *Id.* Operation of both processes will share the use of several emission sources, including paved (FUG-102) and unpaved roads (FUG-101), the iron oxide loading/unloading gantry crane (DOC-101), raw material conveyors (FUG-103), iron oxide storage piles (PIL-102), the sinter plant (SIN-101), and the service water system. All paved roads will be considered part of the "DRI permit" and all unpaved roads will be considered part of the "pig iron permit" regardless of whether the paved or unpaved roads are physically located within the battery limits of those processes. All raw materials and product conveyed to or from the mass storage piles will be considered part of the "DRI permit" regardless of which process used or generated the raw material or product. In fact, since there will not be a conveyor fugitive emission source in the "pig iron permit," even emissions from conveying pig iron will be permitted as part of the DRI process. The same holds for

iron oxide raw material storage -- it is all permitted as part of the DRI process even if it will be used to produce pig iron.

Last, Nucor's official statements make it absolutely clear that Nucor considers the DRI and pig iron processes to be part of a single operation. During an October 21, 2010 earnings call, Nucor's chairman, Dan Damico, clarified Nucor's position that the DRI process is really just an extension of the pig iron plant, stating:

"Actually we do mean both. Let me clarify it for you. All along, we've said there were three phases to the project. The first phase was a 3 million ton a year blast furnace/coke oven, second phase was a 3 million ton a year blast furnace/coke oven, and the third phase would be potentially steel making operations and downstream activities. So what we are talking about changing is only the first phase. The other two phases are still permitted and is intact and will depend upon conditions at the time that we decide to act on the second phase. In the first phase, instead of being just one blast furnace and coke oven, it is now being permitted for two DRI plants of 2.5 plus million tons a piece." See Nucor CEO Discusses Q3 2010 Results – Earnings Call Transcript ("Earnings Call"), available at: <http://seekingalpha.com/article/231532-nucor-ceo-discusses-q3-2010-results-earnings-call-transcript?part=qanda>.

Clearly, the DRI and pig iron processes are simply phases of a single project. Zen-Noh and the public have been harmed by the issuance of separate PSD permits for this multi-phase project. It is not enough separately to evaluate the air quality impacts of the phases because, as explained more fully in comments to follow, the "phased" air quality impact analysis approach allowed Nucor to avoid performing a *full* air quality impact analysis for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and CO (not to mention certain hazardous air pollutants and toxic air pollutants). If Nucor is required to evaluate the impacts of the aggregate emissions from the DRI and pig iron processes, a full air quality impact analysis will be (and is) required for all regulated new source review ("NSR") pollutants. EPA and the public will then have an opportunity to review and comment on the true impacts of Nucor's overall plan for Convent.

This is nothing more and nothing less than what the Clean Air Act requires. The air quality impact demonstrations for a proposed source must be based on the potential emissions, i.e., the emission rate at the maximum operating capacity of the *source*, taking account for operating or production limits and controls only if they are federally enforceable. See New Source Review Workshop Manual, Prevention of Significant Deterioration and Nonattainment Area Permitting," Draft, October 1990 (the "NSR Manual", p. C.11. This emission rate must "comport with the true design and intended operation of the project." Terrell E. Hunt,

“Guidance on Limiting Potential to Emit in New Source Permitting,” June 13, 1989 (“Hunt Memo”), p. 13. As noted by Mr. Damico, the true design and intended operation for the Nucor Steel Louisiana facility is to produce at least 8 million tons per year (“tpy”) of iron feedstock for Nucor’s steel mills -- 3 tpy of pig iron and 5 tpy of DRI -- *not* the 6 tpy of pig iron reflected in the pig iron PSD permit or the 5 tpy of DRI reflected in the DRI PSD permit. Nucor has a duty to provide -- and the public has a right to review and comment on -- the true air quality impacts of Nucor’s plans. Permit Nos. PSD-LA-740 and 2560-00281-V0 authorizing construction of the pig iron manufacturing plant should be terminated and the proposed DRI Permits should be withdrawn. The pig iron and DRI manufacturing plants must be permitted under a single PSD permit, and the public must be given an opportunity to review and comment on the aggregate emissions and air quality impacts from the pig iron and DRI manufacturing processes, pursuant to § 165 of the Clean Air Act.

To which, LDEQ responded: “See LDEQ Response to Comment No. V.A.2.”

(See Exhibit 16, pp. 83-86). In Comment No. V.A.2, EPA states:

On October 22, 2010 Nucor submitted their DRI GHG BACT Analysis, and as part of this analysis, included their rationale for why the DRI and pig iron products and processes “cannot be compared directly for the purposes of determining BACT.” However, LDEQ needs to provide an adequate record to substantiate why the Nucor Steel Louisiana projects (pig iron and DRI) should or should not be subject to one permitting action. Please provide in the Response to Comments Summary LDEQ’s rationale for why the Nucor Steel Louisiana projects (pig iron and DRI) should be considered as separate projects for the purposes of PSD permitting rather than one single new source or one aggregated project subject to one PSD permit. Please explain how your rationale comports with the State’s approved SIP, current Federal regulations and policy, court decisions, and EPA petition orders. In particular, LDEQ may find it useful to consider the summary of EPA’s historic approach to aggregation (or circumvention) contained in 72 Fed. Reg. 19567, 19570 – 71 (April 15, 2010) (section 111(C)(2)(a)), and the memoranda and determinations cited in that discussion.

LDEQ responded:

EPA presents two related issues within the comment. The first is whether the “Nucor Steel Louisiana projects (pig iron and DRI) should or should not be subject to one permitting action” (i.e., addressed in the same Prevention of Significant Deterioration (PSD) permit). The second is whether construction of the pig iron manufacturing facility and DRI plants constitutes a single project, thus requiring emissions from the DRI plants

to be aggregated with those from the pig iron manufacturing facility to determine applicable requirements under the PSD program. EPA notes that "LDEQ may find it useful to consider the summary of EPA's historic approach to aggregation (or circumvention)" as set forth in the agency's April 15, 2010, proposal entitled "Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Aggregation; Reconsideration, (Aggregation Reconsideration).

First, there are no statutory or regulatory requirements or EPA policy that requires the pig iron and DRI projects to be addressed under "one permitting action" (i.e., a single PSD permit). Neither the Aggregation Reconsideration nor the guidance documents and applicability determinations identified in footnotes 6 - 9 of the proposal state or otherwise imply that a project must be addressed "in a single permit." In the instant case, the pig iron manufacturing facility and DRI plants are clearly separate and distinct projects; therefore, aggregation of emissions is not required

The discussion of EPA's "historic approach" in the Aggregation Reconsideration and the guidance documents and applicability determinations identified therein address whether emissions from multiple projects must be aggregated in order to determine whether a PSD significance threshold has been exceeded for a given project. The intent behind EPA's aggregation policy is to prevent a facility from arbitrarily breaking up a "single" project into component parts that are below NSR threshold levels in order to circumvent NSR by avoiding it completely or delaying it until the facility had been constructed. For example, the Aggregation Reconsideration states:

"We calculate the emissions increase associated with a physical or operational change at a major stationary source by reference to *de minimis* thresholds (also known as "significance levels"). From the earliest days of the NSR program, we recognized that a party seeking to avoid major source NSR might attempt to break up a single physical or operational change into nominally-separate changes in order to make the emission increase associated with each change appear to be less than significant." (Emphasis added).

Nucor has not attempted to make either project "appear to be less than significant" to avoid PSD review. In this case, both the pig iron manufacturing facility and DRI plants have undergone PSD review.

Notably, EPA acknowledges that neither "the CAA nor current EPA rules specifically address the basis upon which to aggregate nominally-separate changes for the purpose of making NSR applicability determinations." However, EPA's memorandum entitled "Applicability of New Source

Review Circumvention Guidance to 3M - Maplewood, Minnesota," dated June 17, 1993, provides several "criteria to permitting and enforcement authorities to apply when making determinations whether a source is circumventing major NSR through the minor modification process." Three of the factors that may be considered include:

- Filing of more than one minor source or minor modification application associated with emissions increases at a single plant within a short time period;
- Application of funding; and
- Statements of authorized representatives of the source regarding plans for operation.

Each of these factors is addressed below.

#### *Filing of More than One Minor Source or Minor Modification Application*

The 3M memo references a September 19, 1989 memo from John Calcagni to William Hathaway, stating that "two or more related minor changes over a short time period should be studied for possible circumvention." Although what constitutes a "short time period" is not further discussed, EPA correspondence suggests that "one year between the issuance of permits for modifications at a facility should be suspected of circumvention." The permit applications for the pig iron manufacturing facility and the DRI plants were submitted approximately two years and 3 months apart.

Regardless, the 3M and other EPA guidance memos on circumvention share one common theme - the application for one project does not trigger PSD review. As noted above, this is not the case here.

#### *Application of Funding*

According to the 3M memo, if "the project would not be funded or if it would not be economically viable if operated on an extended basis (at least a year) without the other projects, this should be considered evidence of circumvention." In this case, the pig iron project is economically viable without the DRI project, and the DRI project is economically viable without the pig iron project.

#### *Statements of Authorized Representatives of the Source*

Nucor has consistently represented the pig iron and DRI projects as being two separate projects co-located at a single source: (I) the pig iron project, originally conceived at 6 million tonnes/year (Phase I and II), with the possible addition of a Phase III steelmaking facility (for which no application has been received); and (2) the DRI plants, which were

separately conceived, but co-located with the pig iron facility. The fact that the two projects are co-located means that the interaction between the plants must be considered. The applicant has presented the project as co-located because of the excellent port facilities not otherwise available to Nucor, but separate in making different products, by different processes and technologies, with different end uses, and without process integration or dependency of one process on the other.

In sum, the pig iron and DRI projects do not require each other from a technical or economic standpoint. Each facility produces a separate product (pig iron and DRI), the products serve different purposes, and both are separately viable without consideration of the other project. For these reasons, emissions from the DRI plants need not be aggregated with those from the pig iron manufacturing facility to determine applicable requirements under the PSD program.

(See Exhibit 16, pp. 50-53).

LDEQ's determination regarding the requirement to conduct the air quality analysis on aggregate emissions from the DRI and pig iron processes is not based on reasonable grounds nor properly supported on the record.

LDEQ completely misses the point of EPA and Zen-Noh's comments. There is no dispute that PSD applies to both processes. PSD is not, however, an a la carte program. It is not enough to issue a PSD permit after determining that a source will apply BACT -- LDEQ must also require the applicant to demonstrate that the source will not cause a violation of any NAAQS or PSD increment. The purpose of the aggregation policy is to assure that proposed sources undergo the full spectrum of PSD review. See Revised Policy on Permit Modifications and Extensions, July 5, 1985 (the "1985 Policy"), pp. 8-9, 13-15; John B. Rasnic, "Applicability of New Source Review Circumvention Guidance to 3M-Maplewood, Minnesota," June 17, 1993 ("Maplewood Memo"). LDEQ has not provided any rational basis for an aggregation policy that would allow PSD applicants to avoid or skirt the air quality impact analysis requirements by breaking up a proposed source into multiple projects, as Nucor has done here.

In addition, LDEQ's discussion of the aggregation policy ignores several important factors and misstates the record as to others. *Cf. In the Matter of Kerr-McGee/Anadarko Petr. Corp., Frederick Compressor Station, Permit No. 95OPWE035, Order Granting Petition for Objection to Permit* (EPA, Oct. 8, 2009) (granting petition to object to issuance of title V permit because state permitting authority did not adequately support or explain its aggregation decision, in particular by failing to consider all appropriate criteria identified in EPA source determinations). LDEQ does not discuss whether managers or workers will be shared between the DRI and pig iron processes, whether the location of the DRI process was chosen primarily because of its proximity to and integration with the pig iron process, or whether materials will be routinely transferred between the facilities. *See* Richard R. Long, "Response to Request for Guidance in Defining Adjacent with Respect to Source Aggregation," May 21, 1998 ("Long Memo"). In fact, the record shows that all these factors militate strongly in favor of aggregation.

The DRI and pig iron processes will share an on-site manager and on-site contact for air pollution control (*see* Exhibit 17, p. 254; Exhibit 3, p. 191). The DRI and pig iron processes also will share several emission units. Incoming iron ore for both processes will be offloaded, conveyed and stored in emission units that were transferred from the pig iron Part 70 permit to the DRI Part 70 permit: DOC-101 (the unloading dock), FUG-103 (conveyor fugitives), and PIL-102 (the iron ore storage pile) (*see* Exhibit 2, pp. 19-21; Exhibit 3, pp. 2-3; Exhibit 15, p. 42). None of the emission units remaining in the pig iron process is authorized to perform these operations (*see* Exhibit 3, pp. 37-38), but the pig iron process will require off-loading, conveying and storage of iron ore. Similarly, all of the paved roads in the Facility will be part of the DRI process, while all the unpaved roads will be part of the pig iron process (*see* Exhibit 2, p. 20; Exhibit 3, pp. 2-3, 38). It would be unreasonable to believe that heavy trucks carrying DRI-

related loads will not use unpaved roads or that light vehicle traffic related to the pig iron process will not use paved roads. Moreover, wastewater from both processes will be treated in common facilities and discharge pursuant to the same Clean Water Act § 402 LPDES permit and § 401 water quality certification (*see* Exhibit 2, p. 18; Exhibit 3, p. 35), which were issued in final form *before* Nucor submitted the DRI permit application, and in draft form before LDEQ issued the 2010 Permits. The DRI and pig iron processes are necessarily dependant upon and integrated with each other.

The DRI process is also *legally* dependant upon the pig iron Part 70 permit modification. As Nucor described in the October 14, 2010 application, one of the purposes of the Part 70 permit modification is to reduce NO<sub>x</sub> emissions from the pig iron plant to avoid modeling a violation of the NAAQS for NO<sub>2</sub> (although, as Zen-Noh's modeler shows, the violation occurs anyway). The reductions proposed in the application and the later addendum include elimination of a blast furnace and related emission units, elimination of the HRSG bypass vents on the coke ovens, and installation of SCR on the coke ovens and other pig iron emission units. In other words, without the pig iron Part 70 permit modification, the DRI process could not be permitted. This is significant because the pig iron process has not been constructed -- and indeed may not be constructed until the appeal process is complete. Submitting an application to modify one process before it is constructed, for the sole purpose of obtaining a permit to construct a second process, is clear evidence that the two processes should be considered one "source" for the purposes of PSD.

LDEQ's responses regarding the statements by corporate officials and funding for the two projects are devoid of any citation to the record and are contrary to the evidence. In his third quarter 2010 conference call with stock analysts, Nucor's CEO clearly identified the DRI process

and pig iron process as two “phases” of a single “project” (*see* Exhibit 8, Att. 43, p. 16. This is consistent with the Cooperative Endeavor Agreement entered into between Nucor and the State of Louisiana Department of Economic Development on September 15, 2010 (the “CEA”) (*see* Exhibit 30). Nucor executed the CEA before Mr. Damico made his statement to the stock analysts and before Nucor submitted the application to amend the pig iron Part 70 permit, but the CEA was not announced or made available to the public until after the ground-breaking ceremony on March 4, 2011.

The CEA provides the terms pursuant to which the State will invest up to \$160 million to induce Nucor to construct and operate a “state-of-the-art iron and steel facility” (*see* Exhibit 30, p. 6). The “Project” is broken down into five phases: Phase A, the first DRI production unit; Phase B, the second DRI production unit; Phase C, direct-reduced-iron-related infrastructure; Phase D, the pig iron manufacturing process; and Phase E, a steel manufacturing process (*id.*, pp. 6 (defining “Project”), 8 (defining “Facility”), 10-11 (defining “Phase A” through “Phase E”). All the phases will be located on the “Site” (*id.*, pp. 12-13).

The State’s capital investment will be spread over the five phases (*id.*, pp. 16-17). The State will invest an initial \$30 million (the “Phase A Initial State Investment”) and an additional \$30 million (the “Phase A Additional Investment”) in Phase A, the first DRI production unit, and the only phase Nucor has committed to construct (*id.*, pp. 16, 20-21, 29). The State’s commitment to invest in Phases B through E depends upon the order in which Nucor decides to construct those phases -- if at all -- and Nucor’s actual payroll (*id.*, pp. 16-17, 20-29, 62 (providing examples of the State’s commitment depending on the order of construction)). Nucor’s only commitment with respect to Phases B through E is to inform the State of Nucor’s decision whether to proceed with each phase by December 31, 2015 and, if Nucor decides to

proceed with a phase, to commence construction and operation of the phase in a timely fashion (*id.*, pp. 22-29). Clearly, funding for the DRI process and pig iron process is interdependent. There is absolutely no support in the record for the contention that the two processes are financially independent.

The State's other commitments in the CEA emphasize the interdependence between the two processes. In addition to funding the Project, the State agrees to provide permitting assistance, including a state employee to shepherd and expedite the submittal and processing of Nucor's permits, and to use its "best efforts" to help Nucor avoid the effect of greenhouse gas ("GHG") regulations that would "materially adversely affect the economics of the Facility," such as a requirement to switch fuels (*id.*, pp. 18-20). If GHG regulations cause Nucor to determine that "Operation of the Facility in the manner originally contemplated by this Agreement is not economically feasible or practical," the State and Nucor agree to negotiate an amendment to the CEA that will preserve the economic benefits to the State (i.e., projected payroll tax revenues and "Louisiana Purchases") while permitting Nucor to "operate in a different and economically feasible or practical manner," (*id.*, p. 20). These commitments make no sense in the context of the DRI process alone or the pig iron process alone. One of the primary comments as to the 2010 Permits is that LDEQ should require Nucor to apply BACT for GHG emissions, and that BACT would be the production of DRI instead of pig iron. Indeed, although Nucor denies that DRI is BACT for the production of iron feedstock, Nucor's GHG BACT analysis for the DRI process focuses almost exclusively on the fact that the DRI process will generate much less GHGs than the pig iron process will generate (*see* Exhibit 19B). In this context, the practical effect of § 4.01(M) of the CEA is clear: if LDEQ determines -- voluntarily or at EPA's direction -- that BACT for the production of iron feedstock is to use the DRI process instead of the pig

iron process, Nucor and the State can renegotiate the terms of the CEA to eliminate the penalties for failing to construct the pig iron process, and shift those portions of the State's total capital investment to Phases A, B and C. The circumstances, the plain wording of the CEA, and Mr. Damico's statements compel the conclusion that the DRI and pig iron processes are simply two (or four) phases of one cohesive and singularly funded project that were permitted separately to circumvent the full set of analyses required by PSD.

The timing of the permits compels the same conclusion. As Nucor notes, "one year between the issuance of permits for modifications at a facility should be suspected of circumvention." Letter from Cheryl L. Newton, Chief, Permits and Grants Section, to Mike Hopkins, Ohio Environmental Protection Agency, dated August 8, 1996. Here, the 2011 Permits were issued eight months after the 2010 Permits. Moreover, the applications were not, as LDEQ suggests, submitted two years apart; the DRI application was submitted less than 14 months after the June 2009 pig iron application, which is a complete, stand-alone application that does not simply "revise" the earlier application. Even if the applications were two years apart, this does not create a presumption of "non-circumvention," particularly where, as here, the owner submits an application to transfer some of the emission units permitted in the initial permit to the second process before construction commences. Given the timing and the interdependence between the management, operation and funding of the two processes, there is no question but that the true "source" of "emission increases" that Nucor should have modeled for purposes of providing the air quality impact analyses required by PSD and the SIP is the aggregate source -- the pig iron process and the DRI process. LDEQ's conclusion to the contrary is arbitrary and capricious and violates the Act and the SIP. The public should -- and must -- be given an opportunity to review and comment on the true air quality impacts of the "Facility" Nucor proposes to construct on the

“Site” adjacent to Zen-Noh’s Convent elevator, as required by 42 U.S.C. § 7475(a), LAC 33:III.509.K and LAC 33:III.509.O.

For all these reasons, EPA must object to the issuance of Permit No. PSD-LA-751, Permit No. 3086-V0, and Permit No. 2560-00281-V1, with instructions that LDEQ require Nucor to perform the air quality impact analyses required by PSD and the SIP for the aggregate emissions of all pollutants from the pig iron and DRI processes.

**Issue 2: The ambient air quality analysis to demonstrate compliance with the NO<sub>2</sub> NAAQS unlawfully relied on the elimination of HRSG bypass vents on the coke ovens and installation of SCR control devices on pig iron emission units, even though these emission reductions are not federally enforceable.**

Air quality modeling for NAAQS compliance must be based on a source’s potential emissions. “Potential to emit” is defined as:

the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is *federally enforceable*.

40 C.F.R. § 51.165(a)(iii); LAC 33:III.509.B (*emphasis added*). To be federally enforceable, a physical or operational limitation must meet two criteria: “(1) the limitation must be contained in a permit that itself is federally enforceable . . . and (2) the limitation must be enforceable as a practical matter.” See John B. Rasnic, *Applicability of Policy on Limiting Potential to Emit to General Motors Morrain Assembly Plant, Dayton Ohio*, Sept. 2, 1992, p. 3; Kathie A. Stein, *Guidance on Enforceability Requirements for Limiting Potential to Emit through SIP and § 112 Rules and General Permits (“Stein Memo”)*, Jan. 25, 1995, p. 5. Controls must be “‘unquestionably’ and ‘demonstrably’ effective in order to be taken into account.”

*Ogden Projects, Inc. v. New Morgan Landfill Co.*, 911 F. Supp. 863, 875 (E.D. Pa. 1996) (quoting *National Mining Ass'n v. USEPA*, 59 F.3d 1351, 1364 (D.C. Cir. 1995); Stein Memo, p. 8 (limitations must be “technically sufficient to provide assurance to EPA and the public that they actually represent a limitation on the potential to emit for the category of sources identified,” and must require specific compliance monitoring). “[C]ontrols that are only chimeras and do not really restrain an operator from emitting pollution,” or which will be “knowingly and regularly violated” do not limit the source’s potential to emit. *National Mining Association*, 59 F.3d at 1361; *Ogden Projects*, 911 F. Supp. at 876; *Louisiana-Pacific*, 682 F. Supp. at 1161.

It also matters how the emission limit is implemented. As the United States Court of Appeals for the Sixth Circuit has explained, “the distinction between preconstruction and operating permits is critical.” *United States v. Marine Shale Processors*, 81 F.3d 1329, 1355 (5th Cir. 1996). At the preconstruction, i.e., PSD, stage, “the permitting authority must determine whether the proposed construction or modification would violate [the] state’s emissions control strategy or interfere with attainment or maintenance of CAA air quality standards.” *Id.* Thus, the PSD permit that results from the agency’s preconstruction review is the legal mechanism through which PSD requirements become applicable, and remain applicable, to an individual source. *See* John S. Seitz to Robert Hodanbasi et al., May 20, 1999, Enclosure A, p. 4 (“Hodanbasi Memo”). The emission limitations and other specific conditions in the PSD permit -- together with NSPS, NESHAP and SIP emission limitations -- are “applicable requirements” that must be incorporated into the source’s title V permit. This process does not work in reverse -- limitations and other conditions in an operating permit cannot be incorporated into a preconstruction permit -- specifically or by reference.

Physical or operational limitations that do not meet these criteria are *not* federally enforceable. Blanket emission limits in a title V permit -- not accompanied by a practicably enforceable underlying applicable requirement -- may not be considered in the determination of a source's potential to emit. *United States v. Louisiana-Pacific Corp.*, 682 F. Supp. 1141, 1160 (D. Colo. 1988); Terrell E. Hunt, Guidance on Limiting Potential to Emit in New Source Permitting, Jun. 13, 1989 ("Hunt"), p. 3.

Here, LDEQ allowed Nucor to take credit, in the ambient air quality impact analysis for the DRI process, for emission reductions that would be achieved by eliminating the HRSG bypass vents and installing SCR control devices on emission units in the pig iron process, even though LDEQ determined that these emission reductions are not technically feasible, and therefore not BACT, when issuing the pig iron PSD permit. LDEQ did not modify the pig iron PSD permit to include these control techniques, and therefore there is no underlying applicable requirement to import into Permit No. 2560-00281-V1, the pig iron Part 70 permit modification. Moreover, the table of Specific Requirements in Permit No. 2560-00281-V1 (in both the draft and final permit) does not include any requirement to construct spare HRSG units or otherwise to eliminate the HRSG bypass vents, or to install SCR for any emission units. These emission reductions are not federally enforceable and cannot be used for modeling purposes. Allowing Nucor to take credit for these emission reductions violates the SIP, LAC 33:III.509.K.

LDEQ's responses to comments do not adequately respond to these concerns:

**[EPA] Comment No. V.B.3**

It is not clear that the Nucor Pig Iron Permit No. PSD-LA-740 is being modified to include the changes that are being made as part of the Title V modification. The new emission limits for SCR control, emission decreases from the units being transferred to the DRI plant permit, and units being removed from the design of the Pig Iron Plant permit, require the PSD-LA-740 permit to be modified such that the applicable

requirements in the modified PSD permit are transferred to the Title V permit. How does LDEQ plan to address this concern?

**LDEQ Response to Comment No. V.B.3**

LDEQ does not propose to modify PSD-LA-740 based on the fact that the need for selective catalytic reduction (SCR) controls and a supplementary heat recovery steam generator (HRSG) did not stem from LDEQ's BACT determinations, but are now required to demonstrate compliance with the 1-hour NO<sub>2</sub> NAAQS. However, *the requirements to install SCR controls and eliminate the coke battery HRSG bypass vents are set forth in Permit No. 2560-00281-VI*. Further, this modification eliminates Nucor's authority to construct the sources associated with Blast Furnace #2, even without a modification of the PSD permit.

**[EPA] Comment No. V.B.4**

We are encouraged that Nucor is proposing to employ Selective Catalytic Reduction (SCR) as a NO<sub>x</sub> control technique at the Pig Iron Plant. EPA believes that this technology is among the most effective for reducing nitrogen oxide emissions from a wide variety of industrial combustion facilities. We are concerned; however, that Nucor stated in their pig iron modification application that SCR is technically infeasible on some of the units, yet the reductions attained from the installation of SCR are being relied upon to show that both the Pig Iron and DRI plant permits do not cause or contribute to a violation of the 1-hour NO<sub>2</sub> National Ambient Air Quality Standard (NAAQS). Pages 2-5 through 2-6 of the permit application discuss why SCR is being considered. "Nucor searched for other potential ways to reduce emissions in order to bring the modeled predictions of NO<sub>x</sub> below the [Significant Impact Level] SIL level." It goes on to say "To date, SCR controls have never been applied to coke ovens, sinter plants, or blast furnace gas combustion, either solely or in conjunction with nuc gas desulfurization technology as in the MEROS unit test. Nucor believes the application of SCR technology remains technically infeasible for these sources. Nucor is submitting with this permit modification application emissions calculations which reflect the experimental application of SCR to the Coke Oven Main Flue Stacks and the Sinter Plant. While the technical feasibility of these SCR applications is highly suspect, Nucor has decided to take these steps in order to maintain the viability of the NSLA project." If SCR proves not to be technically feasible, then LDEQ must evaluate what further emission reductions can occur or other control technologies that can be utilized to maintain the emission limits that were used to demonstrate that the plant will not cause or contribute to a violation of the NAAQS. *Additionally, a practically enforceable condition in the permits should be included to require Nucor to go through the PSD permitting process and modify their Title V permit if SCR is not technically feasible.* At this time, it appears Nucor is implying that the pollution control technology proposed for these

permits is technically infeasible but on the other hand they are relying on this technology to achieve reductions to support the issuance of these permits and the potential viability of the project.

**LDEQ Response to Comment No. V.B.4**

LDEQ concurs with EPA's statement that if "SCR proves not to be technically feasible, then LDEQ must evaluate what further emission reductions can occur or other control technologies that can be utilized to maintain the emission limits that were used to demonstrate that the plant will not cause or contribute to a violation of the NAAQS." Should SCR prove technically infeasible, Nucor would be required to modify Permit No. 2560-00281-VI. In addition, if the "replacement" technology or other facility modifications needed to comply with the 1-hour NO<sub>2</sub> NAAQS result in a significant increase in a "regulated NSR pollutant," PSD review would be required.

(see Exhibit 6, pp. 54-55) (emphasis added).

And, in response to Zen-Noh's comment #92, which echoes EPA's concern regarding the use of SCR-derived emission rates for the air quality impact analysis when SCR is not incorporated into the pig iron PSD permit and Nucor continues to argue that SCR is technically infeasible for pig iron sources, LDEQ states:

The air quality modeling associated with the pig iron and DRI permits is in fact, based on each operation's potential to emit. Regarding the feasibility of SCR controls, see LDEQ Response to Comment No. V.B.4. LDEQ's BACT determinations associated with PSD-LA-740 have not been modified; however, the commenter's statement that the requirement to install SCR controls is "unenforceable" is not accurate. First, the NO<sub>x</sub> limitations established by Permit No. 2560-00281-V1 are federally enforceable. See, for example, LDEQ Response to Comment No. V.C.6. *Second, in order to eliminate any ambiguity regarding this matter, LDEQ will add Specific Requirements to Permit No. 2560-00281-V1 explicitly requiring SCR controls to be installed.* LDEQ has not "ignored" the coke battery HRSG bypass vents; Permit No. 2560-00281-V1 eliminates them. Nucor has proposed to install a spare HRSG to eliminate the bypass vents (COK-105 - COK-109 and COK-205 - COK-209), and these sources have been removed from the permit. "Physical or operating restrictions" are therefore not necessary. *Any emissions resulting from the bypass of a HRSG would be a violation of the permit for which EPA or LDEQ could take enforcement action.*

(*id.*, p. 233) (emphasis added).

As an initial matter, LDEQ's responses violate the SIP's air quality impact analysis requirements, LAC 33:III.509.K -- to be taken into account for the purposes of PSD modeling, the installation of SCR and spare HRSG units must be incorporated first into the PSD permit, Permit No. PSD-LA-740, and then into the Part 70 permit, Permit No. 2560-00281-V1. *See Marine Shale Processors*, 81 F.3d at 1355; Hodenbasi Memo, Enc. A, p. 4. As noted above, PSD is more than BACT and it is not a pick-and-choose standard. The ambient air quality impact analysis, including the NAAQS compliance demonstration, is a PSD issue, not a title V issue, and compliance must be demonstrated in the context of a PSD permit, not a title V permit.

LDEQ's responses also are not properly supported by the record or described in enforceable terms. When incorporated into a Part 70 permit, applicable requirements must be specific and practicably enforceable. *See Hunt*, p. 3. Contrary to assertions otherwise in the Public Comments Response Summary, LDEQ did not add any specific requirements in the final Permit No. 2560-00281-V1 explicitly requiring SCR controls to be installed (*see Exhibit 3*, pp. 79-86 (specific requirements for the coke oven FGD stacks and process area, 87-91 (sinter plant MEROS system stack), 120-23 (power boilers), and 134-35 (blast furnace #1 hot blast stoves common stack)). LDEQ also did not add any specific requirements to eliminate the HRSG bypass vents (*id.*, pp. 79-86). In fact, specific requirement # 288 implies that HRSG bypass emissions are not prohibited so long as they are not planned and simultaneous with planned FGD bypass events (*id.*, p. 86). Last, LDEQ has not responded, explicitly or impliedly, to EPA's comment that a specific practicably enforceable condition be included in the permit to require Nucor to go through the PSD permitting process if SCR is not technically feasible. LDEQ's responses and failures to respond -- like LDEQ's determination not to modify the PSD permit -- are arbitrary and capricious.

Significantly, the risk that EPA and Zen-Noh warned about has already occurred. On February 28, 2011, Nucor submitted a Request for Administrative Hearing Respecting Control Technology Determinations to LDEQ (*see* Exhibit 29). Essentially, Nucor asks LDEQ to remove the NO<sub>x</sub> control and emission limits for pig iron emission units (although Nucor cannot identify any specific control requirements it would like removed because, as described above, LDEQ did not incorporate any specific requirements in the Part 70 permit modification) because Nucor does not believe it should be required to comply with the NO<sub>2</sub> NAAQS (*id.*, pp. 1-2). If LDEQ had modified the pig iron PSD permit to incorporate these requirements, LDEQ would not be able to eliminate them without going through the PSD process, including a renewed BACT determination and a renewed ambient air quality impact analysis. As it stands, these “requirements” could be eliminated without giving the public an opportunity to review and comment on the true air quality impacts of the proposed source, as required by PSD and the SIP.

For all these reasons, EPA must object to the issuance of Permit No. PSD-LA-751, Permit No. 3086-V0, and Permit No. 2560-00281-V1, with instructions to modify Permit No. PSD-LA-740 to require the SCR and spare HRSG units necessary to demonstrate compliance with the NO<sub>2</sub> NAAQS, and to modify Permit No. 2560-00281-V1 to incorporate the resulting applicable requirements in Permit No. PSD-LA-740.

**Issue 3: Authorizing installation of SCR control devices by way of Permit No. 2560-00281-V1 violates PSD and the SIP because SCR will significantly increase emissions of sulfuric acid mist.**

Under the SIP, a 7 ton per year increase in emissions of sulfuric acid mist is considered to be a “significant emissions increase.” LAC 33:III.509.B (defining “significant”). In its January 3, 2011 comments, Zen-Noh submitted a substantial amount of technical literature demonstrating the well-known fact that SCR control devices increase emissions of sulfuric acid mist because

SCR catalyst converts from 0.3% to 3% of the flue gas SO<sub>2</sub> to SO<sub>3</sub> (see Exhibit 8, pp. 55-58, and Att. 21, 33, 45 (pp. 21-22, 61-63), 46, 47 (pp. 8-9), 49 and 50 (pp. 5-7)). Zen-Noh also presented calculations showing that, even assuming a 0.3% conversion rate, the addition of SCR will cause pig iron process sulfuric acid mist emissions to increase by 40 tons per year more than the “significance” level, and assuming a 3% conversion rate, sulfuric acid mist emissions will increase by over 400 tons per year (*id.*, Att. 3, pp. 12-14). Zen-Noh also showed that the increased sulfuric acid mist emissions would also result in significant increases in emissions of PM<sub>2.5</sub> and PM<sub>10</sub> (*id.*, pp. 58-60). Zen-Noh presented evidence showing that it is commonplace for facilities that install SCR units to evaluate BACT and air quality impacts for sulfuric acid mist emissions generated by the SCR units (*id.*, p. 57, Att. 33 (pp. 22-28), 47 (pp. 8-9) and 58 (pp. 32-34)). Last, Zen-Noh presented evidence showing that the use of “low conversion catalyst” can significantly reduce sulfuric acid mist emissions generated by an SCR unit, and would do so for the pig iron process (*id.*, Att. 3 (pp. 12-14), 21 and 52-55).

LDEQ should have required Nucor to quantify the aggregate sulfuric acid mist emissions from SCR units in the DRI process and pig iron process, evaluate BACT for these emissions, and provide air quality analyses as required by the SIP and LAC 33:III.5109.B (because sulfuric acid mist is also a toxic air pollutant) (*id.*, pp. 54-58, 150).

In response, LDEQ stated:

Nucor is not permitted to directly emit any sulfuric acid mist from these sources. However, a portion of sulfur dioxide emissions may be converted to sulfur trioxide in the atmosphere, and become a precursor of sulfuric acid mist. Reducing SO<sub>2</sub> emissions is the only way to reduce the possibility of the secondary formation of sulfur trioxide and sulfuric acid mist. Sulfur dioxide will be controlled by BACT and was properly addressed in the facility's permits.

The commenter cites several technical documents studying sulfuric acid mist emissions from coal-fired power plants as justification for the

presence of sulfuric acid mist emissions at the Nucor pig iron facility. It should be noted that the Nucor facility does not propose to construct a coal-fired electric utility boiler. Although the coke ovens will process coal, and the HRSG units reclaiming heat from the process will generate steam to produce electricity, conflating this process with coal-fired electric boilers is not technically sound for several reasons. Metallurgical coal has significantly lower sulfur content than most thermal coals, and the majority of the coal mass entering a coke oven is retained in the coke product, including sulfur compounds, as opposed to fully combusted down to ash as in boiler operations. LDEQ has placed requirements in the permit for the applicant to conduct stack tests on all sources that employ SCRs, including tests for sulfuric acid mist.

(see Exhibit 6, pp. 140-43).

LDEQ's determination is arbitrary and capricious and without foundation in the record, for a number of reasons. As an initial matter, LDEQ did not cite to, or make available for public review, a single document supporting its arguments that SCR will not create sulfuric acid mist. LDEQ's argument that Nucor is not permitted to directly emit sulfuric acid mist from the pig iron emission units is directly contradicted by LDEQ's BACT determination for  $PM_{2.5}$  emissions from the coke ovens in Permit No. PSD-LA-740, in which LDEQ states:

Flue gas from the coke ovens contains  $PM_{2.5}$  generated from the combustion of the coke oven gas. Additionally, coals used as raw materials in the coke ovens contain a certain percentage of sulfur. A portion of the sulfur in the coal is retained in the coke product, and a portion is volatilized and combusted in the coke oven gas. The majority of combusted sulfur becomes  $SO_2$ , which is controlled by a lime slurry-based scrubbing system installed on the coke oven flue gas duct upstream of the particulate control device. A fraction of the sulfur in the gas may be combusted to form ionized  $SO_3$  at the high temperatures of the coke oven process. These  $SO_3$  radicals are known to combine with moisture to form sulfuric acid mist, which may contribute to  $PM_{2.5}$  emissions from the coke ovens in a secondary manner. An effective control strategy for  $PM_{2.5}$  emissions from the coke ovens should also address the need to reduce emissions of  $SO_3$ .

(see Exhibit 14, p. 36). LDEQ's argument that there is no need to control sulfuric acid mist emissions because Nucor is not permitted to emit  $SO_3$  and  $SO_3$  will only be formed in the

atmosphere lacks any support and is contradicted by the evidence in the record. LDEQ's argument that reducing SO<sub>2</sub> emissions is the only way to reduce sulfuric acid mist emissions is also unsupported and contradicted by the record -- the literature submitted by Zen-Noh demonstrates that SO<sub>3</sub> formation can be reduced by, among other things, selecting the proper SCR catalyst. A number of the PSD determinations for sulfuric acid mist generated by SCR also evaluated end-of-pipe controls to reduce SO<sub>3</sub>/sulfuric acid mist emissions -- much as LDEQ found necessary in Permit No. PSD-LA-740 (*see* Exhibit 14, p. 36; Exhibit 8, Att. 33, 47 and 58).

LDEQ does not provide any technical literature to support the distinction LDEQ draws between coke ovens and coal-fired boilers, or to support its statements that "metallurgical coal has significantly lower sulfur content than most thermal coals" and that "the majority of the coal mass entering a coke oven is retained in the coke product, including sulfur compounds, as opposed to fully combusted down to ash as in boiler operations." LDEQ does not identify the sulfur content of the coal Nucor will use or describe how that sulfur content compares to the coal that was the subject of the numerous studies cited and provided by Zen-Noh. Similarly, LDEQ also does not identify the percentage of sulfur compounds that will be retained in the coke at Nucor or explain how this compares to the percentage of sulfur compounds that is retained in bottom ash and fly ash. Moreover, LDEQ fails to show how the SO<sub>2</sub> to SO<sub>3</sub> conversion dynamics and rate would be any different whether the SCR unit is treating coke oven flue gas or coal-fired boiler flue gas. The literature provided by Zen-Noh shows that the conversion rate is affected by a number of variables (and by the type of catalyst). LDEQ has not presented a reasoned evaluation of any of these factors, supported on the record.

LDEQ fails to acknowledge the ultimate issue, which is *not* “whether SCR units will work identically in coke oven applications as they do in coal-fired boiler applications.” The real issue is whether adding SCR units on the pig iron sources will cause a significant increase in emissions of sulfuric acid mist and/or PM<sub>2.5</sub>. LDEQ simply has not evaluated this question, and certainly has not rebutted Zen-Noh’s demonstration that adding SCR will, in fact, cause a significant increase. Instead, LDEQ proposes to wait until the pig iron process commences operation, and to determine then whether sulfuric acid emissions are significant. The CAA and the SIP do not, however, authorize this “wait and see” approach. PSD is a *preconstruction* permit program, and *all* the evaluations required under PSD, including the BACT determination and air quality impact analyses -- which includes a NAAQS demonstration, preconstruction monitoring and additional impact analysis -- *before* commencing construction of the facility. 42 U.S.C. § 7475; LAC 33:III.509.J-K, M, and O. LDEQ’s failure to require or provide any of these evaluations for sulfuric acid mist emissions caused by the addition of SCR controls in the pig iron process violates PSD and the SIP, and LDEQ’s basis for deciding not to do is arbitrary and capricious and without reason or support on the record.

Moreover, a Part 70 permit modification is *not* an appropriate vehicle for implementing PSD. The PSD evaluations described above must be performed and documented in accordance with the procedures set forth in LAC 33:III.509. If the addition of SCR will significantly increase pig iron process sulfuric acid mist emissions, Nucor must obtain a new or revised PSD permit to install SCR, regardless whether SCR primarily is a control device. Only then can the SCR requirements be incorporated into the pig iron Part 70 permit. *Marine Shale Processors*, 81 F.3d at 1355; Hodanbasi Memo.

As to the DRI process, LDEQ cannot ignore the wealth of technical literature submitted by Zen-Noh, all of which demonstrates that the formation of sulfuric acid mist is not caused by the type of fuel burned but by stack conditions when the flue gases reach the SCR unit and the type of catalyst used. The type of fuel is relevant as to the quantity of SO<sub>2</sub> that is generated and therefore as to the *quantity* of sulfuric acid mist that is generated, but it does not determine *whether* sulfuric acid mist is generated. LDEQ claims to have reviewed "available literature" but did not cite any literature, data, calculation or scientific basis to dispute the fact that SO<sub>2</sub> will be generated by the DRI process and will be converted to sulfuric acid mist by the SCR units. LDEQ's response regarding BACT also misses the point of the comment (*see* Exhibit 6, p. 140). Although end-of-pipe control may be an option to reduce sulfuric acid mist emissions from SCR units, it is not the only option. LDEQ should have evaluated whether BACT for sulfuric acid mist emissions from the SCR units in the DRI and pig iron processes is the use of low conversion rate catalyst.

As to the comment that Nucor should have provided an ambient air quality analysis pursuant to LAC 33:III.5109.B, LDEQ responds only that this comment is "substantially the same" as the earlier comments (discussed above) and refers back to LDEQ's responses to those comments (*see* Exhibit 6, p. 230). However, none of the earlier comments discusses the fact that the Louisiana air toxics program -- pursuant to which Louisiana complies with and imposes maximum achievable control technology standards under § 112 of the Act -- requires a demonstration that sulfuric acid mist emissions as low as 75 pounds per year will not cause an exceedance of the Louisiana Ambient Air Standard. *See* LAC 33:III.5109.B.

LDEQ's decisions not to require Nucor to implement BACT for and evaluate air quality impacts of emissions of sulfuric acid mist, and to authorize construction of SCR units for the pig

iron process by way of a Part 70 permit modification, are not based on reasonable grounds nor properly supported on the record.

For all these reasons, EPA must object to the issuance of Permit No. 2560-00281-V1, with instructions to comply with PSD and the SIP before authorizing construction of SCR units in the pig iron process. In addition, EPA should object to the issuance of Permit No. PSD-LA-751 and Permit No. 3086-V0, with instructions that LDEQ require Nucor to quantify aggregate emissions of sulfuric acid mist from the DRI and pig iron processes and demonstrate that BACT for sulfuric acid mist emissions from SCR units will be employed and that these emissions will not cause unlawful or harmful air quality impacts, with an opportunity for the public to review and comment, as required by PSD, the SIP, and the Louisiana Air Toxics Program.

**Issue 4: LDEQ violated PSD and the SIP by issuing the DRI permits without requiring preconstruction ambient air quality monitoring.**

Zen-Noh presented technical literature, modeling results, and modeling files, demonstrating that aggregate emissions of SO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> from the DRI and pig iron processes will cause violations of the NAAQS for these pollutants (*see* Exhibit 8, pp. 65-106). Concentrations that violate an NAAQS necessarily exceed the “significant monitoring levels” listed in LAC 33:III.509.I.5. Therefore, the aggregate emissions from the DRI and pig iron processes trigger a nondiscretionary duty to provide preconstruction ambient air quality monitoring data for public review and comment before conducting a public hearing on the DRI PSD permit, pursuant to 42 U.S.C. § 7475(a) and LAC 33:III.509.M (*see* Exhibit 8, pp. 109-109). LDEQ’s response to this comment relies on LDEQ’s argument that emissions from the two processes do not need to be aggregated (*see* Exhibit 6, pp. 192-93), which, as shown above, is incorrect. LDEQ’s decision not to require preconstruction ambient air quality monitoring and

provide the results for public review and comment violates the requirements of the SIP and is not based on reasonable grounds nor properly supported on the record.

EPA must object to the issuance of Permit No. PSD-LA-751 and Permit No. 3086-V0, with instructions that LDEQ require preconstruction monitoring for SO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> -- at least -- and provide the results for public review and comment before re-issuing the permits for public hearing.

**Issue 5: The DRI permits violate PSD and the SIP because the Permit No. PSD-LA-751 does not include BACT determination with specific emission limitations and compliance provisions; therefore, Permit No. 3086-V0 does not incorporate all applicable requirements.**

A PSD permit must be a stand-alone document that “establishes emissions standards or other operational limits to be met; specifies methods for determining compliance and/or excess emissions, including reporting and recordkeeping requirements; and outlines the procedures necessary to maintain continuous compliance with the emission limits.” *See* NSR Manual, p. H.1. When a PSD permit “requires add-on controls operated at a specified efficiency level [i.e., BACT], permit writers should include, so that the operating efficiency condition is enforceable as a practical matter, those operating parameters and assumptions which the permitting agency depended upon to determine that the control equipment would have a given efficiency.” *See* Terrell E. Hunt, “Guidance on Limiting Potential to Emit in New Source Permitting,” June 13, 1989, p. 7. The proposed BACT must be shown to achieve the “continuous emission reduction,” *see* LAC 33:III.509.N.1.c, necessary in order to achieve compliance with the NAAQS.

Continuous emissions monitoring should be specified in the PSD permit unless infeasible, in which case surrogate monitoring parameters, e.g. opacity or pressure drop; should be specified. *See* NSR Manual, p. H.6; Guidance on Enforceability Requirements for Limiting Potential to Emit through SIP and § 112 Rules and General Permits, Kathie A. Stein, Jan. 25, 1995, pp. 8-9;

Operating and maintenance procedures for monitoring equipment should also be specified. *See* NSR Manual, p. H.7. Thus, BACT determinations in the specific conditions of a PSD permit must consist of three parts: (1) an emission rate limit; (2) the control technology that the limitation is based on; and (3) compliance assurance provisions. A *complete* BACT determination in a PSD permit -- including the three elements necessary to assure continuous emission reductions -- is an "applicable requirement," *see* LAC 33:III.502.A, that must be incorporated into the source's title V permit. 42 U.S.C. § 7661c(a); LAC 33:III.A.3.

The DRI permits do not comply with PSD, title V or the SIP because the Specific Conditions in Permit No. PSD-LA-751 do not establish specific maximum emission rates or compliance assurance provisions (*see* Exhibit 8, pp. 9, 11-12). Instead, the emission limits and compliance assurance provisions were written into Part 70 Permit No. 3086-V0 and incorporated into the PSD permit by reference, in Specific Condition #6 (Specific Condition #8 in the draft permit), which provides: "All emission limitations, monitoring, recordkeeping, and reporting requirements of Permit No. 3086-V0 related to TSP/PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and CO<sub>2</sub>e emissions are also terms and conditions of this PSD permit."

In response to comments, LDEQ states:

*... The commenter identifies no specific condition or BACT determination that fails to include the three elements cited above [emission limitation, identification of control technology, and compliance provisions]. LDEQ's BACT determinations are set forth in the Preliminary Determination Summary. Translation of these determinations into permit conditions is accomplished in the Part 70 permit. The Specific Requirements in the Part 70 permit are worded to ensure practical enforceability of the final conditions.*

(*see* Exhibit 6, pp. 92-93) (emphasis added). And,

According to the signature page of Permit No. 3086-V0, the permit is "both a state preconstruction and Part 70 Operating Permit." Procedurally, LDEQ issues PSD and Part 70 (Title V) permits concurrently as a matter

of course. As per 40 CFR 70.6(c)(1), Part 70 permits must contain "testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit," and the BACT limitations established by the PSD have been incorporated into the Title V.

LDEQ notes that the NSR Manual predates EPA's Part 70 Operating Permits Program, even the Clean Air Act Amendments of 1990, the statutory basis of the Title V program. Thus, it is easy to understand why this document suggests that practically enforceable conditions should be included in a PSD permit to ensure the BACT limitations are met -- Title V permits, which must include "emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of permit issuance" per 40 CFR 70.6(a)(1), did not exist. Given today's regulatory framework and the fact that LDEQ requires an applicant to secure a Part 70 permit before construction commences, *it is simply improper to review a PSD permit in isolation.*

The reference to Permit No. 2560-00281-V0 in Specific Condition 8 of proposed PSD-LA-751 is a typographical error. This condition should read, "All emission limitations, monitoring, recordkeeping, and reporting requirements of Permit No. 3086-V0 related to TSP/PM<sub>10</sub>/PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, and CO<sub>2e</sub> emissions are also terms and conditions of this PSD permit." LDEQ believes such a requirement is preferable, *from an administrative perspective*, to establishing numerous conditions in PSD-LA-751 identical to those set forth in Permit No. 3086-V0.

The commenter states that PSD permits may not incorporate any condition of a Title V permit. The Clean Air Act does not require such a distinction. LDEQ has historically issued PSD and Part 70 permits in tandem, making the required PSD determinations in the PSD permit and translating those determinations into permit language in the Part 70 permit. By so doing, LDEQ has provided public notice opportunities for challenge beyond what is required by the PSD program. With respect to the commenter's assertion that PSD and Part 70 may not be combined, LDEQ notes that *EPA has approved, as fully meeting both PSD and Title V requirements, unitary permit programs that make no distinction between preconstruction and operating permit requirements.* The commenter's assertion that LDEQ's long standing permitting practice is inconsistent with the Clean Air Act is without merit.

The PSD permit does establish emission limitations based upon the BACT review of each source. *The Title V operating permit acts as the enforcement tool for PSD conditions*, and requirements for specific monitoring actions and compliance demonstrations, such as operating

parameters and performance tests, are contained within that document. These conditions are clearly "enforceable as a practical manner."

(*id.*, pp. 95-96) (emphasis added).

As an initial matter, LDEQ's failure to provide a reasoned comment because the comment "identifies no specific condition or BACT determination that fails to include the three elements" of a BACT determination is arbitrary and capricious and not supported by the record. In fact, *none* of the BACT determinations in the Specific Conditions includes a practicably enforceable hourly emission rate or any testing, monitoring, recordkeeping or reporting requirements. It is not Zen-Noh's duty to point to each individual BACT determination -- it is LDEQ's duty to draft a permit that complies with the requirements of PSD. Nonetheless, by way of example, the Specific Conditions in the DRI PSD permit does not include a practicably enforceable emission limitation, in terms of pounds per hour, for SO<sub>2</sub> or PM<sub>10</sub>, or any compliance assurance provisions, for the reformer/main flue gas stacks (DRI-108/DRI-208) and the acid gas absorption vent (DRI-111/DRI-211). Table 2 does include "maximum allowable emission rates," in terms of lb/MMBTU (SO<sub>2</sub>) and gr/dscf (PM<sub>10</sub>) for the reformers and tons per year (SO<sub>2</sub> and PM<sub>10</sub>) for the acid gas absorption vents. The Part 70 permit, on the other hand, identifies a BACT emission rate for PM<sub>10</sub> emissions from the reformers, but it is in terms of lb/MMBTU. The Part 70 permit does not include any BACT emission rate for SO<sub>2</sub> emissions from either the reformers or the acid gas absorption vents. The Part 70 permit also does not include any compliance assurance provisions for these BACT "determinations." In other words, at least as to these emission units, Specific Condition No. 6 is empty, and fails to meet the requirements of PSD.

The fallacy of LDEQ's argument is illustrated by another example. The preliminary determination summary in the PSD permit includes a BACT "review" for the upper seal gas

vents (DRI-106/DRI-206), but this review lacks anything approaching the top-down BACT analysis required under PSD and the SIP (*see* Exhibit 1, pp. 56-57). There is a brief discussion of the emission units, but no identification and review of feasible control alternatives, no elimination of technically or economically infeasible options, and no ranking of remaining options. Instead, LDEQ states that “BACT for VOC and CO were already determined” and that “[s]ulfur dioxide and particulate matter BACT was determined to treat the spent reducing gas being sent to the Reformer as combustion fuel and *so no additional control is feasible* for the seal gas” (*id.*) (emphasis added). There is absolutely no explanation of how LDEQ arrived at these conclusions. Similarly, for furnace dedusting (DRI-107/DRI-207) and DRI product storage silos (DRI-112/DRI212), LDEQ says that “[r]emoval and control of air borne particulate is also subject to BACT analysis,” but LDEQ does not provide the analysis (*id.*).

Table 1 in the Specific Conditions (*id.*, pp. 77-78), identifies a selected BACT for PM<sub>10</sub>/PM<sub>2.5</sub> for these sources, but there is no selected BACT for SO<sub>2</sub>, CO or NO<sub>x</sub>. Then, in Table 2 of the Specific Conditions (*id.*, p. 79), LDEQ identifies the Maximum Allowable Emissions Rates for SO<sub>2</sub>, NO<sub>x</sub> and CO from the upper seal gas vents and for NO<sub>x</sub> and CO from the furnace dedusting and product storage silos. These emission rates were copied from the table of Emission Rates for Criteria Pollutants in the DRI Part 70 permit (*see* Exhibit 2), which LDEQ argues is appropriate. However, none of these BACT “determinations” is reflected in the Specific Requirements for these sources. In other words, LDEQ has taken the emission rates that Nucor provided in its emission calculations (which is all that the Emission Rates for Criteria Pollutants represents), and made them appear to be “BACT” by copying them into the Specific Conditions, Table 2. This is *not* BACT and does not comply with PSD or the SIP. These emission rates do not a reasoned determination of what BACT should be and they are not

practicably enforceable, either in the PSD permit or the Part 70 permit. Thus, LDEQ's approach allowed LDEQ to skirt the requirements of PSD while appearing to comply. LDEQ should be required to provide a compliant BACT determination for all these sources and pollutants and to incorporate that determination into the Specific Conditions, with emission rates, control technologies, and compliance assurance provisions.

In addition, none of the emission limits in the PSD permit or Part 70 assures that the DRI process will achieve the continuous emission reductions necessary to demonstrate compliance with the NAAQS. The modeling performed by Nucor was based on maximum hourly emission rates for each source. The Specific Conditions in the PSD also should be -- but are not -- expressed in the same terms. At a minimum, the Specific Conditions should include practicably enforceable operating limits, such as limits on natural gas usage and monitoring requirements to assure compliance. Again, LDEQ did not include such terms in the PSD permit. Moreover, even if it were possible to incorporate title V permit conditions into a PSD permit, the DRI Part 70 permit does not, as discussed above, include operational limits and monitoring requirements necessary to show that the continuous emission reductions necessary to demonstrate compliance with the NAAQS will be achieved.

In addition, LDEQ's interpretation of PSD and Part 70 as being "unitary" or two parts of a single "permit" is contrary to the CAA and the SIP. BACT determinations can *only* be made in the context of a PSD permit, through the process described in the SIP, LAC 33:III.509, and in compliance with 42 U.S.C. § 7475. *United States v. Marine Shale Processors*, 81 F.3d 1329, 1355 (5th Cir. 1996) (discussing the distinction between the PSD and title V permit processes and holding that "the permitting authority must determine [as part of the PSD permit review] whether the proposed construction or modification would violate [the] state's emissions control

strategy or interfere with attainment or maintenance of CAA air quality standards”). This includes emission limitations and compliance assurance provisions, which are necessary to assure that the chosen BACT will provide the continuous emission reductions that are relied upon when the applicant completes the air quality impact analysis and NAAQS compliance determination. And it is only through the PSD program that the public is assured the opportunity to participate in the decision-making process, as Congress intended. *See* 42 U.S.C. § 7470(5), § 7475(a)(2). LDEQ may provide a similar public participation opportunity when issuing title V permits, but it is not *assured*, and title V does not provide the same legal recourse that PSD provides. For example, public comment cannot change or make more stringent an applicable requirement incorporated into a title V permit, as that would be an impermissible collateral attack on the underlying permit. On the other hand, public comment can, and should, make a difference as to the level of control that is selected as BACT in a PSD permit. In other words, LDEQ is incorrect -- PSD permits *are* reviewed in isolation, and are judged solely by whether they comply with the requirements of PSD and the SIP.

Title V permits, on the other hand, are not reviewed in isolation. Obtaining a title V permit does not excuse the failure to obtain a PSD permit. 42 U.S.C. § 7661a(a). It may be that EPA has approved unitary programs, but those programs are different from LDEQ’s separate PSD/Part 70 programs -- a permit issued through a unitary program *must* comply with PSD, whereas a Part 70 permit issued by LDEQ does not. When, as in Louisiana, PSD and title V permits are issued separately but concurrently, the PSD permit is review in isolation, while the title V permit is reviewed in conjunction with all the applicable requirements it must incorporate, including the underlying PSD permit.

LDEQ is also wrong when it argues that “[t]he title V permit acts as the enforcement tool for PSD conditions” and that incorporating title V permit conditions into a PSD permit is preferable, “from an administrative perspective,” to establishing conditions in the PSD permit that are identical to conditions in the title V permit. A title V permit is *an* enforcement tool for applicable requirements in general, but is not *the* enforcement tool for underlying conditions imposed by way of a PSD permit. Congress has specifically provided an enforcement tool authorizing citizens to commence a civil action against any person who violates “any condition of such permit” issued under PSD. 42 U.S.C. § 7604(a)(3). LDEQ may not take away that right by failing to comply with the procedural requirement to incorporate specific emission limits and compliance assurance provisions for each BACT determination in the PSD permit.

Furthermore, it may be easier for LDEQ, “from an administrative perspective,” not to be required to duplicate specific BACT conditions from the title V permit into the PSD, but LDEQ’s argument is wrong for several reasons. As discussed above, PSD requires that specific BACT conditions be incorporated in the PSD permit, and title V requires that these specific conditions, which are “applicable requirements,” be incorporated into the title V permit. *All* BACT conditions -- including emission rates, control technologies and compliance assurance provisions -- must be copied or otherwise transferred from the PSD permit to the title V permit. It is of no consequence whether this creates an administrative burden on LDEQ.

Another example illustrates the pitfalls of LDEQ’s attempt to keep things easier “from an administrative perspective” by not, as a routine matter, developing complete and practicably enforceable BACT requirements in the PSD permit and then transferring *all* applicable requirements from the PSD permit to the Part 70 permit. In the preliminary determination summary, LDEQ determines that BACT for PM<sub>10</sub>/PM<sub>2.5</sub> emissions from sources DRI-101/DRI-

201, DRI-102/DRI-202, and DRI-105/DRI-205 is a “fabric filter baghouse achieving at least 99.5% control of PM<sub>10</sub>/PM<sub>2.5</sub>” (see Exhibit 1, pp. 12-17). In Table 2 of the Specific Conditions, this determination is watered down to read “fabric filter with enhanced filter media,” (*id.*, p. 76), and in the Part 70 permit the BACT determination is further watered down to read “Particulate matter (10 microns or less)  $\leq$  0.002 gr/dscf” (see Exhibit 2, pp. 29-30, 32, 45-46, 48). This requirement does not apply to PM<sub>2.5</sub> and is not equivalent to the BACT determination in the preliminary determination summary. If LDEQ had followed the procedural requirements in the SIP, the full BACT determination -- including BACT would have been incorporated in the Specific Conditions of the PSD permit and the Specific Requirements of the Part 70 permit.<sup>4</sup>

For all these reasons, the failure to identify specific BACT emission limits and compliance assurance provisions for all emission units and all pollutants in the Specific Conditions of Permit No. PSD-LA-751, the empty incorporation of terms and conditions from Permit No. 3086-V0 into the PSD permit, and the failure to incorporate all applicable requirements from the PSD permit into the Part 70 permit, violate the procedural requirements of PSD, the SIP and title V, and LDEQ’s determination to issue the permits in this fashion is not based on reasonable grounds nor supported on the record.

EPA must object to the issuance of Permit No. PSD-LA-751 and Permit No. 3086-V0, with instructions to make complete BACT determinations, including emission rates expressed in appropriate terms and appropriate compliance assurance provisions, in Permit No. PSD-LA-751, and to incorporate specifically (not by reference) all such applicable requirements into Permit No. 3086-V0.

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<sup>4</sup> Zen-Noh identified a number of discrepancies between the PSD permit and Part 70 permit, similar to those discussed here, in the January 3, 2011 comments (see Exhibit 8, pp. 112-139). Zen-Noh incorporates those comments in their entirety into this petition by reference.

**Issue 6: LDEQ violated PSD and the SIP by issuing the DRI permits and the pig iron Part 70 permit modification without a BACT emission limitation for PM<sub>2.5</sub>.**

The initial pig iron title V permit, No. 2560-00281-V0, included a potential to emit for PM<sub>2.5</sub> but did not include a PM<sub>2.5</sub> emission limitation. In Nucor's Part 70 permit modification application, Nucor stated that it did not include a potential to emit or emission limitation for PM<sub>2.5</sub> in the modification because PM<sub>10</sub> was being used as a surrogate for PM<sub>2.5</sub>. EPA commented:

The proposed permit modification does not contain a PM<sub>2.5</sub> potential to emit, even though it was included in the initial Title V permit No. 2560-00281-V0 issued May 24, 2010. The permit modification application submitted by Nucor states that "current USEPA guidance recommends that PM<sub>10</sub> should be used as a surrogate for PM<sub>2.5</sub> in the PSD program, which has been done in this application. Accordingly, discussion of PM<sub>10</sub> should be regarded as also addressing PM<sub>2.5</sub>." LDEQ should provide a rationale as to why PM<sub>10</sub> is an appropriate surrogate for PM<sub>2.5</sub> in this case. Please clarify this issue in the proposed permit and permitting record.

(see Exhibit 6, p. 53).

LDEQ admitted in its response that Permit No. 2560-00281-V0 did not include emissions limits for PM<sub>2.5</sub> because it claimed that PM<sub>10</sub> is an adequate surrogate for PM<sub>2.5</sub>. However LDEQ did not provide any rationale for this claim, much less technical support demonstrating that PM<sub>10</sub> is an adequate surrogate for PM<sub>2.5</sub>. Specifically, LDEQ responded:

Permit No. 2560-00281-V0 does not contain emissions limits for PM<sub>2.5</sub>. As explained in LDEQ's Response to Comment No. 5 associated with the original Title V, LDEQ concluded:

"Nucor provided a top-down BACT analysis for PM<sub>2.5</sub>. LDEQ reviewed the analysis and agrees with its conclusion that there are no feasible control technologies or combination of control technologies capable of controlling PM<sub>2.5</sub> to a higher level than the PM<sub>10</sub> control technology originally identified as BACT. Further, modeling results have demonstrated that Nucor's emissions will not result in violations of the annual and 24-hour PM<sub>2.5</sub> NAAQS. The combination of the BACT analysis, together with the modeling results for PM<sub>2.5</sub> are consistent with

the results for PM<sub>10</sub> demonstrating that PM<sub>10</sub> is, in fact, an adequate surrogate for PM<sub>2.5</sub>.”

Permit No. 2560-00281-VI reflects a significant decrease in both PM<sub>10</sub> and PM<sub>2.5</sub> emissions, and does not propose new physical changes or changes in the method of operation.

(*Id.*).

LDEQ violated the SIP by failing to require an emission limitation for PM<sub>2.5</sub> for the DRI permits and the initial pig iron Title V permit and modification, and by failing to provide any technical documentation or explanation for its supposed determination that PM<sub>10</sub> is an adequate surrogate for PM<sub>2.5</sub>

The DRI permits similarly did not include any potential to emit or emission limitation for PM<sub>2.5</sub>. EPA commented, with respect to the DRI permits:

The draft Title V and PSD permits do not include a PM<sub>2.5</sub> potential to emit, and LDEQ's record should justify why PM<sub>10</sub> is an adequate surrogate for PM<sub>2.5</sub> in this case. Additionally, the PM<sub>2.5</sub> BACT requirements from the PSD permit have not been included in the Title V permit. LDEQ needs to ensure all the requirements of the BACT determination are carried forward to the Title V permit. Additionally, LDEQ needs to ensure the BACT determination requirements are supported by appropriate monitoring; recordkeeping and reporting in the Title V permit to ensure these requirements are practically enforceable.

(*Id.*, p. 57).

LDEQ responded:

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.*, pp. 57-58) (emphasis added).

Yet LDEQ has only included a PM<sub>2.5</sub> emissions limitation in the initial Part 70 DRI—not in the DRI PSD permit or the pig iron permits. Evidently LDEQ is continuing to rely on its

unsupported, unsubstantiated "determination" that PM<sub>10</sub> is an adequate surrogate for PM<sub>2.5</sub>. The failure to include PM<sub>2.5</sub> emission limitations is a violation of PSD and the SIP.

Nucor's BACT analyses include a separate top-down BACT analysis for PM<sub>10</sub> and PM<sub>2.5</sub>. However, LDEQ combined the two analyses and failed to set separate BACT emission limitations for PM<sub>10</sub> and PM<sub>2.5</sub> in either the PSD permit or part 70 permit for the DRI process. BACT must be selected "for each pollutant subject to regulation." 42 U.S.C. § 7475(a)(4). BACT is an emission limitation "based on the maximum degree of reduction for each pollutant subject to regulation under [PSD] that would be emitted from [the source]." 42 U.S.C. § 7479(3); LAC 33:111.509.A. PM<sub>10</sub> and PM<sub>2.5</sub> are *not* the same pollutant and are subject to different NAAQS standards. Moreover, a given control different control technologies may (and generally will) provide a different degree of reduction for PM<sub>10</sub> than for PM<sub>2.5</sub>, and a technology that is BACT for PM<sub>10</sub> emissions from a source might not be BACT for PM<sub>2.5</sub> emissions from the same source. LDEQ should have required separate BACT analyses for PM<sub>10</sub> and PM<sub>2.5</sub> emissions from each DRI source.

EPA must object to the issuance of Permit No. PSD-LA-751, Permit No. 3086-V0 and Permit No. 2560-00281-V1, with instructions to make incorporate complete BACT determinations for PM<sub>2.5</sub>, including emission limitations for PM<sub>2.5</sub>, in the PSD permit and Part 70 permits.

**Issue 7: BACT determinations in Permit No. PSD-LA-751 do not comply with the requirements of PSD and the SIP.**

The DRI PSD permit violates the CAA and the SIP because there are a number of serious deficiencies with the BACT determinations that were included in the PSD Permit, and there are a

number of instances in which LDEQ has completely failed to require Nucor to demonstrate BACT for major sources of regulated NSR pollutants.

Section 165(a)(4) of the CAA provides that a new major source of air pollution proposed to be constructed in an area that is in attainment with all national ambient air quality standards, such as Nucor, is subject to PSD permitting requirements. These requirements are incorporated into Louisiana regulations at LAC 33:III.509. One of the principle requirements of the PSD regulations is that the major source must install and operate best available control technology or BACT for each pollutant subject to regulation under the Act. 42 U.S.C. § 7475(a)(4); LAC 33:III.509.B. The requirements for conducting a BACT analysis are codified in the definition of BACT:

*Best Available Control Technology (BACT)—*

a. an emissions limitation, including a visible emission standard, based on the maximum degree of reduction for each pollutant subject to regulation under this Section that would be emitted from any proposed major stationary source or major modification that the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant;

b. in no event shall application of *best available control technology* result in emissions of any pollutant that would exceed the emissions allowed by an applicable standard under 40 CFR Parts 60 and 61. If the administrative authority determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of *best available control technology*. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice, or operation, and shall provide for compliance by means that achieve equivalent results.

LAC 33:III.509.B.

To ensure that the BACT determination is “reasonably moored” to the CAA’s statutory requirements, this definition is generally implemented by following the top-down BACT process as set out in the New Source Review Workshop Manual: Prevention of Significant Deterioration and Nonattainment Area Permitting, Draft, October 1990 (“NSR Manual”), a guidance document issued by EPA’s Office of Air Quality Planning and Standards in 1990. The NSR Manual’s approach is structured to take into account all of the elements in the regulatory definition of BACT. See *Knauf Fiber Glass, GmbH*, 8 E.A.D., 121, 129 (EAB 1999). The LDEQ’s BACT analysis is contained in the Preliminary Determination Summary (“PDS”). The top-down BACT process consists of five-steps:

- STEP 1: Identify all control technologies. This list must be comprehensive and include all “Lowest Achievable Emission Rates” (“LAER”)
- STEP 2: Eliminate technically infeasible options. A demonstration of technical infeasibility should be clearly documented and must show, based on physical, chemical, and engineering principles, that technical difficulties would preclude the successful use of the control option on the emissions unit under review.
- STEP 3: Rank remaining control technologies by control effectiveness. This must include:
  - control effectiveness (percent pollutant removed);
  - expected emission rate (tons per year);
  - expected emission reduction (tons per year);
  - energy impacts (Btu/kWh);
  - environmental impacts (other media and the emissions of toxic and hazardous air emissions); and
  - economic impacts (total cost effectiveness, incremental cost effectiveness)
- STEP 4: Evaluate most effective controls and document results. This must include a case-by-case consideration of energy, environmental, and economic impacts. If top option is not selected as BACT, evaluate next most effective control option.
- STEP 5: Select most effective option not rejected as BACT.

See NSR Manual, Table B-1.

In addition, as discussed above, the BACT determination must incorporate the practicably enforceable emission limitation that the source relies upon to demonstrate compliance with the NAAQS and compliance assurance provisions, such as testing, monitoring and recordkeeping requirements.

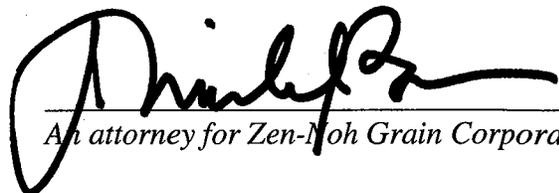
LDEQ repeatedly failed to conduct proper top-down BACT analyses, including 1) basing its BACT decisions on factors that are not authorized under PSD and the SIP, and not supported by the evidence; 2) failing to provide reasoned bases supported by evidence for its BACT decisions; and 3) failing to provide reasoned and individualized responses supported by the evidence to comments regarding BACT, or the lack thereof, for particular emission sources. LDEQ also failed to incorporate in the PSD permit practicably enforceable emission limitations that are tied to the NAAQS demonstration and appropriate compliance assurance provisions. As a result, the DRI PSD permit -- and by extension the DRI Part 70 permit -- does not actually apply or impose BACT for major sources of regulated NSR pollutants and do not assure that the DRI process will achieve the continuous emission reductions necessary to maintain compliance with the NAAQS. Zen-Noh identifies and discusses these issues at length in the January 3, 2011 comments (*see* Exhibit 8, pp. 4-61, 38-139; Exhibit 9, pp. 1-5, 7-8), which comments, arguments and supporting evidence Zen-Noh incorporates herein by reference.

EPA should object to the issuance of Permit No. PSD-LA-751 and Permit No. 3086-V0, with instructions that LDEQ provide top-down BACT determinations, properly documented in the record with sufficient technical support documentation, and appropriate emission limitations and compliance assurance provisions in the PSD permit, and to incorporate these applicable requirements in the Part 70 permit.

## CONCLUSION

For all the foregoing reasons, the issuance of Permit No. 3086-V0, Permit No. PSD-LA-751, and Permit No. 2560-00281-V1 violates the procedural requirements of the CAA and SIP, and is not based on reasonable grounds properly supported on the record. Pursuant to 42 U.S.C. § 7661d(b)(2), EPA should object to the issuance of the permits within 60 days of receipt of this petition, and should revoke the permits pursuant to 42 U.S.C. § 7661d(b)(3).

Respectfully submitted,



*An attorney for Zen-Noh Grain Corporation*

James G. Burke, Jr.  
Paul N. Vance  
BALDWIN HASPEL BURKE & MAYER LLC  
1100 Poydras Street, Suite 2200  
New Orleans, LA 70163  
(504) 569-2900

J. Michael Bowman  
Daniel P. Cory  
PLEWS SHADLEY RACHER & BRAUN LLP  
1346 N. Delaware Street  
Indianapolis, IN 46202  
(317) 637-0700

**CERTIFICATE OF SERVICE**

The undersigned certifies that a copy of the foregoing, with exhibits, was served upon the following by certified first class United States mail, return receipt requested, proper postage affixed, this 3rd day of May, 2011:

Administrator Lisa P. Jackson  
Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460

Al Armendariz, Regional Administrator  
Environmental Protection Agency, Region 6  
1445 Ross Avenue, Suite 1200  
Dallas, TX 75202

Peggy M. Hatch, Secretary  
Louisiana Department of Environmental Quality  
P.O. Box 4301  
Baton Rouge, LA 70821-4301

R. Joseph Stratman, Executive Vice President  
Nucor Corporation  
1915 Rexford Road  
Charlotte, NC 28211

A handwritten signature in black ink, appearing to read "J. Milner", written over a horizontal line.

**Petition to Object to Title V and PSD Permits for DRI Manufacturing Process and Modified Title V Permit for Pig Iron Manufacturing Process at the Nucor Steel – Louisiana Facility, filed May 3, 2011 by Zen-Noh Grain Corporation**

**EXHIBIT LIST\***

- Exhibit 1: PSD Permit No. PSD-LA-751
- Exhibit 2: Part 70 Permit No. 3086-V0
- Exhibit 3: Part 70 Permit No. 2560-00281-V1
- Exhibit 4: Basis for Decision, Permit Nos. PSD-LA-751 and 3086-V0
- Exhibit 5: Basis for Decision, Permit No. 2560-00281-V1
- Exhibit 6: Public Comments Response Summary, Permit Nos. PSD-LA-751, 3086-V0, and 2560-00281-V1
- Exhibit 7: Stay of Effectiveness of Permit No. 2560-00281-V1
- Exhibit 8: Zen-Noh Grain Corporation Comments and Objections, Jan. 3, 2011, with attachments
- Exhibit 9: Zen-Noh Grain Corporation Supplemental Comments and Objections, Jan. 3, 2011
- Exhibit 10: June 26, 2009 Application for PSD and Part 70 permits for pig iron process
- Exhibit 11: Public Notice and draft permits, March 10, 2010
- Exhibit 12: Zen-Noh Grain Corporation Comments, April 19, 2010, with exhibits
- Exhibit 13: Zen-Noh Grain Corporation Comments, May 3, 2010, with exhibits
- Exhibit 14: PSD Permit No. PSD-LA-740
- Exhibit 15: Part 70 Permit No. 2560-00281-V0
- Exhibit 16: Public Comments Response Summary, Permit Nos. PSD-LA-740 and 2560-00281-V0
- Exhibit 17: August 20, 2010 Application for PSD and Part 70 permits for DRI process
- Exhibit 18: September 24, 2010 Addendum to DRI permit application
- Exhibit 19A: October 22, 2010 Addendum to Initial Part 70 Application
- Exhibit 19B: October 22, 2010 Direct Reduced Iron GHG BACT Analysis
- Exhibit 20: October 14, 2010 Part 70 Permit Modification Application
- Exhibit 21: October 28, 2010 Addendum to Part 70 Permit Minor Modification Application
- Exhibit 22: Public Notice and draft PSD permit and Part 70 permit for DRI process, November 24, 2010
- Exhibit 23: Public Notice and draft Part 70 permit modification for pig iron process, November 24, 2010

- Exhibit 24: EPA Region 6 comments on Public Comment Response Summary for Permit Nos. 2560-00281-V1, 3086-V0 and PSD-LA-751, March 4, 1011
- Exhibit 25: EPA Region 6 comments on proposed Permit Nos. 2560-00281-V1 and 3086-V0, Jan. 7, 2011
- Exhibit 26: June 25, 2010 Petition to EPA.
- Exhibit 27: Withdrawn
- Exhibit 28: Withdrawn
- Exhibit 29: Request for Administrative Hearing Respecting Control Technology Determinations, filed by Nucor Steel Louisiana, Feb. 28, 2011
- Exhibit 30: Cooperative Endeavor Agreement between State of Louisiana, Louisiana Department of Economic Development, Parish of St. James Parish, State of Louisiana, Nucor Steel Louisiana LLC and Nucor Corporation, dated Sept. 15, 2010

\* The Exhibits listed above, and attachments to Exhibit 8, are produced in Adobe Acrobat® format on the enclosed compact disk.