BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF:

CONSOLIDATED ENVIRONMENTAL MANAGEMENT, INC. – NUCOR STEEL LOUISIANA

PIG IRON AND DRI MANUFACTURING IN ST. JAMES PARISH, LOUISIANA

ORDER RESPONDING TO PETITIONER’S REQUEST THAT THE ADMINISTRATOR OBJECT TO THE ISSUANCE OF TITLE V OPERATING PERMITS

PERMIT NUMBERS: 2560-0028-V0, 3086-V0, AND 2560-0028-V1

ISSUED BY THE LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Petition Number VI-2010-02 & Petition Number VI-2011-03

ORDER GRANTING PETITIONS FOR OBJECTION TO PERMITS

INTRODUCTION

This order responds to two related petitions, brought pursuant to authorities including Section 505(b)(2) of the Clean Air Act ("CAA" or the "Act"), 42 United States Code ("U.S.C.") § 7661d(b)(2), asking, in relevant part, that the Administrator of the Environmental Protection Agency ("EPA" or the "Administrator") object to three title V permits. The title V permits were issued by the Louisiana Department of Environmental Quality ("LDEQ") to Consolidated Environmental Management, Inc. - Nucor Steel Louisiana ("Nucor") for a pig iron manufacturing process (the "pig iron process") and a direct reduced iron manufacturing process (the "DRI process") located in Convent (St. James Parish), Louisiana.

On June 25, 2010, the EPA received the first petition (the "2010 Petition") from Zen-Noh Grain Corporation ("Zen-Noh" or "Petitioner"), requesting, in relevant part, that the Administrator object to the Part 70 permit issued by LDEQ on May 24, 2010, for Nucor’s pig iron process (the "pig iron title V permit") (2560-0028-V0). The pig iron title V permit is a state Part 70 operating permit, issued pursuant to title V of the Act, 42 U.S.C. §§ 7661-7661f.

On May 3, 2011, Zen-Noh submitted a second petition (the "2011 Petition") requesting, in relevant part, that the Administrator object to two Part 70 permits issued by LDEQ on January
27, 2011—first, a modified Part 70 permit for the pig iron process (the “modified pig iron title V permit”) (2560-0028-V1) and second, a new title V permit for the DRI process (the “DRI title V permit”) (3086-V0). The modified pig iron title V permit and the DRI title V permit are state operating permits, issued pursuant to title V of the Act,\(^1\) 42 U.S.C. §§ 7661-7661f.

Following the submittal of the 2011 Petition, the Administrator agreed to respond to both petitions by March 16, 2012, to the extent that such response is required under 42 U.S.C. § 7661d(b)(2). This response satisfies EPA’s duty to respond to Zen Noh’s 2010 and 2011 Petitions under CAA § 505(b)(2), 42 U.S.C. § 7661d(b)(2). Following is a summary of the more than 80 specific issues raised in the three petitions. In the 2010 Petition for the pig iron title V permit, the Petitioner makes the following claims: (1) The Best Achievable Control Technology (“BACT”) determinations are unsupported and inadequate under the Prevention of Significant Deterioration program (“PSD”) and Louisiana’s State Implementation Plan (“SIP”); (2) LDEQ failed to require BACT for major sources of pollutants; (3) LDEQ failed to require reliable ambient air quality modeling to ensure that the facility’s emissions will not cause an exceedance of a national ambient air quality standard (NAAQS) or PSD increment; (4) LDEQ unlawfully issued the permits without requiring preconstruction monitoring for particulate matter less than 10 microns (PM\(_{10}\)), sulfur dioxide (SO\(_2\)), hydrogen sulfide (H\(_2\)S), total reduced sulfur (TRS) and sulfuric acid mist; and (5) LDEQ unlawfully issued the pig iron PSD permit without providing the required opportunity for public participation in the decision-making process.

Also, in the 2011 Petition for the modified title V pig iron permit and for the DRI title V permit, the Petitioner makes the following claims: (1) Permitting construction of the DRI process and pig iron process as separate projects unlawfully circumvents the requirements of PSD and the Louisiana SIP; (2) The ambient air quality analysis to demonstrate compliance with the nitrogen dioxide (“NO\(_2\)”) NAAQS unlawfully relied on the elimination of heat recovery steam generator (“HRSG”) bypass vents on the coke ovens and installation of selective catalytic reduction (“SCR”) control devices on pig iron emission units, even though these emission reductions are not federally enforceable; (3) Authorizing installation of SCR control devices by way of the modified pig iron title V permit violates PSD and the SIP because SCR will significantly increase emissions of sulfuric acid mist; (4) LDEQ violated PSD and the SIP by issuing the DRI permits without preconstruction ambient air quality monitoring; (5) The DRI permits violate PSD and the SIP because the DRI PSD permit does not include BACT determinations with specific emission limitations and compliance provisions; therefore, the DRI title V permit does not incorporate all applicable requirements; (6) LDEQ violated PSD and the SIP by issuing the DRI permits and the modified pig iron title V permit without a BACT emission limitation for particulate matter less than 2.5 microns (PM\(_{2.5}\)); and (7) the BACT determinations in the DRI PSD permit do not comply with the requirements of PSD and the SIP.

The EPA has reviewed these allegations pursuant to the standard set forth in section 505(b)(2) of the Act, which requires the Administrator to issue an objection if the Petitioner demonstrates to the Administrator that the permit is not in compliance with the requirements of

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\(^1\) For the sake of clarity, we adopt the following naming convention for the various title V and PSD permits that have been issued for Nucor and discussed in this Order: the “pig iron title V permit” for Permit # 2560-0028-V0; the “pig iron PSD permit” for Permit # PSD-LA-740; the “modified pig iron title V permit” for Permit # 2560-0028-V1; the “DRI title V permit” for Permit # 3086-V0; and the “DRI PSD permit” for Permit # PSD-LA-751.
Based on a review of the Petitions and other relevant materials, including the Permits and Permit records, and relevant statutory and regulatory authorities, I grant the 2010 and 2011 Petitions requesting the Administrator to object to the three title V permits as described below.

STATUTORY AND REGULATORY FRAMEWORK

Section 502(d)(1) of the Act, 42 U.S.C. § 7661a(d)(1), requires each state to develop and submit to the EPA an operating permit program intended to meet the requirements of title V of the CAA. The state of Louisiana submitted a title V program governing the issuance of operating permits on November 15, 1993, and revised this program on November 10, 1994. 40 C.F.R. Part 70, Appendix A. In September 1995, the EPA granted full approval to Louisiana’s title V operating permits program. 60 Federal Register (“Fed. Reg.”) 47,296 (September 12, 1995); 40 C.F.R. Part 70, Appendix A. This program, which became effective on October 12, 1995, was codified in Louisiana Administrative Code (L.A.C.), Title 33, Part III, Chapter 5.

All major stationary sources of air pollution and certain other sources are required to apply for title V operating permits that include emission limitations and such other conditions as are necessary to assure compliance with applicable requirements of the CAA, including the requirements of the applicable SIP. See CAA §§ 502(a) and 504(a), 42 U.S.C. §§ 7661a(a) and 7661c(a). The title V operating permit program does not generally impose new substantive air quality control requirements (referred to as “applicable requirements”), but does require permits to contain monitoring, recordkeeping, reporting, and other requirements to assure compliance by sources with applicable requirements. 57 Fed. Reg. 32,250, 32,251 (July 21, 1992) (the EPA final action promulgating Part 70 rule). One purpose of the title V program is to “enable the source, states, EPA, and the public to better understand the requirements to which the source is subject, and whether the source is meeting those requirements.” Id. Thus, the title V operating permits program is a vehicle for ensuring that air quality control requirements are appropriately applied to facility emission units and that compliance with these requirements is assured.

Applicable requirements include the requirement to obtain a preconstruction permit that complies with applicable new source review requirements (e.g., PSD requirements). Part C of the CAA establishes the PSD program, the preconstruction review program that applies to areas of the country, such as St. James Parish, that are designated as attainment or unclassifiable for...
the NAAQS. CAA §§ 160-169, 42 U.S.C. §§ 7470-7479. PSD requirements are triggered when a new major stationary source is constructed, including new construction on a greenfield site. New Source Review, or "NSR," encompasses both the PSD program as well as the nonattainment NSR program (applicable to areas that are designated as nonattainment with the NAAQS). In attainment areas, such as St. James Parish, Louisiana, where Nucor is located, a major stationary source may not begin construction or undertake certain modifications without first obtaining a permit which conforms to PSD requirements. CAA § 165(a)(1), 42 U.S.C. § 7475(a)(1). The PSD analysis must address several requirements before the permitting authority may issue a permit, including: (1) an evaluation of the impact of the proposed new major stationary source or major modification on ambient air quality in the area, and (2) an analysis ensuring that the proposed facility is subject to BACT for each pollutant subject to regulation under the PSD program. CAA § 165(a)(3),(4), 42 U.S.C. § 7475(a)(3), (4).

The EPA implements the Act’s PSD requirements in two largely identical sets of regulations: one set found at 40 C.F.R. § 52.21, contains the EPA’s federal PSD program, which applies in areas without a SIP-approved PSD program; the other set of regulations, found at 40 C.F.R. § 51.166, contains requirements that state PSD programs must meet to be approved as part of a SIP.

On April 24, 1987, the EPA approved a revision to the Louisiana SIP, which provides for State issuance and enforcement of permits to prevent the significant deterioration of air quality. 52 Fed. Reg. 13671. The EPA also has approved subsequent revisions to Louisiana’s PSD regulations. 40 C.F.R. §§ 52.970(c) and 52.999(c). The EPA also approved a recodification of the PSD program in the Louisiana SIP at L.A.C. 33:III.509. 54 Fed. Reg. 9795 (March 8, 1989). In this order, our citations to L.A.C. 33:III.509 are to LDEQ’s SIP-approved PSD program.4

Consistent with the Act and the EPA's regulations, to obtain a PSD permit in Louisiana pursuant to L.A.C. 33:III.509, the applicant must show, among other things, that the source or modification will not cause or contribute to a violation of any NAAQS and satisfy the BACT requirement for any pollutant subject to regulation. As we have previously stated, if a PSD permit that is incorporated into a title V permit does not meet the requirements of the SIP, the title V permit will not be in compliance with all applicable requirements.5

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4 While the EPA has approved merged title V and PSD permitting programs for some states, LDEQ does not appear to assert here that the EPA has approved such a merged permitting program for Louisiana. Rather, LDEQ responds that it has a long standing practice of issuing Part 70 and PSD permits “concurrently” or “in tandem.” See Public Comments Response Summary for the DRI title V and PSD permits and the modified pig iron title V permit (“2011 RTC”) at 96.

5 In our 2009 Columbia Generating Order, we stated that where a petitioner's request that the Administrator object to the issuance of a title V permit is based in whole, or in part, on a permitting authority's alleged failure to comply with the requirements of its approved PSD program (as with other allegations of inconsistency with the Act), the burden is on the petitioners to demonstrate that the permitting decision was not in compliance with the requirements of the Act, including the requirements of the SIP. Such requirements, as the EPA has explained in describing its authority to oversee the implementation of the PSD program in states with approved programs, include the requirements that the permitting authority (1) follow the required procedures in the SIP; (2) make PSD determinations on reasonable grounds properly supported in the record; and (3) describe the determinations in enforceable terms. See In the Matter of Wisconsin Power and Light, Columbia Generating Station, Permit No. III 003090-P20; Petition Number V -2008-1 (October 8, 2009) at 8.
Under CAA section 505(a), 42 U.S.C. § 7661d(a), and the relevant implementing regulations found at 40 C.F.R. § 70.8(a), states are required to submit each proposed title V operating permit to the EPA for review. Upon receipt of a proposed permit, the EPA has 45 days to object to final issuance of the permit if it is determined not to be in compliance with applicable requirements or the requirements under 40 C.F.R. Part 70.6 40 C.F.R. § 70.8(c). If the EPA does not object to a permit on its own initiative, section 505(b)(2) of the Act provides that any person may petition the Administrator, within 60 days of expiration of the EPA's 45-day review period, to object to the permit. 42 U.S.C. § 7661d(b)(2) and 40 C.F.R. § 70.8(d). The petition must “be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided by the permitting agency (unless the petitioner demonstrates in the petition to the Administrator that it was impracticable to raise such objections within such period or unless the grounds for such objection arose after such period).” CAA section 505(b)(2), 42 U.S.C. § 7661d(b)(2). In response to such a petition, the Administrator must issue an objection if a petitioner demonstrates that a permit is not in compliance with the requirements of the CAA. 42 U.S.C. § 7661d(b)(2); see also 40 C.F.R. § 70.8(c)(1); New York Public Interest Research Group v. Whitman, 321 F.3d 316, 333 n. 11 (2d Cir. 2003) (“NYPIRG 2003”). Under CAA section 505(b)(2), the burden is on the petitioner to make the required demonstration to the EPA. Sierra Club v. Johnson, 541 F.3d. 1257, 1266-67 (11th Cir. 2008); Citizens Against Ruining the Environment v. EPA, 535 F.3d 670, 677-78 (7th Cir. 2008); Sierra Club v. EPA, 557 F.3d 401, 406 (6th Cir. 2009) (discussing the burden of proof in title V petitions); see also NYPIRG 2003, 321 F.3d at 333 n. 11. In evaluating a petitioner’s claims, the EPA considers, as appropriate, the adequacy of the permitting authority’s rationale in the permitting record, including the response to comment. If, in responding to a petition, the Administrator objects to a permit that has already been issued, the EPA or the permitting authority will modify, terminate, or revoke and reissue the permit consistent with the procedures set forth in 40 C.F.R. §§ 70.7(g)(4), (5)(i)-(ii) and 70.8(d).

BACKGROUND

I. The Facility

The Nucor facility is located on an approximately 4,000-acre site on the Mississippi River, in Saint James Parish, near Convent, Louisiana, immediately outside of the Baton Rouge Ozone Nonattainment Area. The facility, as permitted, is composed of two primary manufacturing processes: a pig iron process and a DRI process, both of which produce feedstock for steelmaking. The pig iron process is designed to produce pig iron, while the DRI process is designed to produce sponge iron. The pig iron process was originally permitted with two blast furnaces (including hot blast stoves and top gas boilers), two coke oven batteries of 140 ovens

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6 Under 40 C.F.R. § 70.1(b), “[a]ll sources subject to [the title V regulations] shall have a permit to operate that assures compliance by the source with all applicable requirements.” “Applicable requirements” are defined in 40 C.F.R. § 70.2 to include “(1) [a]ny standard or other requirement provided for in the applicable implementation plan approved or promulgated by EPA through rulemaking under title I of the [Clean Air] Act that implements the relevant requirements of the Act, including any revisions to that plan promulgated in [40 C.F.R.] part 52.” In this case, the “applicable requirements” include Louisiana’s NSR Procedures, L.A.C. 33:III.509 ((PSD), as approved by the EPA. The EPA approved a PSD program in the state of Louisiana’s SIP on April 24, 1987. 52 Fed. Reg. 13,671; 40 CFR § 52.986.
each (with associated coke charging, pushing, and quenching operations), iron ore sintering, furnace slag handling, storage piles, and material handling and transfer operations and haul roads. The capacity of the pig iron process was reduced by approximately half through removal of one blast furnace and associated units, in a subsequent permitting action. Under the 2011 permits, the DRI process consists of two production lines, each consisting of a natural gas reformer (where reducing gases are produced), a reduction furnace (where reducing gases are passed through the iron ore), package boilers (which produce steam used in emission control systems), and material handling and transfer operations and haul roads. It is notable that the DRI process differs from the pig iron process in that it does not use blast furnaces, coke ovens, or slag handling operations because the iron ore is reduced in solid form.

II. The Nucor Permitting Actions

LDEQ issued two sets of permits to Nucor for the two processes located at a single site: one set for the pig iron process, and the other set for the DRI process. There is a complex interplay between the PSD and title V permits issued for these processes and the permit records for these actions are complex.

On May 24, 2010, LDEQ separately but concurrently issued the pig iron title V permit and a related pig iron PSD permit. On August 20, 2010, Nucor submitted an application for the new construction of a DRI process to be built on the same site as the pig iron process. On October 13, 2010, Nucor submitted a permit application asking for modification of the existing pig iron title V permit, specifically requesting that production capacity be reduced, that certain material handling and haul roads activities be transferred over to the DRI process (under development by LDEQ at that time) “in order to allow for construction and operation of the DRI facility to proceed independently of the [pig iron] permit,” and proposing the addition of SCR emission controls at several pig iron emission units. On October 28, 2010, Nucor submitted an addendum to the October 13 application asking for removal of the coke battery HRSG bypass vents that had been permitted for the pig iron process.

On January 27, 2011, the second set of permits was issued by LDEQ, including the modified title V pig iron permit. At the time of permit issuance on January 27, 2011, LDEQ also placed an administrative stay on the modified title V pig iron permit, which states that it “shall affect the permit as modified and precludes the commencement of construction as authorized by the permit.” Stay of Effectiveness of Permit No. 2560-00281-V1, at 1 (January 27, 2011). This modified title V pig iron permit reduces production capacity, removes the material handling and haul road units that Nucor had requested to be transferred to the DRI process, and requires operation of SCR and removal of HRSG bypass vents at the pig iron process, as Nucor requested in its October 13, 2010, and October 28, 2010, applications. The record for the permit modification stated that LDEQ was not revising the pig iron PSD permit.

The second set of permits consists of title V and PSD permits for the DRI process, which were issued separately but concurrently on January 27, 2011. These permits also include the material handling operations and haul roads that Nucor requested to be transferred from the pig iron process to the DRI process in its October 13, 2010, application.

III. The Title V Petitions
A. The 2010 Petition

Zen-Noh filed a timely title V petition, received by the EPA on June 25, 2010, requesting that the Administrator object to the pig iron title V permit, among other things. The claims raised in the petition are numerous and complex, but many could be affected by the overarching issue of whether all the appropriate applicable requirements of the PSD program approved into the Louisiana SIP are included in the pig iron title V permit. The issues raised in the petition are summarized as follows:

Issue 1: The Petitioner claims generally that the BACT determinations are unsupported and inadequate under PSD and the SIP. In particular, the Petitioner claims that LDEQ failed to conduct the proper top-down BACT analysis, the BACT decisions do not have a reasoned basis, the BACT determinations are based on unauthorized factors or are based on factors not supported in the record, the BACT decisions lack essential design information, LDEQ used improper AP-42 emission factors to create BACT emission limits, and LDEQ failed to adequately respond to public comments concerning BACT. The Petitioner also makes multiple specific allegations related to these claims. 2010 Petition at 8.

Issue 2: The Petitioner claims generally that LDEQ failed to require BACT for major sources of pollutants. The Petitioner also makes multiple specific allegations related to this general claim. 2010 Petition at 50.

Issue 3: The Petitioner claims generally that LDEQ failed to require reliable ambient air quality modeling to ensure that an exceedance of a NAAQS or PSD increment will not occur. The Petitioner also makes multiple specific allegations related to this general claim. 2010 Petition at 64.

Issue 4: The Petitioner claims generally that LDEQ unlawfully issued the permits without requiring preconstruction monitoring for PM$_{10}$, SO$_2$, H$_2$S, TRS and sulfuric acid mist. The Petitioner also makes multiple specific allegations related to this general claim. 2010 Petition at 71.

Issue 5: The Petitioner claims generally that LDEQ unlawfully issued the DRI PSD permit without providing the required opportunity for public participation. The Petitioner also makes multiple specific allegations related to this general claim. 2010 Petition at 74.

B. The 2011 Petition

Zen-Noh filed a timely title V petition, received on May 3, 2011, requesting that the Administrator object to the DRI title V and PSD permits and to the modified pig iron title V permit.

The claims raised in the petition are numerous and complex, but many could be affected by the overarching threshold issues of whether LDEQ should have permitted the DRI and pig iron processes as a single source subject to unified PSD review rather than as two separate
projects, and whether this, among other considerations, has resulted in the pig iron title V permit and the modified pig iron title V permit failing to include all appropriate applicable requirements for PSD.

The Petitioner makes several claims in the 2011 Petition. Issues 1, 3, and 4 are related to whether the pig iron and DRI processes should have been permitted as a single source. In Issue 1, the Petitioner raises a seminal issue concerning whether LDEQ’s PSD and title V permitting determinations are a reasonable interpretation of its SIP and approved title V regulations, and consistent with the Act. The Petitioner generally claims in Issue 1 of the 2011 Petition that LDEQ incorrectly applied its SIP-approved PSD permitting program by permitting the pig iron process and the DRI process as separate projects, rather than together as a single source. 2011 Petition at 8-10. In Issue 1, the Petitioner claims that LDEQ allowed Nucor to circumvent the air quality impact analysis prerequisites of the PSD program by permitting the pig iron and DRI processes separately. 2011 Petition at 9. In the first instance, the Petitioner claims that “[b]efore LDEQ can determine whether an applicant has complied with the air quality impact analysis requirements,” “LDEQ must determine what is the ‘source,’ asserting that LAC 33:III.509.K requires the analysis to evaluate increased emissions from a ‘source,’ not a ‘project.’” 2011 Petition at 10. The Petitioner further asserts that the SIP at LAC 33:III.509B “defines ‘stationary source’ as ‘any building, structure, facility, or installation that emits or may emit any pollutant subject to regulation under this Section.’” 2011 Petition at 10. The Petitioner claims that “[t]he DRI and pig iron processes clearly are a single ‘source.’” Id. In support of this claim, the Petitioner states that both processes have the same SIC code (3312), both are owned by and under the control of Nucor, and both will be located on the site. Id. The Petitioner concludes that LDEQ should have conducted the required ambient air quality modeling analysis considering the pig iron process and the DRI process as two new emission units. Id. In further support of this claim, the Petitioner also contends that LDEQ’s approach is not based on reasonable grounds or properly supported in the record. 2011 Petition at 18. The Petitioner further claims that “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.” 2011 Petition at 18.

In Issue 3, the Petitioner claims generally that authorizing installation of SCRs in the modified pig iron title V permit violates PSD and the SIP because the SCRs would have led to significant increases for sulfuric acid mist, PM$_{2.5}$ and PM$_{10}$, because LDEQ should have required Nucor to aggregate the sulfuric acid mist emissions from the SCR units for the DRI and pig iron processes, and because LDEQ should have required Nucor to comply with PSD requirements. 2011 Petition at 30-31.

In Issue 4, the Petitioner claims generally that LDEQ violated PSD and the SIP by issuing the DRI permits without preconstruction monitoring. 2011 Petition at 36. The Petitioner also claims that if the emissions of the pig iron and DRI processes had been combined, the modeling would have shown that the NAAQS for SO$_2$, PM$_{2.5}$ and PM$_{10}$ would be exceeded and preconstruction monitoring would have been required for those pollutants. 2011 Petition at 37. Thus, the claims the Petitioner raised in Issues 3 and 4 relate to the seminal issue of whether LDEQ should have permitted the DRI and pig iron processes as a single source subject to unified PSD review rather than as two separate projects.
The 2011 Petition in Issues 2, 3, and 5 through 7 also contains several claims regarding whether LDEQ correctly interpreted its SIP concerning PSD requirements for the pig iron and DRI processes, in particular claiming that the PSD requirements were incorrectly established for the first time in the title V permit, rather than first being established as required in the PSD permit. These claims also concern whether the permit record is clear regarding the full scope of applicable requirements included in the various title V permits for the pig iron and DRI processes. In Issue 2 of the 2011 Petition, the Petitioner claims generally that the ambient air quality analysis for the NO₂ NAAQS unlawfully relied on installation of SCR and elimination of HRSG bypass vents at the pig iron process, when these reductions are not federally enforceable. 2011 Petition at 24. The Petitioner claims that LDEQ failed to include these emission controls and related emission limitations and other specific conditions, such as compliance monitoring, necessary to make the controls practically enforceable in the PSD permit. The Petitioner thus claims that the title V permit does not include the results of preconstruction review and it cannot serve as the legal mechanism to create such applicable requirements for the purpose of importing such requirements into the modified pig iron title V permit. 2011 Petition at 25. Relying on an EPA memo, the Petitioner states that “[t]he PSD permit that results from the agency’s preconstruction review is the legal mechanism through which PSD requirements become applicable.” The Petitioner further states that “limitations and other conditions in an operating permit cannot be incorporated into a preconstruction permit.” 2011 Petition at 25. The Petitioner asserts that LDEQ did not modify the pig iron PSD permit to include the SCR, and that thus there is no underlying applicable requirement to import into the modified pig iron title V permit. 2011 Petition at 26. Further clarifying their position, the Petitioner says the ambient air quality impact analysis, including the NAAQS compliance demonstration, is a PSD issue, and compliance must be demonstrated in the context of a PSD permit, not a title V permit. 2011 Petition at 29.

In Issue 3, with regard to installation of the SCRs using the modified pig iron title V permit, the Petitioner claims that “a Part 70 permit modification is not an appropriate vehicle for implementing PSD.” 2011 Petition at 34. The Petitioner further states that the PSD evaluations related to the emission increases from the SCR units on the pig iron process “must be performed and documented in accordance with the procedures set forth in LAC 33:III.509.” Id. (referring to LDEQ’s SIP-approved PSD program).

In Issue 5, the Petitioner claims generally that the DRI permits violate PSD and the SIP because the PSD permit does not include BACT determinations with specific maximum emission rates or compliance provisions for add-on controls (2011 Petition at 37) and, instead, these emission limits and compliance assurance provisions were written into the DRI title V permit and incorporated into the PSD permit by reference (2011 Petition at 38). In particular, the Petitioner claims that the BACT determinations can only be made in the context of a PSD permit, through the PSD process described in the SIP, LAC 33:III.509, because this is the only way the public can be assured the opportunity to participate in the decision process for PSD as Congress intended, and that the process afforded under title V for operating permits does not

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provide the same legal recourse with respect to PSD requirements as the process afforded by PSD. 2011 Petition at 42. The Petitioner claims the BACT conditions must be incorporated in the PSD permit first, and that title V requires that these specific conditions of a PSD permit, which are “applicable requirements,” can then be incorporated into the title V permit. Petition at 44. The Petitioner also states that “[a]ll 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” (2011 Petition at 44) and that “obtaining a title V permit does not excuse the failure to obtain a PSD permit.” 2011 Petition at 43.

In Issue 6, the Petitioner claims generally that LDEQ violated PSD and the SIP by issuing the DRI permits and the modified pig iron title V permit without a BACT limit for PM$_{2.5}$, and did not provide a rationale for use of PM$_{10}$ as a surrogate for PM$_{2.5}$ in the DRI PSD permit and the modified pig iron title V permit. 2011 Petition at 46. The Petitioner also claims that LDEQ has only included a PM$_{2.5}$ emissions limitation in the DRI title V permit, and not in the DRI PSD permit or in the pig iron permits. 2011 Petition at 47.

In Issue 7, the Petitioner claims generally that the BACT determinations in the DRI PSD permit do not comply with PSD and the SIP. The Petitioner claims that top-down BACT analysis was not conducted properly, that BACT determinations are missing from the DRI PSD permit for major sources of NSR regulated pollutants, and that for BACT requirements created in the PSD DRI permit, there are no enforceable emission rates or compliance provisions included in the PSD permit, and that these deficient PSD requirements were then transferred over into the title V permits. 2011 Petition at 48. Specifically, the Petitioner states that “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....” 2011 Petition at 51. The Petitioner asserts that the EPA should instruct LDEQ to properly conduct and include the BACT determinations in the PSD permit, and to incorporate these applicable requirements in the Part 70 permit. 2011 Petition at 51. Thus, Issues 2, 3 and 5 through 7 of the 2011 Petition concern whether the PSD requirements were incorrectly established for the first time in the title V permits, rather than first being established in the PSD permit. These claims also concern whether the permit record is clear regarding the full scope of applicable requirements included in the various title V permits for the pig iron and DRI processes.

**EPA RESPONSE**

After a review of the Petitioner’s claims, and the information before me, I grant the Petitioner’s request for an objection to the pig iron and DRI title V permits as described below. The respective permit records for the pig iron and DRI title V permits, including the responses to comments, fail to provide an adequate basis and rationale for EPA to determine that these permits ensure compliance with applicable requirements and are in compliance with the Act.

The decision to grant these petitions is based on two threshold issues, described in detail below: (1) LDEQ has not adequately justified its decision to permit the DRI and pig iron processes as two separate projects for purposes of PSD analysis, and (2) LDEQ has not provided permit records from which the full scope of applicable requirements for the pig iron and DRI title V permits can be determined and, in particular, has not adequately explained the basis for its
transfer of emissions units between the pig iron and DRI processes via the title V permits, and its incorporation by reference of permit requirements established in a title V permit into a PSD permit. Because LDEQ’s response to these issues could affect the EPA’s analysis of many of the other issues raised in the petitions, the EPA is granting the petitions on threshold issues, and is not addressing the other issues raised in the petitions in this Order.

Section 505(b)(2) of the Act provides that the Administrator must “grant or deny” a timely petition for an objection to a title V permit within 60 days after the petition is filed. 42 U.S.C. § 7661d(b)(2). See also 40 C.F.R. § 70.8(d). It further states that the “Administrator shall issue an objection within such a period if the petitioner demonstrates … that the permit is not in compliance with the requirements of this chapter, including the requirements of the applicable implementation plan.” Id. Section 505(b)(2) does not specify whether the EPA must respond initially to all of the issues raised in a petition. Although the EPA has generally responded to petitions by speaking initially to all petition claims, the Act does not explicitly require that, nor does it foreclose the EPA from granting a petition based on one or more threshold issues where those issues potentially affect the analysis or disposition of other issues in the petition. In this situation, where the overarching issues raise fundamental questions about the validity of the title V permits and the permitting processes, this is a reasonable, orderly, and efficient way to proceed. Moreover, the EPA has taken a similar threshold approach in other contexts, such as in actions regarding SIP submissions. Similarly, courts frequently avoid speaking to specific substantive issues where there is an overarching issue that is dispositive of the case. Accordingly, the EPA believes that its approach of granting on these two overarching threshold issues is consistent with the Act and the implementing regulations.

With respect to the first grounds for the EPA’s objection, I grant because LDEQ has not provided an adequate basis for its decision to permit the DRI and pig iron processes as two separate projects, rather than as one single source subject to unified PSD review.

Zen-Noh alleges that LDEQ’s two-project approach was unlawful, arguing that it led to circumvention of the PSD requirements and the Louisiana SIP, including requirements for air quality impact modeling analyses for a source. 2011 Petition at 8-11. Zen-Noh argues that the DRI and pig iron processes are a single source, and that their emissions should have been modeled together for purposes of PSD review. 2011 Petition at 10, 18. The EPA similarly commented in its public comments that LDEQ should explain why the pig iron and DRI processes should be considered as separate projects for purposes of PSD permitting, rather than being analyzed together for PSD purposes. See 2011 RTC at 50.

In the RTC, LDEQ stated that it was permitting the pig iron and DRI processes as separate “projects” and asserted that “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).” 2011 RTC at 51. Referencing various EPA documents addressing when to aggregate nominally-separate changes for purposes of determining NSR applicability, LDEQ further noted that the two permit applications submitted by Nucor were more than 2 years apart, concluded that the processes are technically and economically viable without each other, and noted that both processes were subject to PSD permitting. 2011 RTC at 51-53. Using these concepts of “project” and “aggregation,” LDEQ ultimately determined that emissions from the
DRI process did not need to be aggregated with those from the pig iron process in determining applicable requirements under the PSD program. 2011 RTC at 53.

The definition of the source being permitted is an important initial question for both NSR and title V permitting. Whether various emission units should be considered as a single source is informed by the regulatory definitions of “major source” and “stationary source.” See generally In the Matter of Williams Four Corners LLC, Sims Mesa CDP Compressor Station, at 6 (July 29, 2011) (“Sims Mesa Order”). For facilities to constitute a single stationary source under the PSD, nonattainment NSR, and the title V programs of the Clean Air Act, all three of the following criteria must be satisfied: (1) the facilities are located on one or more contiguous or adjacent properties; (2) they share the same two-digit (major group) SIC code; and (3) they are under common control. See 40 C.F.R. §§ 70.2, 71.2, 51.165(a)(1)(i) and (ii), 51.166(b)(5) and (6), and 52.21(b)(5) and (6).

Zen-Noh claims that the pig iron and DRI processes are a single source, contending that both processes are located on the same site, are owned and under the control of the same company, and have the same SIC code to four digits (3312). 2011 Petition at 10. Although LDEQ did not discuss these three criteria in its response to comments on this issue, LDEQ did note that “Nucor has consistently represented the pig iron and DRI projects as being two separate projects co-located at a single source.” 2011 RTC at 52. Thus, there does not appear to be a dispute in the record about whether the pig iron and DRI processes are a single source. But rather than analyzing whether the pig iron and DRI processes were a single source, and what the implications of that decision would be for the Nucor permitting actions, LDEQ simply stated that “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)” but provided no further support for its conclusion on this point. 2011 RTC at 51. LDEQ instead focused its analysis on whether the pig iron process and the DRI process were separate projects and whether their emissions should be aggregated for permitting purposes under the EPA’s policy on project aggregation, but it did not analyze any regulatory definition of “project,” such as the definition in 40 CFR 52.21(b)(52), before applying that term in this context. Indeed, LDEQ never discussed or supported its basic premise that it was appropriate to apply the concepts of “project” and “aggregation” to new, greenfield construction like the pig iron and DRI processes.

The term “project” and the EPA’s “aggregation” policy generally apply in the context of modification of an existing facility. See, e.g., 75 Fed. Reg. 19567, 19570 – 71, n. 6-9 (April 15, 2010).
2010) and the documents cited therein. For example, current federal PSD rules define “project” as “a physical change in, or change in the method of operation of, an existing major stationary source.” 40 CFR 52.21(b)(52). Yet LDEQ did not explain why the concepts of “project” and “aggregation” are relevant legal concepts to apply to greenfield construction of a new source during its initial build-out. Furthermore, LDEQ did not analyze other relevant statutory and regulatory terms in its justification for treating the pig iron and DRI processes as separate projects, such as the definitions of “modification” and “major stationary source,” to determine whether such an approach is consistent with the Act and LDEQ’s SIP-approved PSD program.

In addition, while LDEQ suggests that Nucor has not attempted to split the projects to avoid PSD permitting because both processes were subject to PSD review, 2011 RTC at 51, this statement does not address whether LDEQ’s PSD review adequately addressed the full scope of the source. For example, LDEQ’s SIP-approved PSD program requires that the owner or operator of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of (1) any ambient air quality standard in any air quality control region; or (2) any applicable maximum allowable increase over the baseline concentration in any area. LAC 33:III.509(K). Because LDEQ determined that the pig iron and DRI processes were separate projects, Nucor’s ambient air quality impacts analysis did not consider whether the combined emissions from both the pig iron and DRI processes for all pollutants call for a more thorough cumulative analysis of the air quality impact of these sources. The EPA has recognized that it may be sufficient in some cases to conduct a screening analysis based on the emissions of the proposed source alone to demonstrate that a cumulative air quality analysis is not needed to demonstrate that the proposed source will not cause or contribute to a violation of the NAAQS. See generally Memorandum from Stephen D. Page to Regional Air Division Directors, Guidance Concerning the Implementation of the 1-hour NO2 NAAQS for the Prevention of Significant Deterioration Permits, Attachment 1 at 11 (June 29, 2010) (discussing use of significant impact levels in PSD permitting). Under this approach, a cumulative analysis is not needed to show a source will not cause or contribute to a violation of a NAAQS if the proposed source can show that its impact alone is not considered to be “significant,” meaning it is below values known as Significant Impact Levels (“SIL”). Id. In this case, the record only shows that either the DRI or the pig iron process was below the SIL for some pollutants, but did not consider whether the combined emissions from the two processes result in an insignificant impact for all pollutants. Nor did LDEQ explain why it is permissible or appropriate to apply the SILs in this manner without an adequate explanation of why the pig iron and DRI processes were not addressed together for purposes of PSD permitting. Without an adequate rationale to allow the public and the EPA to understand the scope of the source that must be evaluated and the basis for LDEQ’s two-project approach, the public and the EPA cannot readily evaluate whether the requirement to conduct an ambient air impact analysis was adequately met for this source.

The close timing of the applications for the new DRI process and the modification of the existing pig iron title V permit, as well as the issuance dates of the pig iron title V modification
and DRI PSD and title V permits, could offer further support for an interpretation that the pig iron and DRI operations should have been addressed together in permitting. As the record shows, on May 24, 2010, LDEQ separately but concurrently issued the pig iron title V permit and a related pig iron PSD permit. On August 20, 2010, Nucor submitted an application for the new construction of a DRI process to be built on the same site as the pig iron process. This permit was issued on January 27, 2011. Moreover, during this same period, on October 13, 2010, Nucor submitted a permit application requesting a permit modification of the existing pig iron title V permit, specifically requesting that certain material handling and haul roads activities be transferred over to the DRI process (under development by LDEQ at that time). LDEQ issued a modified pig iron title V permit with this change included on January 27, 2011.

Accordingly, for the reasons explained above, the rationale provided by LDEQ in the permit records does not give the EPA and the public sufficient information to determine whether the requirements of the SIP and of title V were met for the pig iron and DRI processes. Cf. Sims Mesa Order at 5-6 (granting petition to object to title V permit where permitting authority had not provided adequate rationale for its determination of the source for PSD and title V purposes); In the Matter of Kerr-McGee/Anadarko Petroleum Corporation, Frederick Compressor Station, at 5 (October 8, 2009) (same). In addressing this objection, if LDEQ maintains its decision to permit these processes as separate projects, it must provide an adequate rationale to support that approach, explaining how it is consistent with provisions of its SIP, the approved title V program, and the Act, and it must also explain how the title V permits issued here ensure compliance with the full scope of applicable requirements. Alternatively, LDEQ may develop a different approach and would need to make any necessary changes in the permits.

As to the second grounds for the EPA’s objection, LDEQ has not provided permit records from which the full scope of applicable requirements for the pig iron and DRI title V permits can be determined, and it has not adequately explained the basis for its transfer of emissions units between the pig iron and DRI processes via the title V permits, nor its incorporation by reference of permit requirements established in a title V permit into a PSD permit. There is a complex and confusing interrelationship between the title V and PSD permits for the pig iron and DRI processes, which makes it effectively impossible to determine what the applicable requirements are for each title V permit and to determine whether the title V permits ensure compliance with those requirements.

Zen-Noh claims that the DRI permits do not comply with PSD, title V or the SIP because certain emissions limits and compliance assurance provisions were established in the DRI title V permit and then incorporated by reference into the DRI PSD permit. 2011 Petition at 38. Zen-Noh argues that BACT determinations can only be made in the context of a PSD permit, through the process described in the SIP and the Act, and then incorporated into a title V permit. 2011 Petition at 42, 44. Responding to points in LDEQ’s 2011 RTC, Zen-Noh argues that providing review of the BACT limits through PSD is critical to ensure, among other things, that the public can participate in the decision-making about BACT limits and that citizens can enforce conditions in PSD permits under CAA § 304(a). 2011 Petition at 43-44.

Zen-Noh additionally objects that LDEQ improperly blurred the line between the PSD and title V permits by not modifying the pig iron PSD permit to contain particular control
requirements that were established through the modified pig iron title V permit. 2011 Petition at 26, 29-30. Similarly, the EPA notes that during processing of the modified pig iron title V permit, LDEQ made a number of changes to the pig iron title V permit but did not revise the pig iron PSD permit. For instance, LDEQ transferred certain sources of emissions from the pig iron title V permit to the DRI permit application. See LDEQ’s Basis for Decision Part 70 Operating Permit Modification No. 2560-00281-V1, at 3 (mentioning that DOC-101, PIL-102, FUG-102, and FUG-103 were transferred). LDEQ stated that it was modifying the “initial Part 70 (title V) Operating Permit issued for the Nucor facility” but that the pig iron PSD permit “is not being revised as part of this permitting action.” Basis for Decision Part 70 Operating Permit Modification No. 2560-00281-V1, at 1.

LDEQ states that the DRI title V permit provides that it is “both a state preconstruction and Part 70 Operating Permit,” and explains that LDEQ issues PSD and Part 70 permits concurrently as a matter of course. 2011 RTC at 96. LDEQ also asserts that given the current regulatory framework, which includes the title V program, and because it requires an applicant to obtain a part 70 permit before construction commences, it is not appropriate to review a PSD permit in isolation. Id. In addition, LDEQ explains that it found it preferable from an administrative perspective to incorporate the conditions from the DRI title V permit into the DRI PSD permit, rather than setting forth conditions identical to those in the DRI title V permit in the DRI PSD permit. Id. Contending that the Clean Air Act does not require a distinction that PSD permits may not incorporate any condition of a title V permit, LDEQ notes that the EPA has approved unitary permit programs for preconstruction and operating permits. Id. Finally, LDEQ argues that the PSD permit does establish emission limitations based on BACT review, and that the title V operating permit acts as the enforcement tool for PSD conditions. Id.

A source subject to title V must have a title V permit that assures compliance with applicable requirements of the Act, including the requirements of the applicable state implementation plan. CAA § 504(a), 42 U.S.C. § 7661c(a); see also 40 CFR 70.1(b). The EPA’s title V regulations define applicable requirements to include “[a]ny term or condition of any preconstruction permits issued pursuant to regulations approved or promulgated under title I, including parts C or D, of the Act.” 40 CFR 70.2. Moreover, a basic precept of the title V operating permit program is that it does not generally impose new substantive air quality control requirements, or new applicable requirements, but does require permits to contain monitoring, recordkeeping, reporting, and other requirements to assure compliance with applicable requirements. 57 Fed. Reg. 32,250, 32,251 (July 21, 1992) (the EPA final action promulgating Part 70 rule); see also 40 C.F.R. § 70.1(b). In addition, the EPA’s guidance has explained that a title V permit may not simply “supersede, void, replace, or otherwise eliminate the independent enforceability of terms and conditions in SIP-approved permits.” Letter from J. Seitz, EPA, to R. Hodanbosi and C. Lagges, STAPPA/ALAPCO (May 20, 1999), Enc. A at 4. That is, title V permits must assure compliance with the requirements of SIP-approved permits, but may not simply eliminate their independent existence and enforceability. Id.

As explained above, a title V permit must assure compliance with any term or condition of a PSD permit. See 40 CFR 70.2. While LDEQ removed certain emission sources from the pig iron title V permit when it modified that permit, it does not appear to have removed those sources from the pig iron PSD permit, since it stated that the PSD permit was not being revised.
in that permitting action. For those units that were removed from the modified pig iron title V permit, LDEQ did not explain whether the terms or conditions that apparently remain in the pig iron PSD permit are title V applicable requirements for the pig iron process or not. If they are applicable requirements, it is not clear how the modified pig iron title V permit would ensure compliance with those requirements, since those units were removed from the modified pig iron title V permit.

In addition, LDEQ has not provided sufficient rationale to justify its transfers of emission units between the pig iron and DRI title V permits, nor has it provided an adequate explanation for its incorporation by reference of emissions limits from the DRI title V permit into the DRI PSD permit. In particular, LDEQ has not explained how either action is consistent with its SIP-approved PSD program and its EPA-approved title V program, or with the Act, and it has not explained its basis for using a title V permitting action to create or remove terms and conditions in the PSD permits at issue here. Furthermore, in light of these actions, it is not clear what LDEQ believes the relationship is between Nucor’s title V and PSD permits. While the EPA has approved merged title V and PSD permitting programs for some states, LDEQ does not assert that the EPA has approved such a merged permitting program for Louisiana. In fact, in this case, LDEQ issued separate PSD and Part 70 permits. These actions, and LDEQ’s failure to fully justify them, create a complex and confusing record between the title V and PSD permits for the pig iron and DRI processes, which makes it effectively impossible to determine what the applicable requirements are for each title V permit and to evaluate whether the title V permits ensure compliance with those requirements.

For these reasons, the EPA grants Zen-Noh’s request for an objection because the rationale in the permit records does not give the EPA and the public sufficient information to determine whether the requirements of the SIP and of title V were met for the pig iron and DRI processes. In addressing this objection, LDEQ must establish a clear permit record consistent with this Order that explains its bases for the actions described above, including the legal authority that supports those actions, or make appropriate changes to pig iron and DRI title V permits based on a revised approach supported by the record.

In sum, for the threshold reasons discussed above, the pig iron title V permit, the modified pig iron title V permit, and the DRI title V permit fail to comply with the Act because the permits and permit records are inadequate to ensure compliance with all applicable requirements. Accordingly, I grant the Petitioner’s request for an objection and direct LDEQ to establish a clear permit record in accordance with this Order and to make any necessary changes in the permits.

As noted above, the EPA believes that LDEQ’s response to these threshold issues could substantially affect the EPA’s analysis of many of the other issues raised in the petitions. These threshold issues raise fundamental questions about the title V permitting process LDEQ employed here and the validity of the title V permits. Accordingly, the EPA is not addressing the other issues raised in the 2010 and 2011 Petitions in this Order. Title V provides an opportunity for the EPA objection to proposed title V permits, and an opportunity for the public to petition the EPA to object to proposed title V permits. Because these threshold issues may affect many of the petition claims, the EPA will entertain a new future petition from Zen-Noh raising any claims
in the 2010 or 2011 Petitions that the Petitioner still wishes to raise after LDEQ’s response to this objection, and will entertain any new claims based on the new proposed permit (i.e., those that did not arise or could not have been raised in the earlier permitting actions). 9 In addition, as it responds to EPA’s objection, LDEQ may consider addressing any other issues raised in the petitions on the Nucor permits, in accordance with the procedures in its approved SIP and title V program.

CONCLUSION

For the reasons set forth above and pursuant to CAA section 505(b)(2) and 40 C.F.R. § 70.8(d), I hereby grant the Petitions from Zen-Noh Grain Corporation requesting that the EPA object to the title V permits issued to Consolidated Environmental Management, Inc. - Nucor Steel Louisiana for the pig iron and DRI processes located in St. James Parish, Louisiana.

Dated: 3/23/12

Lisa P. Jackson
Administrator

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9 EPA additionally notes that petitions were filed on June 25, 2010, and May 3, 2011, concerning these pig iron and DRI title V permits by Tulane Environmental Law Clinic on behalf of Louisiana Environmental Action Network (LEAN) and the Sierra Club. Because those petitions could similarly be affected by the threshold issues raised in this objection, the EPA will similarly entertain a future petition from those petitioners raising any of the issues in their 2010 and 2011 petitions that they still wish to raise, and will entertain any new claims based on the new proposed permit (i.e., those that did not arise or could not have been raised in the earlier permitting actions). [If Zen-Noh, LEAN, or the Sierra Club wish to raise an issue from their respective 2010 or 2011 petitions, they would simply identify that issue in any new petition filed, unless they believe additional demonstration is needed to address LDEQ’s response.]