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October 9, 2013

Via Federal Express Overnight, USPS Express Overnight and e-mail at *McCarthy.gina@Epa.gov*

Hon. Gina McCarthy
Administrator, USEPA
Ariel Ross Building (AR)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20004

RE: Petition Requesting that the Administrator Object to Arkansas Department of Environmental Quality Final Operating Air Permit No. 2305-AOP-R0, Big River Steel, LLC

Dear Administrator McCarthy:

Enclosed is a Petition submitted by Nucor Steel-Arkansas and Nucor-Yamato Steel Company pursuant to 40 CFR §70.8 requesting that you object to Final Operating Permit No. 2305-AOP-R0 issued by the Arkansas Department of Environmental Quality to Big River Steel, LLC. Due to the size of the attachments, only selected printed attachments are enclosed with the printed version of the Petition. However, also enclosed is a CD containing a complete copy of the Petition and all attachments in pdf format.

Please let me know if you have any questions. Thank you for your attention to this matter.

Sincerely,

DOVER DIXON HORNE PLLC

Mark H. Allison

MHA/dlw
Enclosures
cc w/enc: Hon. Ron Curry (via Federal Express Overnight, USPS Express Overnight and e-mail at Curry.ron@Epa.gov)
Hon. Teresa Marks (via U.S. Mail)
David Stickler (via U.S. Mail)

bcc w/enc: Sam Commella
Wayne Turney
Steve Rowlan
Eric Hiser, Esq.
Will Foster (via Federal Express Overnight)
Michael O. Parker, Esq.

BEFORE THE ADMINISTRATOR
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

In the Matter of the Final Operating Permit for

BIG RIVER STEEL, LLC
to construct and operate a steel mill
located in Mississippi County, Arkansas

PERMIT NO. 2305-AOP-R0

Issued by the Arkansas Department
of Environmental Quality

PETITION REQUESTING THAT THE ADMINISTRATOR OBJECT TO ISSUANCE OF THE PART 70 OPERATING PERMIT FOR THE BIG RIVER STEEL LLC FACILITY

TO: Hon. Gina McCarthy
Administrator, United States Environmental Protection Agency
Ariel Ross Building (AR)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20004

Pursuant to the Clean Air Act ("CAA" or "Act") §505(b)(2) and 40 C.F.R. §70.8, Nucor Steel-Arkansas, a division of Nucor Corporation ("NSA"), and Nucor-Yamato Steel Company ("NYS")(collectively referred to herein as "Nucor") hereby petition the Administrator of the United States Environmental Protection Agency ("EPA") requesting that she object to the final Part 70 Operating Permit No. 2305-AOP-R0 (the "Permit") issued to Big River Steel, LLC ("BRS") by the Arkansas Department of Environmental Quality ("ADEQ"). The Permit authorizes the construction and operation of a steel mill to be constructed and operated by BRS near Osceola, in Mississippi County, Arkansas (the "BRS Facility"). NSA and NYS both

operate steel mills in Mississippi County, Arkansas that are approximately 20 miles from the site of the BRS Facility.

Nucor's Petition is filed within 60 days following the end of EPA's 45 day review period. Furthermore, Nucor preserved its right to raise these issues by submitting comments during the public comment period for the Permit; Nucor also relies on public comments submitted by other parties as noted herein. A copy of Nucor's public comments is attached hereto as Attachment 1. A copy of ADEQ draft permit No. 2305-AOP-R0 (the "Draft Permit") and ADEQ's Statement of Basis ("SOB") is attached hereto as Attachment 2. A copy of the Permit and ADEQ's Response to Comments ("ADEQ RTC") is attached hereto as Attachment 3. A copy of BRS's final permit application (referred to in Nucor's Comments and in this Petition as "Application, Rev. 2"), is submitted herewith in electronic pdf format on a compact disc as Attachment 5. Nucor is submitting thirteen (13) attachments to this Petition. A list of these Attachments is at the end of the Petition. For the sake of convenience, a printed copy of excerpts of Nucor's Comments (Attachment 1), the final Permit and ADEQ's Response to Comments (Attachment 3), and selected email correspondence (Attachments 9-13) are included with the printed copy of this Petition. A copy of this Petition and all thirteen Attachments are included in electronic pdf format on a compact disc accompanying the printed copy of this Petition. All Attachments to the Petition are incorporated herein by reference.

INTRODUCTION AND SUMMARY OF GROUNDS FOR OBJECTION

Section 502 of the CAA makes it unlawful for anyone to operate a facility such as the BRS Facility without a permit issued under 40 CFR Part 70. 42 USC §7661a. The CAA provides that

> if 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.

42 USC §7661d(b)(1). Furthermore, the CAA provides that if the Administrator does not object within 45 days after a permit has been proposed, any person may petition the Administrator within 60 days after the expiration of the 45 day period, to take such action and the Administrator "shall issue an objection within such period if the petitioner demonstrated to the Administrator that the permit is not in compliance with the requirements of this chapter, including the requirements of the applicable implementation plan." 42 U.S.C. §7661d(b)(2). Where, as here, the Permit incorporates the requirements of the Prevention of Significant Deterioration ("PSD") program, EPA has held that the Permit must fully comply with PSD requirements, and that if it does not, the permit will not be in compliance with all applicable requirements and EPA must object to the Permit. See, *In the Matter of Wisconsin Power and Light, Columbia Generating Station*, Permit No. Ill 003090-P20; Petition Number V-2008-1 (Oct. 8, 2009) at 8.

As explained herein, and in Nucor's Comments submitted to ADEQ (Attachment 1), the Administrator must object because the Permit fails to comply with the CAA in many respects. Based on the proposed emission rates, the BRS Facility is subject to PSD review for NO_x, CO, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC, lead and greenhouse gases. (Attachment 3, Permit, p. 5). The Arkansas State Implementation Plan, promulgated by the Arkansas Pollution Control & Ecology Commission

("APC&EC") incorporates federal PSD permitting requirements at 40 CFR §52.21(a)(2) through (bb) as of November 29, 2005, with certain exceptions not relevant here. APC&EC Reg. 19.904. APC&EC Regulation 19 also establishes increment consumption limits, requiring an assessment of effects on industrial and economic development and alternatives to such consumption, whenever more than 50% of any annual increment or more than 80% of any short term increment is consumed. APC&EC Reg. 19.904(C). In addition, because it is subject to PSD review, the BRS Facility is a "major source" for purposes of Title V of the CAA, and is required to obtain an operating permit pursuant to APC&EC Regulation No. 26, the Regulations of the Arkansas Operating Air Permit Program. Reg. 26.302. Accordingly, the Permit must "include all applicable requirements for all relevant emissions units" at the BRS Facility. APC&EC Reg. 26.304. APC&EC Reg. 26 also contains requirements that the application be complete and contain all the information required by Reg. 26.402 and that a permit may be issued only if the processing of the permit application and the conditions of the permit provide for compliance with all applicable requirements. APC&EC Reg. 26.501. Reg. 26 also requires that ADEQ provide a statement that sets forth the legal and factual basis for the draft permit conditions.

Following is a summary of Nucor's grounds for objection to the Permit. First, the permit application was incomplete, did not contain information necessary to determine whether all applicable requirements were met - including the requirements for PSD review -- and was improperly processed by ADEQ. The Draft Permit was issued the day after BRS's third permit application, Application, Rev. 2, was received by ADEQ. In fact, ADEQ permitting staff was still working on verifying modeling submitted by BRS as late as mid-afternoon on June 25, 2013, the day the Draft Permit

was issued. Although ADEQ had been working on the BRS project for months and had already required BRS to submit two permit applications, ADEQ did not have time to properly review the Application, Rev. 2 to verify that that application was complete and that the final application, modeling, and supporting documents satisfied all applicable requirements. The haste with which the Draft Permit was issued was due in part to BRS's failure to submit a complete, timely and sensible permit application, and in part due to the fact that agencies of the State of Arkansas – including the Arkansas Teachers Retirement System – had made sizeable financial commitments to the project, including a sizeable equity investment in the project. Because considerations relating to other financing arrangements were becoming of critical importance (and perhaps were contingent on issuance of a draft permit), ADEQ issued the Draft Permit rather than conducting a proper review. As a result, ADEQ improperly processed an incomplete permit application and prematurely issued a Draft Permit that contained numerous errors and was misleading. For example, the Draft Permit stated that air quality impacts for the 1-hr. NO_x NAAQS was 37.6 $\mu g/m^3$, or approximately 20% of the standard (Attachment 2, Draft Permit, p. 8.); however, this was an error because the actual projected impact was 181.8 $\mu g/m^3$ or 96% of the standard. (See, Attachment 3, ADEQ RTC, p. 1). Accordingly, the public was presented with a draft permit that showed the BRS Facility met the 1-hour NO_x NAAQS with a considerable margin of safety, but this misrepresented the BRS Facility's actual performance and deprived the public of critical information it would need to know to make informed comment on the adequacy of the controls, monitoring, recordkeeping and reporting requirements. For this and other reasons stated in Nucor's Comments the Draft Permit did not provide adequate public notice as required by the CAA.

Second, BRS has not included, and ADEQ has not required adequate technical documentation supporting Best Available Control Technology ("BACT") determinations, emission calculations, and air quality impact analyses, in violation of the CAA and the Arkansas State Implementation Plan ("Arkansas SIP") in APC&EC Commission Regulation No. 19, including the PSD requirements in Chapter 9.

Third, BRS did not perform, and ADEQ did not require pre-construction monitoring in the locality of the BRS Facility for any criteria pollutants, contrary to 42 U.S.C. § 7475(e)(2). ADEQ did not explain its rationale for this decision, even though modeled impacts for the BRS Facility were 100% of the 12 $\mu g/m^3$ $PM_{2.5}$ annual NAAQS, and 96% of the 188 $\mu g/m^3$ 1-hr NO_x NAAQS. Of additional concern is the fact that BRS's modeling was based on unsubstantiated estimates of $PM_{2.5}$ emissions from the BRS facility. Furthermore, ADEQ did not explain the rationale for use of background concentration data from Dyersburg, TN for $PM_{2.5}$, instead of from other available monitors that are likely more representative of the location than the Dyersburg monitoring data. Use of background monitoring data from other $PM_{2.5}$ monitors including monitors located in Marion, Arkansas, Newport, Arkansas, and Memphis, Tennessee demonstrate that impacts from the BRS facility exceed the $PM_{2.5}$ annual NAAQS.

Fourth, after issuing the Draft Permit, ADEQ doubled the CO_2e BACT limit in the Permit (from 0.0723 ton CO_2e/ton of steel to 0.155 ton CO_2e/ton of steel) without adequate explanation or justification, based solely on the unsupported comment from BRS that its future product mix might result in increased CO_2e emission rates. (See, Attachment 3, ADEQ RTC, p. 2, Response to BRS Comment 4). BRS did not provide any alternative operating scenarios in the Application, Rev. 2 to support the higher CO_2e BACT emission rate contained in the Permit. Because this change

occurred after the Draft Permit was issued, Nucor, EPA and members of the public did not have an opportunity to comment.

Fifth, the Permit used emission factors for $PM_{2.5}$ for the EAFs and natural gas combustion that were not supported, and ADEQ did not provide any rationale for adopting those emission factors. The Permit is based on a $PM_{2.5}$ emission factor for natural gas combustion sources from preliminary test data that is only 6.8% of the US EPA AP-42 emission factor. In light of the fact that the BRS $PM_{2.5}$ air quality impacts are 100% of the $PM_{2.5}$ annual NAAQS, ADEQ should not have accepted the proposed $PM_{2.5}$ emission factors without evidence that the facility could in fact meet that emission level. In addition, BRS did not consider secondary formation of $PM_{2.5}$ in its modeling and air quality analysis. Again, because $PM_{2.5}$ impacts are 100% of the $PM_{2.5}$ annual standard, ADEQ should have required analysis of secondary $PM_{2.5}$ impacts.

Sixth, as more fully explained in Nucor's Comments on the Draft Permit, because of errors in the permitting process and in the Draft Permit itself, and because of ADEQ's failure to explain adequately the basis for its draft permitting decision in the SOB, ADEQ did not provide the required opportunity for public participation in the decision-making process.

BACKGROUND

ADEQ issued a final Title V Operating Permit, No. 2305-AOP-R0 to BRS on or about September 18, 2013 (the "Permit"). The Permit purports to authorize BRS both to construct and to operate the BRS Facility under APC&EC Reg. No. 26 and 19. Reg. 26 is the Arkansas Title V Operating Permit Program regulation, and Reg. 19 is the Arkansas SIP (including PSD). ADEQ issued a Draft Permit for the BRS

facility on June 25, 2013. A copy of the Draft Permit was electronically transmitted to EPA on June 26, 2013. EPA's 45 day comment period expired on August 10, 2013, and the deadline for filing a petition to object with EPA expires on October 10, 2013.

Emission units at the proposed BRS Facility include two electric arc furnaces, ladle metallurgy furnaces, a RH degasser and boiler, casters, ladle preheaters, ladle dryout heaters, vertical ladle holding stations, tundish preheaters, a pickling line, galvanizing lines, annealing furnaces, a decarburization line, rolling mills, coating lines, material storage and handling operations, conveyors, emergency generators, cooling towers, and unpaved roads. (Attachment 3, Permit, p. 5) The BRS Facility is permitted to emit 238.1 tpy of PM, 321.3 tpy of PM_{10}, 315.9 tpy of $PM_{2.5}$, 350.3 tpy of SO_2, 194.1 tpy of VOC, 3949.7 tpy of CO, 1067.7 tpy of NO_x, 0.963618 tpy of lead, and 1,203,020 tpy of CO_2e. The site for the proposed facility is located approximately 3.5 miles south of the town of Osceola, Arkansas, which had a population of 7,757 according to the 2010 U.S. Census. The population of Osceola is approximately 53% minority, and according to 2010 Census data the poverty rate of residents of Osceola was more than twice the national average. The site of the proposed BRS Facility is adjacent to the Mississippi River, and will be built next to and within a mile of a 665 MW coal fired power plant, Plum Point Energy Station.

The BRS facility will cost approximately $1.2 billion to construct. Significant financing for the BRS facility will be provided by agencies of the State of Arkansas. The Arkansas Development Financing Authority will provide $120 million for construction of the facility through state issued revenue bonds to be repaid from gross general revenues or special revenues appropriated by the Arkansas General Assembly. The Arkansas Teacher Retirement System will invest $60 million, for a 20% equity ownership in the BRS mill. Copies of economic reports prepared for the Arkansas

General Assembly to support state financing for the BRS Facility are attached hereto as Attachments 7 and 8.

The State of Arkansas's financing for the BRS mill required enactment of legislation by the 89th Arkansas General Assembly, which met during the spring of 2013. Legislation enabling the State of Arkansas's financing and investment in the mill included Acts 1084 and 1076. As a condition of moving forward with that legislation, the State required BRS to file an application for an air permit.[1] Accordingly, BRS filed its first air permit application with ADEQ on January 30, 2013. Because the air permit application was incomplete, confusing, erroneous and contradictory, ADEQ required BRS to file a second air permit application. This second application was filed on March 5, 2013. Thereafter, the BRS application was deemed administratively complete by ADEQ on or about March 14, 2013, and notice of receipt of the application was published on or about March 18, 2013.

Due to errors, design and calculation changes, and ongoing supplementary information submitted by BRS, ADEQ required BRS to submit another complete air permit application, i.e., Application, Rev. 2. (Attachment 5, Vols. 1 and 2). Because BRS had scheduled a meeting of investors in the project, BRS requested that ADEQ issue and provide public notice of the Draft Permit prior to or at the time of this investor meeting scheduled for June 25, 2013.[2] As a result, the Application, Rev. 2 was submitted to ADEQ on June 24, 2013. The next day, on June 25, 2013, without proper review of the Application, Rev. 2 and its supporting materials, ADEQ issued the Draft Permit and an accompanying Statement of Basis ("SOB"). (Attachment 2).

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[1] See, emails dated January 29 and 30, 2013, submitted herewith as Attachment 9.

[2] See, emails dated June 20 and 21, 2013, attached hereto as Attachments 10 and 13.

On June 26, ADEQ sent the Draft Permit and SOB to EPA for review. Notice of the Draft Permit was published on June 27, 2013.

ADEQ provided a public comment period on the Draft Permit from June 27, 2013 through July 30, 2013, the date of a combined public hearing and public meeting held by ADEQ on the Draft Permit in Osceola, Arkansas. During that time written comments were submitted by NSA, NYS, EPA, and the Federal Land Manager for the Mingo Wilderness ("FLM"). On September 18, 2013, ADEQ issued the final Permit for the BRS Facility. (Attachment 3).

EPA OBJECTION TO PART 70 PERMITS

In reviewing a petition regarding a Part 70 permit, the Administrator must object where petitioners "demonstrate" that the permit "is not in compliance with the requirements of the Clean Air Act, including the requirements of the applicable implementation plan." 42 U.S.C. §7661d(b)(2). The Administrator has explained that EPA will "generally look to see whether the Petitioner has shown that the state did not comply with its SIP-approved regulations governing PSD permitting or whether the state's exercise of discretion under such regulations was unreasonable or arbitrary."[3]

ADEQ transmitted the BRS Draft Permit to EPA for review on June 26, 2013, triggering EPA's 45 day review period as required by CAA §505(b)(2), 42 U.S.C.

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[3] *In the Matter of Louisville Gas and Electric Company, Trimble County, Kentucky* (hereinafter "Trimble"), 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 (citing *In re East Kentucky Power Cooperative, Inc. (Hugh L. Spurlock Generating Station) Petition No. IB-2006-4* (Order on Petition) (August 30, 2007); *In re Pacific Coast Building Products, Inc.* (Order on Petition) (December 10, 1999); *In re Roosevelt Regional Landfill Disposal Company* (Order on Petition) (May 4, 1999).

§7661d(b)(2). NSA and NYS file this petition within sixty days following the end of EPA's review period as required by CAA §505(b)(2), 42 U.S.C. §7661d(b)(2). The Administrator has sixty days to grant or deny this Petition. ADEQ issued the Final Permit on September 18, 2013, and therefore, the Administrator shall "modify, terminate or revoke such permit" upon its objection. 42 U.S.C. §7661d(b)(3).

For the reasons summarized above and for those discussed in more detail below, the Administrator must object to the Permit within 60 days upon receipt of this Petition, as required by section 505 of the Clean Air Act, because the Permit violates the applicable requirements of the Act and the Arkansas SIP.

GROUNDS FOR PETITION FOR OBJECTION

A. THE MODELING SUPPORTING THE PSD ANALYSIS IS FLAWED AND DOES NOT DEMONSTRATE THAT THE BRS FACILITY WILL NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE NATIONAL AMBIENT AIR QUALITY STANDARD

Clean Air Act Section 165 and 40 CFR §52.21, as incorporated by APC&EC Reg. 19.904, require that the owner or operator of a proposed source demonstrate that the allowable emissions from the proposed source would not cause or contribute to air pollution in violation of any national ambient air quality standard ("NAAQS") in any air quality control region. 42 U.S.C. §7475(a)(3)(B); 40 C.F.R. §52.21(k). The Permit does not assure compliance with the $PM_{2.5}$ NAAQS as required by Section 165 of the CAA. The permitting process fails to assure compliance with Section 165 because there is inadequate information to determine, among other things, if the background concentration of $PM_{2.5}$ was properly determined; the permit fails to

account for known growth and secondary emissions that will increase background; the analysis improperly excluded areas using the invalidated $PM_{2.5}$ "significant impact level", and the permit and permit analysis fails to address secondary particulate formation.

1. ADEQ conducted an inadequate review of background data.

In its comments on the Draft Permit, Nucor stated:

> Plantwide Condition No. 7 requires post-construction ambient air monitoring for PM_{10}, $PM_{2.5}$ and NO_2. Given the fact that modeling submitted in support of the Application, Rev. 2 shows that the impact from BRS's emissions is equal to the NAAQS for annual $PM_{2.5}$, and that the earlier modeling for the facility showed exceedances of the PM_{10} NAAQS, ADEQ should require pre-construction ambient air monitoring. As noted in other comments, questions exist about BRS's use of background concentrations for $PM_{2.5}$ from monitors at Dyersburg, TN. . . Neither the SOB nor the Permit adequately explains why ADEQ chose to require post-construction ambient air monitoring, but not pre-construction monitoring. In light of the decision in Sierra Club v. EPA, 705 F.3d 548 (D.C.Cir. Jan. 22, 2013), ADEQ should require site-specific pre-construction ambient air monitoring for this facility

(Attachment 1, Nucor Comment 21). In Comment 34, Nucor stated:

> The map on page 496 of 533 in Application Volume II indicates that the background concentration for $PM_{2.5}$ from the Dyersburg, TN monitor is 10.4 $\mu g/m^3$. BRS has applied a background concentration of 9.44 $\mu g/m^3$ to the modeled NAAQS impacts to determine the cumulative impact. The 3-year average of annual $PM_{2.5}$ monitoring data from U.S. EPA's AIRS website is 10.42 $\mu g/m^3$ . . . Using the background concentration of 10.42 $\mu g/m^3$ gives a cumulative annual $PM_{2.5}$ impact of at least 12.89 $\mu g/m^3$, which is 7.4% above the 12 $\mu g/m^3$ annual NAAQS. ADEQ should verify the background concentration and determine if additional $PM_{2.5}$ NAAQS analyses are required.
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> * * * * * * * * *
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> In addition, ADEQ should explain why use of the Dyersburg, TN monitoring data is representative of air quality in Osceola in lieu of site-specific pre-construction monitoring for this project. Site-specific pre-construction monitoring should be required.

(Attachment 1, Nucor Comment 21). In its response to Nucor's Comment 21, ADEQ stated that the Sierra Club v. EPA case "does not affect the permitting authority's ability to evaluate the use of existing monitoring data in place of site specific data. In this permit, ADEQ has relied on existing monitors to establish background values." In its response to Nucor's Comment 34, ADEQ stated its reason why it chose one set of monitoring data from Dyersburg, TN over another set of monitoring from Dyersburg, and further cited Appendix W for its authority to use a regional site to determine background if there are no other monitors located in the vicinity of the source. (See Attachment 3, ADEQ RTC). However, ADEQ did not explain why the Dyersburg location was representative of air quality in the location of the BRS Facility and did not explain why other available nearby monitoring data should not have been used or considered.

ADEQ did not adequately explain the basis for its choice of background monitoring data. As the D. C. Circuit made clear in Sierra Club v. EPA,

> The statute explicitly states that one purpose of the monitoring requirement is to determine whether emissions from a proposed source or modification will exceed the increments or NAAQS. . . We logically infer from this statement that Congress intended the monitoring requirement to establish the baseline air quality in an area before the owner of a proposed source or modification even applies for a PSD permit. If an area's pre-existing ambient $PM_{2.5}$ concentration is so high that a violation of the NAAQS or increment is imminent, a source below the SMC may nevertheless cause a violation if built or modified. This is true even if the source's projected ambient impact on $PM_{2.5}$ is so low that the difference in air quality before and after construction would be impossible to measure with accuracy. But a permitting authority cannot know how close an area is to violating the NAAQS or increment unless it knows the existing ambient concentrations of $PM_{2.5}$ before a source is constructed or modified.
>
> The EPA's argument also fails to address Congress's mandate that the results of the air quality analysis required by 165(e) be made available to the public at the time of a hearing for a PSD permit. . . . Indeed, one of Congress's stated purposes in enacting the PSD provisions was "to assure that any decision to permit increased air pollution in any area to which" the PSD provisions apply be made only after careful evaluation

> by the permitting authority and "after adequate procedural opportunities for *informed* public participation in the decision-making process. . . . Congress express statement that the public shall have the air quality data to allow for informed participation in PSD application hearings bolsters our conclusion that the EPA has no authority to exempt the monitoring requirement. [emphasis supplied]

705 F.3d 458, at 468-69. It is clear that ADEQ must either (a) require adequate preconstruction monitoring to allow the public to participate in an informed way or (b) provide an adequate justification of why the supposedly representative monitoring data are, in fact, representative and whether pre-construction monitoring should have been required.

In this case, where the modeled impact of the BRS Facility essentially drives ambient air quality to the NAAQS itself, careful analysis and discussion of the basis for the background air quality decision is required to give effect to the unambiguously expressed intent of Congress in Section 165 of the Act, as interpreted by the court in the Sierra Club case. In this case, ADEQ's mere invocation of Appendix W that allows it to consider a "regional monitor" does not meet the standard established by the Act or the implementing regulations, and ADEQ should have explained its rationale for using the Dyersburg data or required pre-construction monitoring.[4]

Furthermore, neither BRS nor ADEQ even attempted to explain why $PM_{2.5}$ monitoring data from Dyersburg, TN was representative of air quality in Osceola, AR.[5] Dyersburg, TN is approximately 40 miles northeast of Osceola, and there is no

[4] Nucor notes that the Tennessee Department of Environmental Conservation characterizes the Dyersburg monitor as a "neighborhood" scale monitor rather than a "regional" one. The closest "regional" monitor to the BRS site is in Marion, Arkansas.

[5] It should be noted that BRS used data from different monitoring locations to establish background concentrations for various pollutants. BRS picked data for PM_{10} and SO_2 from a location in Shelby County, TN some 40 miles to the south, picked data for NO_2 from a location in Marion, AR some 35 miles to the south-southwest, and picked data for $PM_{2.5}$ from Dyersburg, TN some 40 miles to the

discussion as to any factors about the Dyersburg location that would make it representative of the site of the BRS Facility. Furthermore, there is no discussion regarding use of $PM_{2.5}$ monitoring data from any of the following locations as background:

Marion, AR – approximately 35 miles south-southwest
Memphis, TN (Breedlove Ave.) – approx. 40 miles south
Newport, AR – approximately 70 miles west
Helena, AR – approximately 87 miles south
Stuttgart, AR – approximately 120 miles south-southwest
North Little Rock, AR – approximately 145 miles southwest

It should be noted that the final Air Quality Analysis Report (Attachment 4 - Application, Rev. 2, Appendix C, Figure 1) shows that the wind blows primarily from the south and southwest, suggesting that monitoring data from the south and southwest of the BRS Facility location would be more appropriate than monitoring data from a location to the northeast. Based on BRS's modeled $PM_{2.5}$ impact[6] of 2.56 $\mu g/m^3$, use of 2010-2012 monitoring data from any of these other locations as background yields the following predicted cumulative impacts, **all of which exceed the annual PM2.5 NAAQS of 12 $\mu g/m^3$**:

	Background ($\mu g/m^3$)[7]	Cumulative ($\mu g/m^3$)
Memphis, TN (Breedlove)	10.33	12.89
Marion, AR	11.16	13.72
Newport, AR	10.23	12.79
North Little Rock, AR	11.87	14.42
Helena, AR	10.56	13.12
Stuttgart, AR	10.46	13.02

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northeast. See, final Air Quality Analysis Report, Attachment 4, Application, Rev. 2, Appendix C, pp. C-15, 16. No explanation is given as to why any of these locations is representative of air quality in Osceola for any of these pollutants.

[6] Attachment 4, Application, Rev. 2, Appendix C, p. C-17.

[7] Data obtained from EPA AirData website database.

In fact, in an internal ADEQ email dated February 6, 2013, after the first BRS permit application had been submitted, ADEQ permitting staff observed that "the new PM2.5 is 12 µg/m3 . . . Looking at our monitors they seem to be consistently reading 10 or 11 outside of [Little Rock]." A copy of this email and other emails discussing the consistency of PM2.5 background data across the state are submitted herewith as Attachment 11. In spite of this observation, when it issued the Draft Permit ADEQ did not provide any explanation as to why use of $PM_{2.5}$ background concentrations from Dyersburg TN were representative or appropriate. Consequently, BRS did not satisfy the requirement in 40 CFR §52.21(k) to demonstrate that its emissions would not cause or contribute to air pollution in violation of a NAAQS.

2. The modeling is deficient because it excluded areas based solely on being below the significant impact level.

Nucor's Comment No. 30 stated:

> NAAQS and increment modeling files appear to include only the receptors that were significant in the significance modeling, rather than all receptors within the radius of impact.

In its response, ADEQ stated:

> Modeling by BRS met the requirements of Appendix W. Areas where BRS had an insignificant impact, as determined by the SIL, were excluded from modeling as allowed by EPA guidance.

(Attachment 3, ADEQ RTC). This response demonstrates that ADEQ and BRS did not properly model and analyse the ambient impact of $PM_{2.5}$ after the D.C. Circuit Court of Appeals decision in Sierra Club v. EPA, 705 F.3d 458 (D.C. Cir. 2013). In that case, the Court vacated the PM2.5 significant impact level ("SIL"). Thus, there is no SIL to apply to $PM_{2.5}$. Even so, ADEQ must rerun the modeling analysis because the modeled value for the $PM_{2.5}$ cumulative impact is 12.00 (equal to the NAAQS) versus a SIL level of 0.3

$\mu g/m^3$.[8] See, e.g., 40 C.F.R. §52.21(k). Thus, it is possible that areas with an impact below the SIL, but above 0.1 $\mu g/m^3$ could demonstrate an exceedance of the $PM_{2.5}$ NAAQS in violation of APC&EC Reg. 19.904. Further, EPA's modeling guidance to exclude receptors below the SIL applies only to the 1-hr. average NO_2 and SO_2 NAAQS, because of the form of the NAAQS (98^{th} and 99^{th} percentile of the maximum daily 1-hour average NO_2 and SO_2 concentration, respectively; USEPA memorandum, dated March 1, 2011). Other averaging periods for SO_2 and NO_2 and other criteria pollutants continue to use the radius of impact based on the most distant extent of the SIL.[9]

The Court in Sierra Club found that where the SIL is greater than the difference between background and the NAAQS, the SIL provides no assurance of compliance with the NAAQS. Sierra Club, 705 F.3d 458. Because there is no way to determine whether the $PM_{2.5}$ NAAQS was violated, EPA must object to the permit and remand it back to ADEQ to clarify BRS's impact compared to the $PM_{2.5}$ NAAQS or revoke the permit.

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[8] See Attachment 4, Application, Rev. 2, Appendix C, p., C-17. Similarly, the modeled value for 1-hour NO_2 is 181.8 $\mu g/m^3$ (within 4% of the NAAQS of 188 $\mu g/m^3$) versus a SIL level of 7.52 $\mu g/m^3$. See, pp. C-11, C-17.

[9] As discussed below, the Permit is based on use of an unproven emission factor for $PM_{2.5}$ from natural gas combustion that is 6.8% of the AP-42 emission factor. If the AP-42 emission factor had been used, it is likely that additional receptors exceeding the NAAQS would be identified.

3. ADEQ failed to properly consider secondary formation of particulate, which would cause or contribute to a NAAQS exceedance given that the predicted cumulative impact of the BRS Facility is equal to the $PM_{2.5}$ NAAQS

In its comment 27, Nucor stated:

> Recent draft EPA guidance (March 4, 2013) for $PM_{2.5}$ modeling indicates that projects that have significant emissions of both $PM_{2.5}$ and $PM_{2.5}$ precursors (SO_2 and NO_x) should evaluate secondary formation of $PM_{2.5}$. It is not clear that secondary $PM_{2.5}$ emissions were included in the $PM_{2.5}$ air quality analysis submitted by BRS. . . BRS meets Case 3 since emissions from the proposed mill exceed the PSD significant emissions rate for direct emissions of $PM_{2.5}$ as well as for NO_x and SO_2. Case 3 calls for assessing secondary impacts of $PM_{2.5}$. It is not clear that BRS has conducted any form of secondary impacts assessments for $PM_{2.5}$. Given that the current $PM_{2.5}$ analysis results in impacts very near or equal to the $PM_{2.5}$ NAAQS, ADEQ should properly assess the impacts of secondary $PM_{2.5}$ formation and document this assessment in the permitting record.

ADEQ's response was succinct: "ADEQ is not obligated to follow draft guidance. The draft guidance was first issued on March 4, 2013, after the initial application for this permit had been received and review started."[10] (Attachment 3, ADEQ RTC).

The CAA is emphatic that a PSD permit cannot be issued if it will result in a violation of the NAAQS. CAA §165(a)(3)(B); 42 U.S.C. §7475(a)(3)(B). Nucor in its comments pointed out that there are multiple sources of doubt concerning the BRS Facility's impact on the NAAQS, including questions about the emission rates assigned to major and minor emissions units, questions about background concentrations used by BRS and ADEQ, and questions about the extent of secondary stationary source emissions that might occur. All of these factors suggest that the

[10] Nucor notes that ADEQ did follow the March 4, 2013 $PM_{2.5}$ draft guidance by using the highest, 8th highest modeled impact, instead of the highest, first highest modeled impact as specified in the current $PM_{2.5}$ modeling guidance, i.e., USEPA, Memorandum from Stephen D. Page, "Modeling Procedures for Demonstrating Compliance with $PM_{2.5}$ NAAQS," March 23, 2010. ADEQ's use of highest, 8th highest values without adopting other sections of the March 4, 2013 draft guidance, including secondary formation of $PM_{2.5}$, is inconsistent with that guidance. ADEQ's actions in accepting and rejecting parts of various guidance documents without explanation or rationale is troubling.

BRS Facility's projected impact on the $PM_{2.5}$ NAAQS is questionable. Considering these doubts, ADEQ in this situation cannot simply refuse, on the basis that EPA's guidance is late in arriving, to fulfil its federal statutory duty to ensure that the BRS Facility will not "cause or contribute" to a NAAQS violation.

Nucor is not insisting that ADEQ must follow EPA's draft guidance. Nevertheless, ADEQ must analyse the facts before it and explain why in its judgment secondary emissions should be wholly disregarded when the precursor emission rate are significant and the direct $PM_{2.5}$ emissions alone are equal to the NAAQS threshold (or over it, depending on what emissions are counted and choice of background monitoring location). There is no such determination in the record. All the record contains is ADEQ's statement that it is not bound by EPA's guidance, without any discussion of ADEQ's statutory obligations. Because the direct $PM_{2.5}$ emissions already place the facility at the NAAQS, it is error for ADEQ to wholly disregard the potential impact of precursor emissions and, as a result, it has not been demonstrated that "emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any . . . national ambient air quality standard."

4. The ADEQ $PM_{2.5}$ modeling analysis appears to be based on an unsupported value.

In Comment 33, Nucor pointed out that there were inconsistencies in the modeling data presented concerning the BRS Facility. Specifically, the Draft Permit indicated a modeled annual impact from the BRS Facility of 2.47 $\mu g/m^3$ for $PM_{2.5}$. (Attachment 2, Draft Permit, p. 8). However, the increment analysis showed an annual impact of 2.53 $\mu g/m^3$ for $PM_{2.5}$ and the cumulative analysis showed an impact of 2.56 $\mu g/m^3$. (Attachment 4, pp. C-11 and C-17). ADEQ responded to Nucor's comment that the increment analysis was based on an earlier run and was being revised down to the

NAAQS value of 2.47 $\mu g/m^3$. ADEQ did not respond to the heart of Nucor's comments, which is that there does not seem to be a basis for the 2.47 $\mu g/m^3$ value. The materials published with the Permit show modeled values of 2.53 $\mu g/m^3$ and 2.56 $\mu g/m^3$. Material supporting the Permit that was provided to Nucor by ADEQ pursuant to a Freedom of Information Act request shows a value of 2.56 $\mu g/m^3$. (Attachment 4 and 5).[11]

Nucor requested its consultant to rerun AERMOD with the model inputs presented and it shows an impact of 2.53 $\mu g/m^3$. As best as Nucor can determine, the 2.47 $\mu g/m^3$ is either an error or is in a model run that was never presented to the public. If the 2.56 $\mu g/m^3$ value presented in the BRS modeling analyses are used, then the cumulative impact analysis shows 12.00 $\mu g/m^3$ for $PM_{2.5}$, which is the NAAQS standard exactly.[12] Thus, any increase in the emissions data of any modeled emissions point, inclusion of emissions from any sources improperly omitted from modeling, or failure to properly account for any ambient contribution could lead to an exceedance.

B. ADEQ AND BRS FAILED TO PROPERLY CARRY OUT AN ADDITIONAL IMPACTS ANALYSIS.

Clean Air Act Section 165 and 40 C.F.R. §52.21(o), as incorporated in APC&EC Reg. 19.904 require BRS to "provide an analysis of the air quality impact projected for the area as a result of general commercial, residential, industrial or other growth

[11] The BRS March 5, 2013 Air Quality Analysis Report also shows a source impact of 2.53 $\mu g/m^3$ and a cumulative impact also of 2.53 $\mu g/m^3$. (Attachment 6, pp. C-7 and C-15).

[12] Furthermore, as discussed below, if the AP-42 emission factors for natural gas combustion sources are used instead of the unsubstantiated values used in the Application, Rev. 2, the $PM_{2.5}$ impacts of the BRS Facility would double, resulting in NAAQS exceedances.

associated with the source." 42 U.S.C. §7475(a)(6); 40 C.F.R. §52.21(o). In addition to this requirement, APC&EC Reg. 19.904(C) states that when more than 50% of available annual increment or 80% of any short term increment is consumed, an assessment is required of the "effects that the proposed consumption would have upon the industrial and economic development within the area of the proposed source" and of "alternatives to such consumption, including alternative siting of the proposed source or portions thereof."

In its Comments No. 5, 11, 12, and 42, Nucor pointed out that BRS's additional impacts analysis was inadequate, was not consistent with NSA and NYS's experiences regarding industrial, commercial and residential growth around their mills, and contradicted published reports and sworn testimony by BRS representatives about significant industrial, commercial and residential growth that was expected to accompany the construction and operation of the BRS Facility. NSA and NYS also commented that BRS did not discuss or analyze any alternatives, including alternate sites for the BRS Facility.

For example, Nucor attached to its Comments sworn testimony from the Executive Director of the Arkansas Economic Development Commission in Arkansas Public Service Commission Docket No. 13-032-P in which he stated that estimates of the direct economic impact of BRS "do not include the impact that could be felt from mill customers who choose to locate near the mill to take advantage of a steady supply of steel and reduced transportation costs. . . . One needs to look no further than Blytheville to know that these types of locations are a strong possibility. Tenaris, an Argentine pipe and tube manufacturer, located its facility within a few miles of the existing Nucor mill near Blytheville to have ready access to Nucor's steel. The AEDC and BRS are already pursuing potential customers for the BRS's mill's

output." [emphasis supplied]. (Attachment 1, Nucor Comments on Draft Permit, Ex. B). In the same docket, the Chairman and CEO of BRS testified:

> Beyond BRS's payroll, there will likely be a number of suppliers and customers that also locate in the area. . . . From a customer perspective, we typically see steel service centers, steel processors, and pipe mills locate in close proximity to new mills in an attempt to reduce transportation costs and gain direct access to steel. From a support industry perspective, the BRS mill will have a number of support entities that will provide BRS with raw materials, maintenance services, material handling services, and various day-to-day needs such as cafeteria services.

Id. Nucor's experience with its mills in Mississippi County, Arkansas is consistent with these observations. Following is a list of some of the facilities and businesses (and their ADEQ identification numbers) that likely provided support or were customers of the Nucor mills or otherwise located near the Nucor mills and that had environmental permits issued by ADEQ after NYS began operations in 1989[13]:

Kinder Morgan Bulk Terminals – AFIN 47-00516
International Mill Service – AFIN 47-00211
Air Liquide (2 locations) – AFIN 47-00241; 47-00962
Harsco – AFIN 47-00243
Inorganic Recycling – AFIN 47-00245
Maverick Tube – AFIN 47-00251
Razorback Concrete (2 locations)– AFIN 47-00257; AFIN 47- 00260
Burlington Northern (2 locations) – AFIN 47-00260; AFIN 47-00436
Huntco Steel – AFIN 47-00264
Paco Steel – AFIN 47-00274
Friedman Industries – AFIN 47-00246
AllMet Industries – AFIN 47-00247
Ipsco Tubulars – AFIN 47-00445
JMS Russell Metals – AFIN 47-00480
Heckett Multiserv – AFIN 47-00486
Skyline Steel – AFIN 47-00493
Hartford Steel – AFIN 47-00522
Siemens Industries – AFIN 47-00907
Atlas Tube – AFIN 47-00909
Precoat Metals – AFIN 47-00914
PIZO Operating Company – AFIN 47-00931

[13] Information obtained on October 4 and 5, 2013 from ADEQ's online Facility and Permit Summary (PDS) database for permitted facilities located in Mississippi County, Arkansas, (AFIN prefix 47), with AFIN numbers greater than NYS (AFIN suffix 00202).

In response to Nucor's Comments, ADEQ ignored the information submitted by Nucor and simply stated that the BRS analysis was consistent with other PSD permit applications, and that EPA had not commented on any deficiencies or inadequacies in the analysis. However, whether other permit applicants had more or less detailed additional impacts analysis or whether EPA commented on this issue is irrelevant. The additional impacts analysis requirement is part of the Clean Air Act and the Arkansas SIP, and ADEQ is required to follow it. Furthermore, APC&EC Reg. 19.904(C)(3) states that the detail of the assessment shall be "commensurate" with the degree of proposed increment consumption. ADEQ did not provide any analysis of this factor in its explanation as to why BRS's superficial analysis was satisfactory.[14] When faced with the degree of increment consumption and an air quality impact analysis from the BRS Facility equal to the annual $PM_{2.5}$ NAAQS, and when presented with available information demonstrating that the State of Arkansas and BRS expected to see significant commercial, industrial and residential growth, ADEQ should have required an adequate and more extensive additional impacts analysis, and should have required BRS to present alternatives to its projected increment consumption. In fact, BRS did not provide any justification for its additional impacts analysis to ADEQ until 2:44 PM on June 25, 2013, the same day that the Draft Permit was issued. See, Attachment 1, Nucor Comments, Ex. A, email dated June 25, 2013, 2:44 PM, also submitted separately as Attachment 12.

ADEQ and BRS's failure to do so demonstrates that the Permit does not comply with all applicable requirements. Because the predicted increment consumption by

[14] As described below, BRS did not provide ADEQ with BRS's justification for its additional impacts analysis until the afternoon that the Draft Permit was issued.

the BRS exceeded 50% of the long term increment and 80% of the short term increment for PM_{10} and $PM_{2.5}$ (and was 100% of the annual $PM_{2.5}$ NAAQS and was 96% of the 1-hour NO_2 NAAQS), and because of Mississippi County's past experience of additional growth as a result of and near the Nucor mills (as evidenced by ADEQ's own permitting records), and because BRS and the State of Arkansas both expected (and in fact were pursuing) additional commercial, residential and industrial growth as a result of and near the BRS mills, ADEQ should have required a more robust and detailed additional impacts analysis, including possible alternative site locations. BRS's additional impacts analysis was not "in detail commensurate with the degree of proposed increment consumption and the area affected." Because BRS's emissions impact could impact both facilities that BRS and the State of Arkansas hope will locate near the BRS mill, and possible expansion by the facilities that are already adjacent to the BRS site, BRS's failure to provide a detailed additional impacts analysis violated APC&EC Reg. 19.904(C)(2) because it was not part of the permit application, and was not made available for public inspection, thereby depriving the public of the opportunity to comment. For these reasons the Administrator must object.

C. THE PERMIT AND PERMIT APPLICATION DOES NOT CONTAIN SOURCE INFORMATION NECESSARY TO PERFORM THE ANALYSES REQUIRED FOR PSD REVIEW. DOES NOT CONTAIN THE INFORMATION REQUIRED BY PART 70 FOR OPERATING PERMITS. AND WAS NOT PROCESSED PROPERLY.

40 C.F.R. §52.21(n) requires that a permit applicant submit "all information necessary to perform any analysis or make any determination under this section." APC&EC Reg. 26.402 likewise requires a permit applicant to submit certain

information, including additional information required by ADEQ "to verify which requirements are applicable to the source" and the "calculations for the above." APC&EC Reg. 26.407 states that to be deemed complete an application must provide all the information required by section 26.402. APC&EC Reg. 26.501 provides that a permit may be issued only if ADEQ has "received a complete application for a permit" and "the processing of the permit application and the conditions of the permit provide for compliance with all applicable requirements." Furthermore, 40 CFR §52.21(a)(2)(iii) states that no new major stationary source shall begin actual construction without a permit that states that the source will meet with the requirements of 40 CFR §§52.21(j) through (r)(5).

The BRS permit application and the Final Permit does not comply with these requirements because the permit application is incomplete in several significant respects, does not contain sufficient information to determine compliance with all applicable requirements or contains conflicting information, and was improperly processed and analysed. The Permit also does not contain a statement that the BRS Facility (as presented in the BRS Permit Application) will meet the requirements of PSD review. Instead, ADEQ issued a permit that ADEQ believes would satisfy all applicable requirements, regardless of whether BRS's Permit Application indicated that it could or would be able to meet such requirements.

1. <u>The emission factors for natural gas combustion used to issue the Draft Permit are conflicting.</u>

In its Comment No. 14, Nucor stated:

> In the Draft Permit, page 10, there is a discrepancy between the factors used to model emissions for natural gas sources, and the emissions for natural gas sources requested by BRS as BACT limits. Modeling and ADEQ's review and permit decision should have been conducted based on the requested BACT emission limits and not on limits or operating conditions that ADEQ thinks will satisfy applicable

> requirements. ADEQ should review BRS's permit application as it was presented to determine whether the facility as proposed satisfies applicable requirements and not issue a permit based on different operating characteristics than proposed by the permit applicant that ADEQ thinks satisfies applicable requirements. ADEQ's decision and rationale on this point should be explained, and an additional public comment period should be provided.

The $PM/PM_{10}/PM_{2.5}$ emission factor for natural gas combustion sources used in the modeling was 0.00052 lb/MMBtu. EPA's AP-42 emission factor is 0.0076 lb/MMBtu. Thus, the proposed emission limit for BRS's natural gas combustion sources is about 6.8% of the BACT emission limit consistently listed in the RBLC, which is the same factor as in AP-42. If AP-42 values are used for natural gas combustion sources, the BRS Facility's $PM_{2.5}$ emissions would more than double, thereby leading to exceedances of the $PM_{2.5}$ NAAQS.

In its response, ADEQ stated that the lower limits used in the modeling were included in the permit because "this was necessary to demonstrate compliance with NAAQS." (Attachment 3, ADEQ Response to Comments, p. 13). However, there is no demonstration in the Permit Application that the BRS Facility will be able to achieve the lower limits for natural gas emissions used in modeling. Since BACT is an emission limit representing the best available control technology that is achievable for the facility, 42 U.S.C. §7479(3), ADEQ should have required a demonstration that the BRS Facility would be able to meet the lower emission limits used in the NAAQS modeling.[15] ADEQ did not do so, and consequently, the Permit Application is

[15] EPA's Comments 1 and 7 express related concerns. In these comments, EPA questioned how compliance with emission limits for natural gas combustion sources would be demonstrated. ADEQ responded that testing for PM_{10} and $PM_{2.5}$ would be required for these sources because "emission limits proposed as BACT are much lower than any BACT limits from similar sources." (Attachment 3, ADEQ RTC). However, because the impact of emissions from the BRS Facility is already projected to equal the $PM_{2.5}$ NAAQS, this demonstration should be made before the permit is issued, not after the facility has been constructed and is operating.

incomplete, and BRS has not demonstrated that the BRS Facility will not cause or contribute to a NAAQS violation, and the Permit is not in compliance with applicable requirements.

Strong public policy supports the requirement that limits be demonstrated to be achievable. The BRS Facility represents a substantial financial commitment, including substantial resources from the State of Arkansas and its agencies. If the BRS Facility cannot achieve the lower, modeled numbers, there will be substantial pressure on ADEQ to "fix" the problem, as EPA has recognized in prior guidance emphasizing that construction cannot commence prior to permit issuance.[16] The same problems apply when a source takes a stringent permit limit that it cannot achieve so that it can meet modeling requirements. While Nucor is not opposed to lower limits *per se*, it does believe that those limits should be acknowledged as "beyond BACT" and that the general public has a right to know when the limits may not be fully achievable – which implicates the air quality for the public surrounding the facility.

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[16] EPA, "Source Construction Prior to Issuance of PSD Permit, at 2 (Oct. 10, 1978) ("It is extremely difficult to deny issuance of a permit when it results in a completed portion of a project having to remain idle. Therefore, in order to avoid any equity arguments at a later time, it is better to prevent any construction now rather than to have a "white elephant" on our hands later on."); EPA, "Construction Activities at Georgia Pacific," at 2 (May 13, 1993) (same); EPA, Letter to Charles W. Williams MPCA, at 2 (Dec. 13, 1995) ("As explained in the GP memo (and those preceding), absent a prohibition on any costly, significant, or permanent pre-construction, affected sources could defeat the pre-construction requirement or its enforcement by making a costly, substantial, and/or permanent investment and later argue that retrofitting of PSD requirements or a denial of the permit would unreasonably interfere with their investment.").

2. BRS did not adequately demonstrate the basis for its proposed $PM_{2.5}$ emission factors.

In its Comment 25, NSA and NYS stated:

> The Application, Rev. 2 contains emission factors for EAFs in Table 2-1A(ii) and Table 2-2a, consisting of 0.0018 gr/dscf for PM and 0.0024 gr/dscf for $PM_{2.5}$. Neither the Application, the Draft Permit nor the SOB adequately explain the derivation of the emission factor for $PM_{2.5}$. An emission factor of 0.0052 gr/dscf for $PM_{2.5}$ should be used to establish emission rates from the EAFs, including in modeling.

In response, ADEQ stated, "In a BACT analysis, a facility can propose a limit less than those achieved by other facilities. In this case BRS proposed a lower limit and is required to show compliance with that emission rate through testing." (Attachment 3, ADEQ RTC, p. 16). However, there is no demonstration in the Application, Rev. 2 of how the .0024 gr/dscf emission factor for $PM_{2.5}$ was derived or developed, and there is no demonstration in the Application, Rev. 2 that the BRS Facility will be able to achieve that emission rate. Rather than blindly accepting BRS's "proposed limits", ADEQ should have required additional information supporting the development of that emission factor, and information demonstrating that BRS's proposed emission limit was in fact achievable. This is required by 40 C.F.R. 52.21(n) and APC&EC Reg. 26.402, and by the policy considerations set forth above in the EPA memoranda prohibiting pre-construction permitting.

Furthermore, because BRS's modeling showed that cumulative impacts from the BRS Facility were equal to the $PM_{2.5}$ NAAQS, it was even more important for ADEQ to conduct a rigorous analysis of the basis for BRS's $PM_{2.5}$ proposed emission rates and emission limits, instead of allowing the facility to be built and then determining through testing whether or not the facility complied with applicable requirements.

3. The BRS facility design was incomplete in critical ways that affected the validity of the air quality modeling.

In Comments 4 and 22, Nucor commented that the permit application was incomplete because BRS had not finalized the design and placement of all emission sources, including calculation of baghouse loading rates. Because the projected $PM_{2.5}$ impacts from the proposed BRS facility are equal to the $PM_{2.5}$ NAAQS, NSA and NYS requested that the draft permit be withdrawn until final engineering is completed and additional modeling can be completed. In its response to Comments, at pages 10 and 15, ADEQ stated that "The Department can only issue a permit decision based on the application it receives." However, ADEQ had other options available to it instead of issuing the Draft Permit under these circumstances. It could have required that BRS submit additional information to support its permit application, including final engineering design and source location and demonstrations that the BRS Facility could meet the emission rates used in modeling. ADEQ also could have denied the permit application. Instead, ADEQ issued the draft permit, based on incomplete information, because BRS needed a draft permit issued in order to proceed with its financing plans. Moreover, as discussed below it was ADEQ's intention to fix any such problems after the Draft Permit was issued and during the public comment period.

4. The Permit does not contain enforceable permit conditions that lead to compliance.

The Permit prominently relies upon a "Dust Control Plan for Miscellaneous Sources" and a "Roadway Dust Control Plan." See Permit, Specific Conditions 95, 100 and 108. NSA and NYS commented in Comment No. 40 that "the permit should

specify when the dust control plan must be prepared and should list the minimum required Plan elements or criteria." ADEQ's response was the "the requirement for a dust control plan for miscellaneous sources was added with the same due date as the roadway dust control plan." ADEQ Response to Comments, p. 23. This response is inadequate. In *In the Matter of: Alliant Energy WPL Edgewater Generating Station*, Permit No. 460033090-P20, Petition No. V-2009-02 (Aug. 1, 2010) (hereinafter "*Alliant*") the Administrator held that a Title V permitting agency must include in the public record for review any element required to determine compliance with the conditions of the permit. In this case, Nucor commented that the permit should list the minimum required plan elements for these dust control plans; but the permit does not list any minimum plan elements or criteria. The permit simply lists a requirement to record throughput data (for water and materials), but the mere keeping of data does not demonstrate that the emissions are well controlled, which requires that the water be applied at a certain rate or when needed, and there is no explanation of how just keeping track of the amount of water applied will maintain proper controls. As the Administrator held in Alliant, the permitting authority must explain how the proposed monitoring will lead to compliance. ADEQ has failed to do this.

5. The Permit does not contain adequate monitoring, recordkeeping and reporting requirements to comply with the requirements of 40 C.F.R. §70.6(a)(3)(i)(B) because it does not provide for a test method.

Specific Condition 93 of the Permit states:

> The permittee tests [sic] the TDS of each of the cooling towers initially and every six months thereafter. This testing shall be conducted in accordance with Plantwide Condition 3 with a method approved by the Department before the first test is performed.

In its comment, Nucor stated: "In Specific Condition 93 concerning testing of TDS in the cooling towers, no test method is specified." (Attachment 1, Nucor Comment 19).

ADEQ responded that "The condition was updated to state that testing can be conducted by a method approved by the Department prior to testing." (Attachment, 2, ADEQ RTC, page 14 of 30). ADEQ's handling of the TDS issue and its response to Nucor's comment is wholly inadequate. In the *Alliant* decision, *supra*, the Administrator held that a Title V permitting agency must include in the public record for review any element required to determine compliance with the conditions of a permit. In this case, it is clear that the method of determining TDS is critical to determining whether the BRS will be in long term compliance. However, it is impossible to determine from the record how compliance is to be determined and ADEQ's response postpones resolution of this issue to beyond the conclusion of the Title V process. ADEQ cannot refuse to provide public notice and an opportunity to comment on critical monitoring provisions. See, *Alliant* at 13-14. Similarly, ADEQ cannot defer critical decisions to beyond the permitting period. As the Administrator stated in *U.S. Steel – Granite Works*, "permitting authorities do not have the discretion to issue a permit without specifying the monitoring methodology needed to assure compliance with applicable requirements in the title V permit." *In the Matter of United States Steel Corporation – Granite City Works*, CAPP Permit No. 96030056, Petition Number V-2011-2 (quoting *In the Matter of Wheelabrator Baltimore, L.P.*, Permit No. 24-510-01886 (Order on Petition) at 10 (April 14, 2010). This problem is compounded because ADEQ did not even specify the units in which TDS is to be determined. See, Attachment 3, Permit, Specific Conditions 92 and 93.

6. <u>The Permit does not appropriately establish BACT requirements.</u>

The Permit does not appropriately establish and set best available control technology requirements (BACT). The CAA requires that BACT be established by

the permitting authority on a case-by-case basis taking into account energy, environmental and economic impacts and other costs, that are achievable for the facility through application of production processes and available methods, systems and techniques for control of pollutants. See, 42 U.S.C. §7479(3). Critically, BACT must include a conclusion that the control technology "is achievable . . . through available methods, systems and techniques." However, it appears that BRS proposed, and ADEQ accepted, values chosen due to the needs of modeling rather than those determined by the BACT process. (Attachment 3, NSA and NYS Comments 4 and 25, and ADEQ's RTC, pp. 10 and 16). Setting BACT limits at modeled limits without completing the full BACT technical analysis and considering the BACT factors does not comply with BACT. The Permit should be remanded to ADEQ to set both a BACT limit, based on "available methods, systems and techniques" and any additional limits required to assure compliance with the NAAQS as separate limits.

7. ADEQ's Draft Permit does not comply with public notice and participation requirements.

ADEQ's Draft Permit and its processing of the Permit Application was inadequate and improper because it relies on plans yet to be developed, and was issued knowing that information in the Permit Application was incomplete and contradictory and that the Draft Permit would have to be revised in order to correct those omissions and contradictions. Thus, ADEQ's action deprived the public of notice and opportunity for comment. As discussed above, Nucor submitted several comments noting the incomplete information in the Permit Application and inconsistencies in the Draft Permit. These problems were known to ADEQ, but ADEQ issued the Draft Permit anyway and decided that it could "fix" these problems

during the Comment period. In an email to BRS's consultants dated June 17, 2013 (one week before the Draft Permit was issued), ADEQ permitting staff stated:

> Just to let you know, we are on a "complete this permit this week deadline." We need the information sooner rather than later or we will have to write the permit with the information in front of us. That may result in some decisions you will not agree with and have to work out in the draft period.

In an internal ADEQ email dated June 21, 2013 at 7:16 AM (four days before the draft permit was issued) ADEQ permitting staff stated:

> We should have the permit ready minus some final model numbers. There are thing[s] in it they may not agree with but we had to put something in the permit when we were faced with contradictions in the application. They can address it in the draft if they want.

Copies of these emails are submitted herewith as Attachment 13, and demonstrate that the Draft Permit was issued based on incomplete or contradictory information with knowledge that the permit terms and conditions would have to be modified in the final permit. ADEQ should not have issued the Draft Permit under these circumstances; instead, it should have required BRS to submit the additional information needed to process the Permit Application, or it should have denied the Permit. ADEQ did not do so because of BRS's need to have draft permit issued in time for its prospective investor meeting on June 25, 2013. See email from BRS to ADEQ dated June 20, 2013, 4:53 PM, submitted herewith as Attachment 10.

Some of the missing and confused data were significant and deprived the public of critical information. For example the Draft Permit stated that air quality impacts for the 1-hr NO_x NAAQS was 37.6 $\mu g/m^3$, or approximately 20% of the standard (Attachment 2, Draft Permit, p. 8); however, the actual impact was 181.8 $\mu g/m^3$ or 96% of the standard. (Attachment 3, ADEQ RTC, p. 1). Accordingly, because of errors in the Draft Permit, the public was presented with a draft permit that

showed the BRS Facility met the 1-hour NO_x NAAQS with a considerable margin of safety, but this misrepresented the BRS Facility's actual performance and deprived the public of critical information it would need to know to make informed comment on the adequacy of the controls, monitoring, recordkeeping and reporting requirements. For this and other reasons the Draft Permit did not provide adequate public notice as required by the CAA.

CONCLUSION

NSA and NYS respectfully request that the Administrator timely object to the Permit for the BRS Facility and remand it to ADEQ for full compliance with all applicable statutory and regulatory requirements, including, without limitation, for the reasons discussed herein, as well as in the other Comments submitted by NSA and NYS, and the EPA, which are incorporated herein by reference. NSA and NYS also request that the Administrator revoke the Permit upon her objection, pursuant to 42 U.S.C. §7661d(b)(2). Furthermore, NSA and NYS request the Administrator, if ADEQ fails, within 90 days after the date of objection, to submit a permit revised to meet the objection of NSA and NYS, to deny the Permit consistent with 42 U.S.C. 7661d(c). NSA and NYS also ask the Administrator to "take such measures" as required by section 167 of the CAA, including issuance of an order, or seeking injunctive relief, as necessary to prevent the construction of the BRS Facility because it does not conform to the requirements of the Clean Air Act. 42 U.S.C. §7477.

Date: October 9, 2013

Respectfully submitted,

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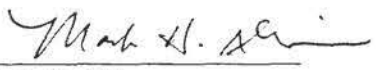
By: 

Mark H. Allison
Ark. Bar No. 85001

Attorneys for Nucor Steel-Arkansas, a division of Nucor Corporation and Nucor-Yamato Steel Company

CERTIFICATE OF SERVICE

The undersigned affirms that a copy of the foregoing Petition Requesting That The Administrator Object To Issuance Of The Part 70 Operating Permit For The Big River Steel LLC Facility has been sent to the following by electronic delivery, overnight courier delivery, or U.S. Mail, this 9th day of October, 2013.

(by overnight courier delivery, and U.S. Mail overnight priority delivery)
Hon. Ron Curry
Regional Administrator
United States Environmental Protection Agency, Region VI
Fountain Place, 12th Floor
Suite 1200, 1445 Ross Avenue
Dallas, TX 75202-2733

(by U.S. Mail)
Hon. Teresa Marks
Director
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

(by U.S. Mail)
Dave Stickler
Senior Managing Director
Big River Steel, LLC
2027 E. State Highway 18
Osceola, AR 73207

Mark H. Allison

LIST OF ATTACHMENTS

NUCOR PETITION TO OBJECT

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT NO. 2305-AOP-R0

BIG RIVER STEEL, LLC

ATTACHMENT NO. 1

NUCOR COMMENTS ON DRAFT PERMIT

COMMENTS OF NUCOR STEEL - ARKANSAS AND NUCOR-YAMATO STEEL COMPANY ON ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY DRAFT OPERATING AIR PERMIT NO. 2305-AOP-R0; BIG RIVER STEEL LLC, AFIN # 47-00991

Nucor Steel - Arkansas, a division of Nucor Corporation ("NSA") and Nucor-Yamato Steel Company ("NYS") submit the following comments in connection with the Arkansas Department of Environmental Quality's ("ADEQ") draft Operating Air Permit No. 2305-AOP-R0 ("the Draft Permit") for Big River Steel LLC ("BRS").

1 The Draft Permit is more than two hundred pages long, BRS's Revision #2 to its Air Permit Application ("the Application, Rev. 2") is two volumes consisting of more than 750 pages, and the modeling files supporting the Application, Rev. 2 contains several Gigabytes of data; however, the Department's Statement of Basis ("SOB") for the Draft Permit is only seven pages long. Consequently, the Statement of Basis does not adequately explain the basis for the Director's decision and does not permit adequate administrative or judicial review. Furthermore, as explained in subsequent comments, both the SOB and the Draft Permit contain significant errors that are not explained. The Draft Permit should be withdrawn in order to afford time for ADEQ to do an adequate analysis of the permit application, and, if a new draft permit is issued another public comment period should be provided.

2 BRS submitted its Application, Rev. 2 to ADEQ on June 24, 2013. As of June 24, 2013, modeling for the facility did not pass regulatory requirements. The next day, ADEQ issued the Draft Permit and released the public notice of the Draft Permit to the newspaper. Notice of the Draft Permit was published in the newspaper two days later, on June 27, 2013. However, the email correspondence attached to these comments as Ex. A indicate that as late as mid-afternoon on June 25, 2013, ADEQ still did not have information that it needed to finalize the Draft Permit and that ADEQ Air Division technical staff were still trying to cross-check the model results reported by BRS versus the raw model output files. ADEQ did not have, and could not have had, sufficient time to adequately analyze the Application, Rev. 2 and issue the Draft Permit. Release of the public notice was premature, and should have waited until the technical review was complete. Consequently, the Draft Permit should be withdrawn in order to give ADEQ sufficient time to analyze the information submitted by BRS in support of its Application, Rev. 2 and a draft permit re-issued once all the technical quality assurance/quality control can be completed.

3 ADEQ's judgment on the BRS permit is subject to bias due to the direct financial investment of an agency of the State of Arkansas, the Arkansas Teachers Retirement System, in

the BRS project. This is evidenced among other things by the fact that ADEQ issued the Draft Permit the day after it received the second revised permit application from BRS, even though ADEQ had not completed, and could not have completed, an adequate analysis of the BRS permit application. This is also evidenced by the fact that ADEQ prepared the extensive Class I modeling analysis for BRS, a practice that ADEQ has not extended to other facilities seeking an air permit. Together with the fact that the air quality modeling analysis submitted with the Application, Rev. 2 demonstrates the predicted cumulative impact for annual $PM_{2.5}$ is equal to the National Ambient Air Quality Standard ("NAAQS") of 12 ug/m^3, plus the fact that earlier modeling submitted by BRS predicted that PM_{10} concentrations would exceed the NAAQS, ADEQ's analysis of the BRS permit application requires extra scrutiny. The Draft Permit should be withdrawn in order to afford ADEQ adequate time to analyze the application and to adequately explain its permitting decision, and to afford the public an opportunity to comment after its Draft Permit decision is re-issued.

4 BRS has not finalized the design and placement of all emission sources. This is evident from comments in the Application, Rev. 2, as well as media reports issued the week that the Draft Permit was issued. As noted elsewhere in these comments, past modeling of the facility demonstrated exceedances of the PM_{10} NAAQS, and the current modeling supporting the Draft Permit demonstrates impacts that equal the NAAQS for $PM_{2.5}$. Because changes in design and placement of emission sources could affect the accuracy of modeling results, and possibly other applicable requirements, and because the air quality impacts in the case of the BRS permits are so close to the NAAQS, the Draft Permit should be withdrawn until the plant design is completed by BRS.

5 The history of heavy manufacturing is that additional support facilities and customer/supplier facilities likely will be built in proximity to BRS. This also is borne out by press accounts prior to the issuance of the Draft Permit as well as economic impact projections proposed to justify this project. This also is demonstrated by testimony provided in support of the BRS project. (See, Arkansas Public Service Commission, Docket 13-032-P, Testimony of G. Tennille, March 21, 2013, p. 11; Testimony of J. Correnti, March 21, 2013, pp. 9-10, attached hereto as Ex. B.) Neither the Draft Permit nor the Application, Rev. 2 take this likelihood into account. Furthermore, SECTION II: INTRODUCTION, Prevention of Significant Deterioration, Growth Analysis of the Draft Permit, indicates that the "only" increase in emissions from associated growth is due to commuting workers automobiles and that the emissions from commuting is assumed to be "insignificant". This analysis is inadequate and is in contrast to official state reports and news media reports regarding the economic impact of this project. The Growth Analysis should consider emissions from the following: population growth due to relocation of skilled workers, commercial and other industrial development that will most certainly occur to support BRS, the truck and rail traffic that will deliver raw materials and ship out BRS' finished product. In addition, ADEQ should provide at least a qualitative assessment, if not a quantitative assessment (using mobile source air quality models), of the commuter traffic emissions, and not simply dismiss them as insignificant.

6 The SOB, the Draft Permit and the Application, Rev. 2 are unclear as to the production capacity of the BRS mill. In some places, it is stated that the production capacity is 3.4 million tons per year of product, and in other places the production capacity is stated at 6.8 million tons per year. See, e.g. SOB, p. 5, paragraph 16. Similarly, the capacity of the mill as stated in the application is confusing. Page 21 of the Application, Rev. 2 states that the combined target production rate for the EAFS is 500 TPH which equates to 4.38 million TPY, but the emission rate tables for SN-01 and SN-02 state that the maximum production rate for each source is 3.4 million TPY. This discrepancy should be further scrutinized and explained, since all criteria pollutants from these operations depend on the production rate.

7 Section IV of the Draft Permit, SPECIFIC CONDITIONS, Meltshop SN-01/02 EAFs and LMFs, Specific Condition 4. The limit on the amount of steel processed in the EAFs listed in this Condition (3,400,000 tons per 12 months for each EAF) is inconsistent with the 250 ton per hour (TPH) EAF capability mentioned in the Source Description. 250 TPH corresponds to 6,000 tons per day, or 2,190,000 tons per year, significantly less than the amount listed in SC 4. ADEQ should resolve this discrepancy.

8 The SOB is inconsistent with the Application, Rev. 2 with respect to the Insignificant Activities list. The SOB states that no list of Insignificant Activities was submitted, however, the Application, Rev. 2 contains a list of Insignificant Activities in Table 2-28. This is additional evidence that the Draft Permit was issued without adequate review by ADEQ, and should be withdrawn.

9 The Draft Permit does not contain conditions limiting opacity for dust handling equipment consistent with 40 CFR §60.272a(b), even though this is discussed in the Application, Rev. 2, p. 63.

10 Neither the SOB nor the Draft Permit appear to contain a statement that the requirements of PSD review have been met.

11 The discussion on page 7-8 of the Draft Permit in connection with consumption of $PM_{2.5}$ and PM_{10} increment by the BRS mill is inadequate and does not comply with Reg. 19. The Draft Permit states that "It is highly unlikely that future growth will take place near or in close proximity to the BRS property or an existing facility's property." However, as indicated in Comment 5 above, the BRS mill likely will result in the construction of support, service and customer facilities in proximity to the mill. The Application, Rev. 2, p. 86, states that "the construction and operation of the proposed steel plant should not result in any noticeable residential growth in the area." Yet, the USEPA has agreed to provide assistance to Mississippi County in developing residential facilities that are anticipated to result from the BRS project. In addition, press reports indicate substantial interest in other facilities locating in the area of the

BRS mill. These statements are inconsistent and should be explained. Furthermore, there is no discussion or analysis in the Draft Permit of any alternatives to increment consumption, and no such alternatives, including alternative site locations, were presented in the Application, Rev. 2. See, e.g., p. 86.

12 The Growth Analysis discussion on page 8 of the Draft Permit is inadequate. It states that the "only increase in emissions from associated growth results from the increase in workers traveling to and from work." However, as indicated in Comments 5 and 11 above, the BRS mill likely will result in the construction of support, service and customer facilities in proximity to the mill.

13 In the Draft Permit, p. 9, ADEQ used a BACT limit of 0.035 lb/MMBtu for the galvanizing line, even though BRS requested a higher limit. BRS did not provide any justification as to why it could not meet ADEQ's proposed BACT limit, even though it requested a higher limit. ADEQ should review BRS's permit application as presented to determine whether the facility as proposed satisfies applicable requirements; not issue a permit based on different operating characteristics than proposed by the permit applicant that ADEQ thinks satisfies applicable requirements. ADEQ's decision and rationale on this point should be explained, and an additional public comment period should be provided.

14 In the Draft Permit, page 10, there is a discrepancy between the factors used to model emissions for natural gas sources, and the emissions for natural gas sources requested by BRS as BACT limits. Modeling and ADEQ's review and permit decision should have been conducted based on the requested BACT emission limits and not on limits or operating conditions that ADEQ thinks will satisfy applicable requirements. ADEQ should review BRS's permit application as it was presented to determine whether the facility as proposed satisfies applicable requirements and not issue a permit based on different operating characteristics than proposed by the permit applicant that ADEQ thinks satisfies applicable requirements. ADEQ's decision and rationale on this point should be explained, and an additional public comment period should be provided.

15 In numerous places in the Draft Permit, for example on page 46, the justification for specific permit conditions is stated as 40 CFR Part 52, Subpart (E). This is insufficient to describe whether the basis for the permit condition is the PSD regulations in 40 CFR Part 52, Subpart (E), or some other provision in the Arkansas SIP, and should be clarified.

16 In March 2013, BRS submitted air quality modelling showing air quality impacts, including impacts that exceeded the PM_{10} NAAQS. The Air Quality Modelling Analysis submitted with the Application, Rev. 2 on June 25, 2013 (Appendix C), shows different impacts, and includes the assertion by BRS that its emissions will not cause or contribute to any NAAQS exceedance. Application, Rev. 2, p. 84. The SOB and the Draft Permit do not explain what

changes were made to resolve the originally modelled NAAQS exceedances and do not demonstrate ADEQ's analysis of and justification for such changes. These decisions by ADEQ should be explained and an additional public comment period should be provided, due to inadequate information supporting the Draft Permit.

17 The Draft Permit does not contain a source number for the meltshop vent, even though there are emission limits for the meltshop under the applicable New Source Performance Standards (Subpart AAa), and even though there are sources that will evacuate through the meltshop vents. See Application, Rev. 2, p. 22.

18 In Specific Condition 64, the Draft Permit establishes emission limits for certain emission sources under the authority of APC&EC Reg. 18, but in Specific Condition 77 the authority for testing requirements for some of these sources is APC&EC. Reg. 19.

19 In Specific Condition 93 concerning testing of TDS in the cooling towers, no test method is specified.

20 Plantwide Condition No. 6 in the Draft Permit is irrelevant and should be removed. This is a new greenfield permit and there are no previous permits. This is further evidence that the Draft Permit was not adequately developed and issued without proper analysis and review. The Draft Permit should be withdrawn and if a new draft permit is issued an additional public comment period should be provided.

21 Plantwide Condition No. 7 requires post-construction ambient air monitoring for PM_{10}, $PM_{2.5}$ and NO_2. Given the fact that modeling submitted in support of the Application, Rev. 2 shows that the impact from BRS's emissions is equal to the NAAQS for annual $PM_{2.5}$, and that the earlier modeling for the facility showed exceedances of the PM_{10} NAAQS, ADEQ should require pre-construction ambient air monitoring. As noted in other comments, questions exist about BRS's use of background concentrations for $PM_{2.5}$ from monitors at Dyersburg, Tennessee. Where the air quality impact analysis demonstrates impacts so close to the NAAQS, the public deserves to understand what the background concentration in the locale actually is. In addition, the authority cited for post-construction monitoring is the 1999 version of the Arkansas State Implementation Plan, although there is no explanation why ADEQ is relying on this version of the SIP, instead of the current version. Neither the SOB or the Permit adequately explains why ADEQ chose to require post-construction ambient air monitoring, but not pre-construction monitoring. In light of the decision in Sierra Club v. EPA, 705 F.3d 548 (D.C. Cir. Jan. 22, 2013), ADEQ should require site-specific pre-construction ambient air monitoring for this facility.

22 Plantwide Condition No. 8 requires final calculation of baghouse loading rates after the BRS mill is constructed and submission of a permit modification if the as-constructed emission rates are higher. Furthermore, Figure 2-7 of the Application, Rev. 2 which concerns the dust collection system states that "all flow rates are estimates and subject to change pending final engineering." Because changes in the baghouse loading rates and the flow rates for the dust collection system may affect modeling results, and because the current modeling predicts emissions of $PM_{2.5}$ that equal the annual $PM_{2.5}$ NAAQS, the Draft Permit should be withdrawn until final engineering for the facility is complete and additional modeling can be completed.

23 The Application, Rev. 2 does not contain a disclosure form as required by APC&EC Reg. §8.204. A new disclosure form should be submitted to reflect any changes in the operation and ownership of the BRS facility and ADEQ's analysis of such disclosure should be explained.

24 The Application, Rev. 2 states that the BRS facility is located "away from sensitive receptors, such as hospitals, schools, nursing homes and highly populated residential areas." However, the BRS slag pile appears to be located immediately adjacent to the Viskase facility, which manufactures products used in the food industry. The Draft Permit should specifically address any potential impacts of the BRS facility on Viskase's operations.

25 The Application, Rev. 2 contains emission factors for EAFs in Table 2-1A(ii) and Table 2-2a, consisting of .0018 gr/dscf for PM and .0024 gr/dscf for $PM_{2.5}$. Neither the Application, the Draft Permit nor the SOB adequately explain the derivation of the emission factor for $PM_{2.5}$. An emission factor of .0052 gr/dscf for $PM_{2.5}$ should be used to establish emission rates from the EAFs, including in modeling.

26 The Application, Rev. 2 states that the rolling mills have no potential to emit regulated air pollutants, and thus there are no emission sources associated with this equipment. However, neither the Application, the Draft Permit nor the SOB adequately explain why these sources have no potential to emit.

27 Recent draft EPA guidance (March 4, 2013) on $PM_{2.5}$ modeling indicates that projects that have significant emissions of both $PM_{2.5}$ and $PM_{2.5}$ precursors (SO_2 and NO_X) should evaluate secondary formation of $PM_{2.5}$. It is not clear that secondary $PM_{2.5}$ emissions were included in the $PM_{2.5}$ air quality analysis submitted by BRS. Table III-1 from EPA's *Draft Guidance for $PM_{2.5}$ Permit Modeling* shows the recommended approaches for assessing primary and secondary $PM_{2.5}$ impacts, depending on the level of emissions from the proposed facility.[1]

[1] *Draft Guidance for $PM_{2.5}$ Permit Modeling*, March 2013. U.S. EPA, Office of Air Quality Planning Standards. EPA 454/D-13-001.

Table III-1. EPA Recommended Approaches for Assessing Primary and Secondary $PM_{2.5}$ Impacts by Assessment Case

Assessment Case	Description of Assessment Case	Primary Impacts Approach	Secondary Impacts Approach
Case 1: No Air Quality Analysis	Direct PM2.5 emissions < 10 tpy SER NOx and SO2 emissions < 40 tpy SER	N/A	N/A
Case 2: Primary Air Quality Impacts Only	Direct PM2.5 emissions ≥ 10 tpy SER NOx and SO2 emissions < 40 tpy SER	Appendix W preferred or approved alternative dispersion model	N/A
Case 3: Primary and Secondary Air Quality Impacts	Direct PM2.5 emissions ≥ 10 tpy SER NOx and/or SO2 emissions ≥ 40 tpy SER	Appendix W preferred or approved alternative dispersion model	• Qualitative • Hybrid qualitative / quantitative • Full quantitative photochemical grid modeling
Case 4: Secondary Air Quality Impacts Only	Direct PM2.5 emissions < 10 tpy SER NOx and/or SO2 emissions ≥ 40 tpy SER	N/A	• Qualitative • Hybrid qualitative / quantitative • Full quantitative photochemical grid modeling

As shown in the table, BRS meets Case 3 since emissions from the proposed mill exceed the PSD significant emission rate for direct emissions of $PM_{2.5}$ and well as for NO_X and SO_2. Case 3 calls for assessment of both primary and secondary impacts of $PM_{2.5}$, and provides three options for assessing secondary impacts of $PM_{2.5}$. It is not clear that BRS has conducted any form of secondary impacts assessment for $PM_{2.5}$. Given that the current $PM_{2.5}$ analysis results in impacts very near or equal to the $PM_{2.5}$ NAAQS, ADEQ should properly assess the impacts of secondary $PM_{2.5}$ formation and document this assessment in the permitting record.

28 For PM_{10} modeling, the Significant Impact Area (SIA) was determined using only two years of meteorological data and an impact threshold of 80% of the Significant Impact Level (SIL). This methodology was used to save time during modeling. (Page C-11 of BRS permit application) However, this approach does not comply with established EPA policy regarding using five years of meteorological data. It is understood that the SILs were exceeded thereby requiring comprehensive modeling; nevertheless, proper definition of the SIA is required in order to determine the appropriate distance at which receptors should be placed for NAAQS and increment modeling analyses. A properly defined SIA may result in an expanded receptor area and an expanded inventory of sources for modeling. ADEQ should properly evaluate the SIA for this project and document its evaluation in the permitting record.

29 BRS has selected incorrect minor source baseline dates for developing an inventory of minor source facilities to include in full impact modeling analyses. A separate minor source baseline date is established for each Air Quality Control Region (AQCR), and is based on the date when the first PSD application is received by the Department from a source or proposed source within the AQCR. The minor source baseline date for AQCR 020 (Northeast

Arkansas Intrastate) for both PM_{10} and SO_2 is October 13, 1977. BRS used a baseline date of May 31, 1983 for PM_{10} and SO_2. This error may result in fewer facilities being included in increment analyses, and could result in lower increment consumption than would have otherwise been realized. ADEQ should withdraw the Draft Permit, re-evaluate BRS's minor source baseline date, and if a new draft permit is re-issued, provide an additional public comment period.

BRS also selected the incorrect minor source baseline date for NO_X, but the BRS baseline date of August 31, 1989 is before the true minor source baseline date for AQCR 020 of January 1, 1991. Nevertheless, this error is indicative of the inadequate analysis in the Application, Rev. 2 and ADEQ's review of the Application.

30 NAAQS and increment modeling files appear to include only the receptors that were significant in the significance modeling, rather than all receptors within the radius of impact (ROI). ADEQ should verify that the proper receptors were included in the NAAQS and increment modeling analyses. Following are some excerpts from EPA's New Source Review (NSR) Workshop Manual regarding the ROI:

The proposed project's impact area is the geographical area for which the required air quality analyses for the a NAAQS and PSD increments are carried out...The impact area is a circular area with a radius extending from the source to (1) the most distant point where approved dispersion modeling predicts a significant ambient impact will occur, or (2) a modeling receptor distance of 50 km, whichever is less. Usually the area of modeled significant impact does not have a continuous, smooth border. (It may actually be comprised of pockets of significant impact separated by pockets of insignificant impact.) Nevertheless, the required air quality analysis is carried out within the circle that circumscribes the significant ambient impacts.[2]

In general, modeling receptors for both the NAAQS and the PSD increment analyses should be placed at ground level points anywhere except on the applicant's plant property if it is inaccessible to the general public...It is important to note that ground level points of receptor placement could be over bodies of water, roadways, and property owned by other sources.[3]

31 Modeled PM_{10} impacts are above the 24-hour PM_{10} increment. BRS has excused the impacts above the increment standard by stating that BRS's contributed impacts were below the PM_{10} significant impact level at all times that the cumulative modeled impacts exceed the increment. If this is true, EPA policy allows a permit to be issued to BRS, but ADEQ would be

[2] *New Source Review Workshop Manual, Prevention of Significant Deterioration and Nonattainment Area Permitting*, DRAFT October 1990, Page C.26.
[3] *New Source Review Workshop Manual, Prevention of Significant Deterioration and Nonattainment Area Permitting*, DRAFT October 1990, Page C.42.

required to take remedial action through the SIP process to address the other sources that do have significant contributing impacts at the time and place of the increment violations. However, the Draft Permit and/or the SOB do not clearly show how the cause and contribute analysis was conducted. Furthermore, to the extent that ADEQ is required to conduct a cause and contribute analysis on other facilities and sources as a result of the air quality modeling analysis submitted by BRS, ADEQ should include an explanation to that effect in the Public Notice, and notify affected facilities and sources directly prior to closing of the public comment period and the issuance of a final permit so that the public and affected sources and facilities have a meaningful opportunity to evaluate and comment on the air quality analysis submitted by BRS.

32 The meteorological data files used were found to have missing data. Per section 5.3.2 of EPA's *Meteorological Monitoring Guidance for Regulatory Modeling Application*, the meteorological data base must be 90 percent complete (before substitution) in order to be acceptable for use in regulatory dispersion modeling. AERMINUTE was developed to provide users with more complete data sets from Automated Surface Observing Systems (ASOS) meteorological data. A March 8, 2013 EPA memo titled "*Use of ASOS meteorological data in AERMOD dispersion modeling*" states:

If NWS data completeness is less than 90% by quarter with the use of AERMINUTE, then the representativeness of the data may be suspect and alternative sources of meteorological data should be considered.

The meteorological data used in the modeling analysis by BRS did not meet this completeness requirement, as less than 90 percent of the data was available from the Blytheville meteorological station for the following quarters: Q3 2008 is missing 350 hours (84% complete), Q1 2009 is missing 364 hours (83% complete), Q4 2011 is missing 240 hours (89% complete). Because of this error, the modeling supporting the Draft Permit is inadequate to properly evaluate the project. The Draft Permit should be withdrawn, and if a new draft permit is issued, another public comment period should be provided.

33 There are several conflicting reports of modeled impacts in the permit application, the draft permit, and the modeling files that have been posted to ADEQ's website for review. These conflicts make a public review of the proposed facility difficult, if not impossible. A few instances of these conflicts are provided below:

a. The draft permit indicates a modeled annual impact for the NAAQS analysis of 2.47 $\mu g/m^3$ $PM_{2.5}$. The draft permit also indicates a modeled annual impact for the significance and increment analyses of 2.53 $\mu g/m^3$ $PM_{2.5}$. These results bring into question the validity of the modeling analyses, since the significance and increment modeling analyses include emissions from only the proposed facility and the NAAQS analysis should include emissions from the proposed facility and all "inventory" sources within a distance equal to the radius of impact plus 50 km. It is not apparent (in fact, it is contrary to common sense) how adding inventory emissions sources to a modeling analysis would result in a lower modeled impact.

b. The draft permit indicates a modeled annual impact for the NAAQS analysis of 2.47 $\mu g/m^3$ $PM_{2.5}$. Page 500 of Application Volume II indicates a modeled annual impact for the NAAQS analysis of 2.56 $\mu g/m^3$ $PM_{2.5}$, resulting in a predicted cumulative impact of 12.00 $\mu g/m^3$ $PM_{2.5}$, based on a background concentration of 9.44 $\mu g/m^3$. A predicted cumulative impact that is exactly at the NAAQS standard requires additional scrutiny, especially in concert with some other concerns presented in these comments (e.g., no secondary $PM_{2.5}$ formation has been considered, the receptor grid may not be complete, incomplete meteorological data, possibility of an improper background concentration).

c. In some cases, the modeling files presented on the ADEQ website are incomplete or nonexistent, making a check of actual model results impossible. The following model plot files (file extension .plt) are not readable: PM2_5 Multi An, PM2_5 Multi 24h, NO2 NAAQS. The increment modeling files are not provided on the website.

34 The map on page 496 of 533 in Application Volume II indicates that the background concentration for $PM_{2.5}$ from the Dyersburg, TN monitor is 10.4 $\mu g/m^3$. BRS has applied a background concentration of 9.44 $\mu g/m^3$ to the modeled NAAQS impacts to determine the cumulative impact. The 3-year average of annual $PM_{2.5}$ monitoring data from U.S. EPA's AIRS website is 10.42 $\mu g/m^3$, as shown in the following table. Using the background concentration of 10.42 $\mu g/m^3$ gives a cumulative annual $PM_{2.5}$ impact of at least 12.89 ug/m3, which is 7.4% above the 12 $\mu g/m^3$ annual NAAQS. ADEQ should verify the background concentration and determine if additional $PM_{2.5}$ NAAQS analyses are required.

Year	Average Background Concentration ($\mu g/m^3$)	Data File ID *
2012	9.90	88501/2 2012
2011	10.28	88501/2 2011
2010	11.07	88501/2 2010
Average	10.42	

* Data taken from http://www.epa.gov/ttn/airs/airsaqs/detaildata/downloadaqsdata.htm. $PM_{2.5}$ Non Reference Method -Hourly

A copy of the raw data from these data files is attached hereto as Ex. C.

In addition, ADEQ should explain why use of the Dyersburg, TN monitoring data is representative of air quality in Osceola in lieu of site-specific pre-construction monitoring for this project. Site-specific pre-construction monitoring should be required.

35 SECTION II: INTRODUCTION, Prevention of Significant Deterioration, Best Available Control Technology – General Comments. The BACT section of the draft permit does not properly describe ADEQ's decision making process with regards to the selected BACT emission limits and/or work practice standards. This description also does not appear in the Statement of Basis. The permit's reference to the applicant's BACT discussion in the permit application is inappropriate, as the permit record should reflect ADEQ's decision not the applicant's.

All BACT emission limits should have an averaging period specified either globally or as part of each Specific Condition that contains a BACT limit.

A review of Appendix A of the March 5 application (pp. 109-110) shows that BRS eliminated several NO_X control technologies, including SCR and SNCR, on the basis of "technical infeasibility". These technologies were eliminated as possible NO_X controls for all natural gas combustion less than 100 MMBtu/hr, the Tunnel Furnaces, the Degasser Boiler, equipment in the Pickling and Galvanizing Lines, and the Annealing Furnaces. However, ADEQ contradicts this blanket determination by listing SCR as the control technology for the Galvanizing Line Preheaters (SN-28/29), which have a listed heat input capacity of only 85 MMBtu/hr each (see SC 63, permit page 84).[4]

The application does not provide any reasoning or explanation as to why the eliminated technologies are infeasible. This explanation is required for any BACT analysis, especially for SCR and SNCR which are widely available and proven technologies for NO_X control on gas-fired boilers. In many applications, these technologies may achieve emission rates below BRS' 0.035 lb/MMBtu (when combined with low NO_X burners). ADEQ should explain why these technologies are infeasible and if they are not infeasible, then additional consideration (especially for the boilers) for these controls should be made.

36 SECTION IV: SPECIFIC CONDITIONS, Meltshop SN-01/02 EAFs and LMFs, SC 26-30. These conditions describe the stack testing requirements for the EAFs, and as an option in lieu of testing, the use of CEMS. The stack testing option requires tests for NO_X, SO_2, CO, CO_2, and VOC every six months. Given the magnitude of emissions and the fact that the emission limits represent BACT, ADEQ should give strong consideration to requiring CEMS for these pollutants for an extended period of time (for example, from startup until at least a year after the facility reaches full production) in order to demonstrate compliance, and at a minimum for NO_X. Both NO_X and SO_2 have 1-hour ambient air quality standards and a twice per year stack test is not adequate to ensure that short-term emissions of these pollutants (and therefore short-term ambient impacts) are below permit levels on a continual basis. The U.S. EPA has indicated the importance of BACT emission limits and the associated compliance monitoring:

The emissions limits must be included in the proposed permit submitted for public comment, as well as the final permit. BACT emission limits or conditions must be met on

[4] ADEQ also lists SCR as the NO_X control technology for other fired units less than 100 MMBtu/hr, including the decarburizing line furnaces (SN-40/42) at 22 MMBtu/hr each and the annealing coating line furnace (SN-51) at 50 MMBtu/hr.

a continual basis at all levels of operation (e.g., limits written in pounds/MMbtu or percent reduction achieved), demonstrate protection of short term ambient standards (limits written in pounds/hour) and be enforceable as a practical matter (contain appropriate averaging times, compliance verification procedures and recordkeeping requirements)[5] *[emphasis added]*

37 Draft Permit, Meltshop SN-01/02 EAFs and LMFs, SC 29. This condition describes the CEMS option and requires reporting of CEMS data in concentration (parts per million) and mass emission rate (lb/hr). However, CEMS measure only the concentration of pollutant in the exhaust gas and the permit does not require exhaust flow monitoring. Therefore, it is unclear how BRS will determine mass emission rate from the concentration measurements. To insure the accuracy of mass emission rate calculations, the permit should specify exhaust flow monitoring or prescribe a technically accurate method for estimating exhaust flow rate.

38 SN-26/27, Galvanizing Line Boiler. As mentioned earlier, ADEQ should explain why SCR and SNCR were eliminated as possible control options.

39 SN-28/29, Galvanizing Line Preheater. The permit indicates that SCR is the required NO_X control technology for these heaters (see SC 63, page 84). However, this designation only appears in a table. The permit should include a condition requiring installation of the SCR (or equivalent technology) and a compliance demonstration. This comment also applies to the decarburizing line furnaces (SN-40/42) and the annealing coating line furnace (SN-51).

In addition, since an add-on control device will be used to achieve compliance with the NO_X BACT limit, a single test (as indicated in SC 78) is not adequate to insure compliance. The permit should require a more frequent compliance demonstration.

40 Miscellaneous Operations, SC 95 and Roadway Sources SC 103. These conditions refer to the Control Technology as a "Dust Control Plan." However, there is no Condition requiring development and/or submittal of this Plan (SC 103 refers to the dust control plan for roadways, but not raw material handling operations). In order to be enforceable, the permit should specify when the dust control plan must be prepared and should list the minimum required Plan elements or criteria.

41 Typographical errors. There are several typographical errors and incorrect cross-references in the draft permit. Some of these are identified as follows:

[5] U.S. EPA. *Draft New Source Review Workshop Manual*, Chapter B, page B.56. Research Triangle Park, North Carolina. October, October 1990.

a. Page 7, last paragraph. First line "in an by itself". Seventh line "property boundary or with a".

b. Page 8, first paragraph. Fourth line "as" should be "has".

c. Page 10, second paragraph. Fifth line "calculated" should be "calculate".

d. Page 47, SC 2 table. "EMFs" should be "EAFs".

e. Page 54, SC 29 and 30. Several Word cross-reference errors.

f. Page 55, SC 34. "Contaminates" should be "contaminants".

g. Page 76, Decarburizing Line, first paragraph. "secton" should be "section".

h. Page 91, SC 67 and 70. The references to "SN-52" should be "SN-53", the Annealing Coating Line Drying Furnace which cures the insulating coating applied at the annealing coating line.

These and other errors throughout the Draft Permit are indicative of the fact that ADEQ did not properly or adequately analyze the Application, Rev. 2 or prepare a proper Draft Permit based on the information submitted by the permit applicant. (See, ADEQ email correspondence attached hereto as Ex. D). The purpose of the public comment period is not to proofread the permit or work through a permitting punch list. Such an approach frustrates the public's ability to properly understand and analyze ADEQ's permitting decision.

42 Draft Permit, Page 46, Source Description – The Draft Permit does not mention or take into account any impacts of material delivery and product shipment by barge. This is inconsistent with the statement that there are no alternative site locations for the facility because of the need for access to the Mississippi River. (Application, Rev. 2, p. 86). In addition, if BRS intends to use river transportation by barges, the failure to include this activity affects the additional impacts analysis and possibly NAAQS modeling of activities associated with barge loading and unloading. These discrepancies should be explained.

43 Draft Permit Page 54, SC-29 and SC-30 contain the statement , "Error! Reference source not found." This obviously is incorrect, and is further evidence that ADEQ issued the Draft Permit without adequate analysis, as stated in Comment 41, above.

44 Draft Permit, Page 55, SC-36 and SC-37, should include a reference to SN-02.

45 Draft Permit, SC 60, p. 62 – This condition contains a visible emission limit, but does not require any compliance demonstration.

46 Draft Permit, p. 108, Slag handling – this source contains no visible emission limits or compliance demonstration for slag processing.

47 There is no discussion in the SOB, Draft Permit, the Application, Rev. 2 or the Public Notice about any community outreach, other than a single public hearing to be held on July 30, 2013. Due to the technical nature of these comments and documents and because of the fact that air quality impacts from the project are equal to the NAAQS, additional outreach should be considered. Furthermore, there is no discussion in the Draft Permit, the SOB, the Application, Rev. 2, or the Public Notice about how this permitting process complies with Environmental Justice considerations, including EPA's September 2011 guidance on implementing such considerations in the permitting process. Because of the State of Arkansas's direct interest and involvement in this project, consideration should be given to not finalizing the Draft Permit at this time and providing adequate funding for an independent review and analysis (including modeling demonstrations) of the Draft Permit, the SOB, and the Application, Rev. 2.

COMMENTS OF NUCOR STEEL – ARKANSAS AND
NUCOR-YAMATO STEEL COMPANY

ADEQ DRAFT OPERATING AIR PERMIT 2305-AOP-R0
BIG RIVER STEEL, LLC, AFIN #47-0091

EXHIBIT A

ATTACHMENT 1

From: Hutchings, Shawn
Sent: Monday, June 10, 2013 1:22 PM
To: Bassett, Karen; Bates, Mike; 'dstickler@globalprincipal.com'; Frey, Kristin; Frey, Steve; 'jpayne@globalprincipal.com'; Kalapati, Raga; Murphy, Phil; Rheaume, Thomas; Thirman, Karen
Subject: BRS modeling

Steve,

I am trying to start reviewing modeling to finish the permit.

Do you have an updated source list so I can begin comparison.

Do you have updated modeling. The latest version I have does not match the facility as in the latest application.

I started reviewing CO modeling. The version of the model I have does not reflect the latest sources or emission rates and will need to be reran.

The timeframe proposed by BRS is extremely tight and I need to start reviewing this information now to meet this time frame.

Shawn

Ex. A

ATTACHMENT 1

From: Kristin Frey [KristinFrey@KennedyJenks.com]
Sent: Monday, June 17, 2013 9:42 AM
To: Hutchings, Shawn; Rheaume, Thomas
Cc: Steve Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com; bill.emling@sms-siemag.us; SubraS@cvengineering.com
Subject: BRS - Updates
Attachments: Big River Steel - Emission Estimates (FINAL - Updated 6-17-2013).pdf; Big River Steel - Natural Gas SN39 - HAP Emission Estimates.pdf; BRS - Emission Rate Tables - Updated (6-17-2013).pdf; BRS - SN-39 HAP emission rate table (Updated 6-17-2013).pdf

Shawn and Tom,

Attached are minor changes to the BRS application emission rate calculations and forms. These changes are administrative in nature and will not affect regulatory applicability or the results obtained from the air quality impact evaluation. We are providing these changes to the ADEQ just to keep the ADEQ in the loop on any changes being made by BRS to previously submitted information. The final version of the application to be provided to the ADEQ later this week will also incorporate these changes.

Thanks,

Kristin M. Frey | Air Quality Specialist | kristinfrey@kennedyjenks.com

Kennedy/Jenks Consultants | 1515 E. Woodfield Road, Suite 360 | Schaumburg, IL 60173
T. 847.278.7703
http://www.kennedyjenks.com/

From: Hutchings, Shawn
Sent: Monday, June 17, 2013 12:00 PM
To: Kristin Frey
Cc: Frey, Steve; Rheaume, Thomas
Subject: RE: BRS - Updates

Kristin,

The calculations for SN-23 the BACT limit and the emission factor used do not match. Please correct.
For all the cold mills and rolling mills. The PM limit should not include condensable and should be lower and different from PM10 and 2.5. 0.0025 gr/dscf was the TCM BACT limit.
I still need updated BACT for the other mills.

This set of calculations just submitted seem to use the actual volumetric flow rate for the sources in actual cubic feet. The BACT limits are in dry standard cubic feet. The difference between a actual cubic foot and a standard would mean all the calculated emissions and proposed limits on the emission rate table are too high. This could also help your modeling.

When submitting updates please submit the whole section. At this point I have to make sure I am looking at the most recent version. You can submit the altered pages separately also, but I need one document to review. Also at this point, please tell me what changes were made in each submittal it will save me the trouble of having to check each number on a page.

And on that note what was updated in the latest submittals?

Shawn

From: Kristin Frey [mailto:KristinFrey@KennedyJenks.com]
Sent: Monday, June 17, 2013 9:42 AM
To: Hutchings, Shawn; Rheaume, Thomas
Cc: Steve Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com; bill.emling@sms-siemag.us; SubraS@cvengineering.com
Subject: BRS - Updates

Shawn and Tom,

Attached are minor changes to the BRS application emission rate calculations and forms. These changes are administrative in nature and will not affect regulatory applicability or the results obtained from the air quality impact evaluation. We are providing these changes to the ADEQ just to keep the ADEQ in the loop on any changes being made by BRS to previously submitted information. The final version of the application to be provided to the ADEQ later this week will also incorporate these changes.

Thanks,

Kristin M. Frey | Air Quality Specialist | kristinfrey@kennedyjenks.com

To: Steve Frey; Hutchings, Shawn
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com; bill.emling@sms-siemag.us; Subra Sennerikuppam
Subject: RE: Final BACT Evaluation - BRS Project

Its not an administrative issue. We have to put numbers in a permit and you are giving us contradictory values to choose from.

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Monday, June 17, 2013 5:01 PM
To: Hutchings, Shawn; Rheaume, Thomas
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com; bill.emling@sms-siemag.us; Subra Sennerikuppam
Subject: RE: Final BACT Evaluation - BRS Project

See responses below.

We are spending to much time on small administrative issues.

STeve

-----Original Message-----
From: Hutchings, Shawn [mailto:HUTCHINGS@adeq.state.ar.us]
Sent: Mon 6/17/2013 3:51 PM
To: Steve Frey; Rheaume, Thomas
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com; bill.emling@sms-siemag.us; Subra Sennerikuppam
Subject: RE: Final BACT Evaluation - BRS Project

Steve,

I saw the way SN-82 and 83 were calculated. There is no way to know if the drop point method use correlates to the limits proposed as BACT. The emission rates for these sources should be calculated on the same methodology as the proposed BACT limits.

Response: We have calculated emissions from small sources to begin with. We have used an approved method to calculate those emissions. For these two material handling operations, BACT should be an emission limit or since there is no way to technical measure the emissions, EPA allows BACT to be a work practice standards. These emission sources are each less than a1 tpy and we sould establish BACT using either approach. The BACT has written with the changes noted below should be sufficient.

For item 1) two emails below, the thermal efficiency for the boilers should be considered the same as a BACT limit. Meaning BRS should be able to achieve what others have. And the BACT discussion should justify why that number is appropriate.

Response: As part of the GHG BACT we will propose 75% thermal efficiency. We have already provided sufficient information identifying the companies selection process for selecting energy efficient equipment. I have not see other GHG BACT that have requested an applicant to identify what others are doing in terms of thermal efficiency and commit to those levels. The GHG BACT as provided with inclusion of a thermal efficiency as a BACT limit should satisfy the intent of a GHG BACT.

Also quick peeks at the submitted modeling it was noticed that the receptors in the models follow the contours of the SIL from the significant impact modeling. BRS also needs to submit the significance modeling to show that the receptors modeled in the cumulative model are appropriate and additional receptors do not need to be modeled.

Response: We had provided that information initially and it was reviewed by the ADEQ. The final modeling should already take the extent of the SIL into accout and should not have to be redone and submitted to the ADEQ. Minor changes to emissions may have

occurred but this would not have affected the downwind extent of the impact area.

Shawn

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Monday, June 17, 2013 2:02 PM
To: Steve Frey; Hutchings, Shawn; Rheaume, Thomas
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com; bill.emling@sms-siemag.us; Subra Sennerikuppam
Subject: RE: Final BACT Evaluation - BRS Project

Shawn

I have reviewed your comment regarding emission sources 82 and 83. provided below is the response, which will also be included in the BACT document

Emission source SN-82 is The Flux receiving station. This station will include an enclosure and associated baghouse to control collected PM dust during the receiving operation. Emission estimates were based on EPA's AP-42 Drop point equation for calculating PM from material handling operation. Also included in this calculation was a maximum material thruput rate and a control efficiency of 99% to account for the enclosure and baghouse removal efficiency. The PM, PM10 and PM2.5 BACT emission limits will be 0.0105, 0.0049 abnd 0.0007 tons/year, respectively.

Emission source SN-83 is The Flux conveyance and storage operation. This station will include various conveyor to transfer the materials and sorage silos that will be equipped with bin vent filters to minimize any fugitive dust during the loading of material into these silos. The conveyors will be either covered or partially covered. BRS will also use good management practices to minimize the loss of this material during the conveyance and storage since it is a valuable raw material in the steel making process. Emission estimates were based on EPA's AP-42 Drop point equation for calculating PM from material handling operation. Also included in this calculation was a control efficiency of 99% to account for the covered / partially covered conveyors and bin vent filers on the storage silos. The maximum material thruput rate was also used in the calculation. The PM, PM10 and PM2.5 BACT emission limits will be 0.5226, 0.2472, and 0.0374 tons/year, respectively.

Best Regards

Steve

From: Steve Frey
Sent: Mon 6/17/2013 12:47 PM
To: Hutchings, Shawn; Rheaume, Thomas
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com<mailto:dstickler@globalprincipal.com>; jpayne@globalprincipal.com<mailto:jpayne@globalprincipal.com>; bill.emling@sms-siemag.us<mailto:bill.emling@sms-siemag.us>; Subra Sennerikuppam
Subject: RE: Final BACT Evaluation - BRS Project

Shawn,

I am going through the BACT and just wanted to answer you questions so you can move forward with the draft permit. We will be making edits directly to the BACT document

1) thermal efficiency for all of the proposed boilers for GHG emissions will be 75%.

2) The PM BACT emission limit for the Tandem Mill, Skin Pass Mill and three (3) reverse cold mills will be 0.0025 grains/dscf (filterable only).

3) I am still looking into the BACT approach for the material handling operations.

Best regards

Steve

-----Original Message-----
From: Hutchings, Shawn [mailto:HUTCHINGS@adeq.state.ar.us]
Sent: Fri 6/14/2013 1:56 PM
To: Steve Frey; Rheaume, Thomas
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com<mailto:dstickler@globalprincipal.com>; jpayne@globalprincipal.com<mailto:jpayne@globalprincipal.com>; bill.emling@sms-siemag.us<mailto:bill.emling@sms-siemag.us>; Subra Sennerikuppam
Subject: RE: Final BACT Evaluation - BRS Project

Steve,

I was looking over the BACT analysis and have found the following issues...

The GHG BACT for the boilers have omitted the thermal efficiency we discussed in previous submittals. Those should be included for all the boilers.

The particulate BACT the different mills (rolling, skin pass, etc.) each take a different approach to how they handle the PM10/2.5 condensable and filterable limits and PM filterable only limits. The Skin Pass Mill has the proper approach to the particulate BACT. The others vary in how they discuss PM and some even state PM is no longer federally regulated. PM is a pollutant regulated under 40 CFR 52.21. The other mills should reflect the approach taken with the skin pass mill.

I also had issues with the material handling sources. Looking at SN-82 and 83, the BACT for SN-82 has a baghouse with a grain loading. The calculated emission rates are based on a different basis. Those should match. SN-83 includes the storage silos for the yet the BACT analysis does not mention the bin vent filters and their BACT grain loading as we had discussed in phone conversations. Also it is unclear which of these two sources account for the conveyors and how they were treated in the BACT analysis or the calculations of the emission rates.

Shawn

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Wednesday, June 12, 2013 1:59 PM
To: Hutchings, Shawn; Rheaume, Thomas
Cc: Kristin Frey; karenthirman@kennedyjenks.com<mailto:karenthirman@kennedyjenks.com>; dstickler@globalprincipal.com<mailto:dstickler@globalprincipal.com>; jpayne@globalprincipal.com<mailto:jpayne@globalprincipal.com>; bill.emling@sms-siemag.us<mailto:bill.emling@sms-siemag.us>; Subra Sennerikuppam
Subject: Final BACT Evaluation - BRS Project
Importance: High

Shawn and Tom,

Attached is the final version of the BACT evaluation for the BRS project. The remaining issue that was previously in discussion with ADEQ was the NOx BACT limit for several furnaces associated with the proposed plant. BRS is now committing to post combustion control and will commit to a NOx emission limit of 0.10lbs/MMBtu. This post combustion control will most likely be Selective Catalytic Reduction (SCR). However BRS would like some permit flexibility to allow the installation of a different technology in the even an emerging technology other than SCR would be available at the time of installation of those operations.

As mentioned in the email earlier this week, we will also be providing the updated emission estimates (emission spreadsheets)and emission rates (completed application forms) later this afternoon in a separate email.

Final modeling runs are being initiated. As mentioned in the email earlier this week we will provide you with an Excel version of the model input for each pollutant going through final runs. This will include PM10, PM2.5, SO2, CO and NOx. As soon as the modeling runs are complete we will notify the ADEQ of this fact and place the files on the FTP for review by the ADEQ.

Also we have added one additional process line. The emission spreadsheets and forms are being updated to reflect this line. We will also provide an updated table that describes this source for easy of entry into the construction permit. The new source is referred to as the Push and Pull Pickle Line (PPPL) and will be a Phase II operation. Two source will be associated with this line. This will include an HCL point of release controlled by a wet scrubber (SN-24A) and a tension leveler operation which is a PM source controlled by a

baghouse (SN-23A). this new source is also included in the BACT analysis attached.

Best Regards

Steve

Steven Frey
Manager Air Quality
Kennedy/Jenks Consultants
1515 East Woodfield Road, Suite 360
Schaumburg, Illinois 60173
Office Phone: 847-278-7705
Email: stevefrey@kennedyjenks.com<mailto:stevefrey@kennedyjenks.com>

From: Steve Frey [SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 18, 2013 4:02 PM
To: Hutchings, Shawn; Rheaume, Thomas
Cc: Kristin Frey; karenthirman@kennedyjenks.com; dstickler@globalprincipal.com; jpayne@globalprincipal.com; bill.emling@sms-siemag.us; Subra Sennerikuppam; alevy@globalprincipal.com; Robert.Kallin@arcadis-us.com
Subject: BRS Air Permitting Process

Importance: High

Shawn and Tom,

As of today it is my understanding we have addressed all questions / comments raised by the ADEQ. The last remaining item was whether or not the galvanizing line furnaces could achieve 0.06 lbs/MMBtu for NOx emissions. BRS is committed to installing post combustion control (i.e., SCR or other emerging technology) on the galvanizing line furnaces. This will be reflected in the final version of the BACT document. This commitment will result in a reduction of the proposed NOx limit of 0.15 lbs/MMBtu to 0.06 lbs/MMBtu.

We are in the process of running the final model runs and will be summarizing the results in tabular format. The results will be captured in the final version of the application. We will also share the results with ADEQ as soon as they become available. Our modeling folks have been in contact with the ADEQ and have been sharing modeling information with the ADEQ.

We will be finalizing the third version of the application (with all the changes noted in the previous emails exchanged with the ADEQ over the past week) and will send this to the ADEQ for arrival this Friday, the 21st of June. The application will also be signed by the responsible official for this project. Information provided in support of the initial application (company certification etc.) will not be resent as part of the final application package. We will be providing two copies of the final application and will provide the application on a CD in pdf format as well.

Please let us know if there are any remaining issues or concerns that need to be addressed.

Best Regards

Steve

Steven Frey
Manager Air Quality
Kennedy/Jenks Consultants
1515 East Woodfield Road, Suite 360
Schaumburg, Illinois 60173
Office Phone: 847-278-7705
Email: stevefrey@kennedyjenks.com

ATTACHMENT 1

From: Rheaume, Thomas
Sent: Friday, June 21, 2013 10:15 AM
To: Hutchings, Shawn; Murphy, Phil
Subject: Emailing: Mississippi County to Receive EPA Help in Anticipation of Big River Steel Arkansas Business News ArkansasBusiness.com

[redacted]

Mississippi County to Receive EPA Help in Anticipation of Big River Steel

by **Arkansas Business Staff**
Posted 6/20/2013 09:08 am
Updated 23 hours ago

The U.S. Environmental Protection Agency will offer technical assistance to Mississippi County in anticipation of redevelopment opportunities related to the Big River Steel mill project.

According to the EPA, the project "will identify neighborhoods that are best suited for expanding housing opportunities and minimizing commuting time to new jobs. The planning effort may also focus on updates to existing infrastructure, reuse of existing buildings, and development of new public spaces for existing residents and new employees moving to the region."

The Smart Growth Implementation Assistance (SGIA) Program is designed to help communities foster economic growth, protect environmental resources, enhance public health and plan for development. Mississippi County is one of three areas selected this cycle for the program, and was one of 79 overall applicants.

The other two areas selected were the state of Rhode Island, which will receive help assessing impacts from rising sea levels, and Kelso, Wash., for downtown redevelopment.

Since 2005, the EPA reports the SGIA program has helped coordinate more than $4 billion to 36 projects in 49 communities across the U.S. The EPA has yet to release the monetary value of the assistance Mississippi County will receive.

Ex. A

Big River's $1.1 billion facility, to be located just south of Osceola, will be the third steel manufacturing plant in Mississippi County. Nucor Steel operates two facilities in the county north of Osceola.

Big Rivers plans to hire 550 workers at an average starting annaul salary of $75,000 when it opens. Construction is expected to begin this fall.

Arkansas Business

ATTACHMENT 1

From: Hutchings, Shawn
Sent: Friday, June 21, 2013 2:23 PM
To: Sudibjo, Alexander
Subject: FW: NO2 Modeling Files
Attachments: NO2 NAAQS Bunge.ADI; NO2 NAAQS PPES.ADI; NO2 NAAQS Viskase.ADI

From: Kallin, Robert [mailto:Robert.Kallin@arcadis-us.com]
Sent: Friday, June 21, 2013 1:24 PM
To: Hutchings, Shawn
Subject: NO2 Modeling Files

Shawn,

Unfortunately the NO2 modeling files I sent you did not include downwash. Attached are the corrected versions.

Robert Kallin | Environmental Scientist | Robert.Kallin@arcadis-us.com
ARCADIS U.S., Inc. | One Executive Drive, Suite 303 | Chelmsford, MA, 01824
T. 978.322.4507 | F. 978.937.7555
www.arcadis-us.com
ARCADIS, Imagine the result

ATTACHMENT 1

From: Hutchings, Shawn
Sent: Friday, June 21, 2013 4:05 PM
To: 'Kristin Frey'; Rheaume, Thomas
Cc: Steve Frey; Karen Thirman
Subject: RE: BRS - Final Application - Application Text, Figures and Tables

Appendix C needs to mention what sources were included and/or excluded from the cumulative models and why if they were excluded. Only BRS sources are discussed.

The modeling discussion needs to explain how the many volume sources in the model correlate to the many sources in the permit application. It is not obvious from your application.

If the modeling is not complete what is the basis for the results in the modeling discussion.

Shawn

From: Kristin Frey [mailto:KristinFrey@KennedyJenks.com]
Sent: Friday, June 21, 2013 3:46 PM
To: Rheaume, Thomas; Hutchings, Shawn
Cc: Steve Frey; Karen Thirman
Subject: RE: BRS - Final Application - Application Text, Figures and Tables

Steve asked me to send you Appendix C as well.

From: Kristin Frey
Sent: Friday, June 21, 2013 3:33 PM
To: 'Rheaume, Thomas'; HUTCHINGS@adeq.state.ar.us
Cc: Steve Frey; Karen Thirman
Subject: RE: BRS - Final Application - Application Text, Figures and Tables

Appendices B and D are attached.

From: Kristin Frey
Sent: Friday, June 21, 2013 3:31 PM
To: 'Rheaume, Thomas'; HUTCHINGS@adeq.state.ar.us
Cc: Steve Frey; Karen Thirman
Subject: RE: BRS - Final Application - Application Text, Figures and Tables

Tom and Shawn –

I am sending the application files in a couple of emails. I broke the application into the following files:

1. Application Text
2. Application Figures
3. Application Tables
4. Appendix A – BACT (sent earlier today)
5. Appendix B – Forms
6. Appendix C – Modeling (Steve will be sending)
7. Appendix D – Backup Documentation for Ozone Analysis

Ex. A

ATTACHMENT 1

From: Rheaume, Thomas [RHEAUME@adeq.state.ar.us]
Sent: Monday, June 24, 2013 11:06 AM
To: Marks, Teresa
Cc: Bates, Mike; Bassett, Karen
Subject: Big River Steel Update

Permit draft being revised for corrections. Still waiting on some final numbers form them

New application received

PM2.5 modeling not finished by them. Ours finished but did not pass. Called them and they are having issues too, but not as bad as ours. Trying to get their latest model revisions

Running out of time for them to get us a passing model

Thomas Rheaume
Permit Branch Manager
Arkansas Department of Environmental Quality
Air Division
5301 Northshore Drive
North Little Rock, AR 72118-5317
501 682 0762 Phone
501 682 0880 Fax

Ex. A

ATTACHMENT 1

From: Marks, Teresa [MARKS@adeq.state.ar.us]
Sent: Monday, June 24, 2013 12:32 PM
To: dstickler@globalprincipal.com; Marc Harrison; grant.tennille@governor.arkansas.gov
Cc: Rheaume, Thomas; Bassett, Karen; Bates, Mike
Subject: FW: Big River Steel Update

FYI. This doesn't bode well for getting it out tomorrow. As you can see we are running our own modeling concurrently, but at this time we don't have modeling performance from us or the consultants upon which we can permit. I will keep you posted.

From: Rheaume, Thomas
Sent: Monday, June 24, 2013 11:06 AM
To: Marks, Teresa
Cc: Bates, Mike; Bassett, Karen
Subject: Big River Steel Update

Permit draft being revised for corrections. Still waiting on some final numbers form them

New application received

PM2.5 modeling not finished by them. Ours finished but did not pass. Called them and they are having issues too, but not as bad as ours. Trying to get their latest model revisions

Running out of time for them to get us a passing model

Thomas Rheaume
Permit Branch Manager
Arkansas Department of Environmental Quality
Air Division
5301 Northshore Drive
North Little Rock, AR 72118-5317
501 682 0762 Phone
501 682 0880 Fax

ATTACHMENT 1

From: Hutchings, Shawn [HUTCHINGS@adeq.state.ar.us]
Sent: Monday, June 24, 2013 2:29 PM
To: Rheaume, Thomas
Cc: Murphy, Phil; Bates, Mike
Subject: BRS
Attachments: Big River R0 SOB.docx; BRS Draft R0.docx; BRS R0 Fee.xlsx; BRS R0 INV.docx; BRS R0 PN.docx

This should be everything but the modeling in the summary.

Shawn

Ex. A

From: David Stickler [dstickler@globalprincipal.com]
Sent: Monday, June 24, 2013 2:59 PM
To: Marks, Teresa; 'marc.harrison@governor.arkansas.gov'; 'grant.tennille@governor.arkansas.gov'
Cc: Rheaume, Thomas; Bassett, Karen; Bates, Mike
Subject: Re: Big River Steel Update

We believe that we are good on all issues. We are speaking with ADEQ now.

Dave

From: David Stickler
Sent: Monday, June 24, 2013 01:41 PM Central Standard Time
To: 'MARKS@adeq.state.ar.us' <MARKS@adeq.state.ar.us>; 'marc.harrison@governor.arkansas.gov' <marc.harrison@governor.arkansas.gov>; 'grant.tennille@governor.arkansas.gov' <grant.tennille@governor.arkansas.gov>
Cc: 'RHEAUME@adeq.state.ar.us' <RHEAUME@adeq.state.ar.us>; 'BASSETT@adeq.state.ar.us' <BASSETT@adeq.state.ar.us>; 'BATES@adeq.state.ar.us' <BATES@adeq.state.ar.us>
Subject: Re: Big River Steel Update

I will follow up as I was told PM 2.5 test had passed.

From: Marks, Teresa [mailto:MARKS@adeq.state.ar.us]
Sent: Monday, June 24, 2013 12:32 PM Central Standard Time
To: David Stickler; Marc Harrison <marc.harrison@governor.arkansas.gov>; grant.tennille@governor.arkansas.gov <grant.tennille@governor.arkansas.gov>
Cc: Rheaume, Thomas <RHEAUME@adeq.state.ar.us>; Bassett, Karen <BASSETT@adeq.state.ar.us>; Bates, Mike <BATES@adeq.state.ar.us>
Subject: FW: Big River Steel Update

FYI. This doesn't bode well for getting it out tomorrow. As you can see we are running our own modeling concurrently, but at this time we don't have modeling performance from us or the consultants upon which we can permit. I will keep you posted.

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To: Marks, Teresa
Cc: Bates, Mike; Bassett, Karen
Subject: Big River Steel Update

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Thomas Rheaume
Permit Branch Manager
Arkansas Department of Environmental Quality
Air Division
5301 Northshore Drive
North Little Rock, AR 72118-5317
501 682 0762 Phone
501 682 0880 Fax

ATTACHMENT 1

From: Rheaume, Thomas [RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 9:44 AM
To: Bates, Mike; Marks, Teresa
Subject: i do not have final models from the consultant

Thomas Rheaume
Permit Branch Manager
Arkansas Department of Environmental Quality
Air Division
5301 Northshore Drive
North Little Rock, AR 72118-5317
501 682 0762 Phone
501 682 0880 Fax

Ex. A

ATTACHMENT 1

From: Rheaume, Thomas [RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 9:53 AM
To: Steve Frey (SteveFrey@KennedyJenks.com); Bates, Mike; Hutchings, Shawn
Subject: these are the final runs we are missing

From: Hutchings, Shawn
Sent: Tuesday, June 25, 2013 9:47 AM
To: Rheaume, Thomas
Subject: list

NO2 NAAQS

NO2 BUNGEE

NO2 PPES

NOS VISKASE

$PM_{2.5}$ PPES 24HR

$PM_{2.5}$ VISKAS 24HR

$PM_{2.5}$ BUNGEE AN

$PM_{2.5}$ PPES AN

$PM_{2.5}$ VISKASE AN

$PM_{2.5}$ MULTI 25

$PM_{2.5}$ MULTI AN

PM_{10} 24HR

Also need the lead model they want us to review as final.

Ex. A

From: Rheaume, Thomas [RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 10:08 AM
To: Bates, Mike
Subject: FW: Modeling run Update - BRS

From: Marks, Teresa
Sent: Tuesday, June 25, 2013 10:07 AM
To: Rheaume, Thomas
Subject: Fwd: Modeling run Update - BRS

FYI.

Begin forwarded message:

> **From:** Julie Payne <jpayne@globalprincipal.com>
> **Date:** June 25, 2013, 9:56:04 AM CDT
> **To:** "Marks, Teresa" <MARKS@adeq.state.ar.us>
> **Subject: Fwd: Modeling run Update - BRS**
>
> Sent from my iPhone
>
> Begin forwarded message:
>
> > **From:** David Stickler <dstickler@globalprincipal.com>
> > **Date:** June 25, 2013, 9:54:21 AM CDT
> > **To:** Julie Payne <jpayne@globalprincipal.com>
> > **Subject: Fw: Modeling run Update - BRS**
> >
> > ---
> >
> > **From**: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
> > **Sent**: Tuesday, June 25, 2013 09:32 AM Central Standard Time
> > **To**: Kallin, Robert <Robert.Kallin@arcadis-us.com>
> > **Cc**: David Stickler; Julie Payne; Kristin Frey <KristinFrey@KennedyJenks.com>; karenthirman@kennedyjenks.com <karenthirman@kennedyjenks.com>
> > **Subject**: RE: Modeling run Update - BRS
> >
> > Thanks Rob
> >
> > Continue to work with Shawn and guide him through the process. They are creating their own headaches at this time.
> >
> > Dave I am just trying to provide you with updates. ADEQ will not use our files, thus they are working through some issues with predicted concentrations that we have already

resolved. Not much we can do on our end other than responding and steering then in the right direction.

Steve

From: Kallin, Robert [mailto:Robert.Kallin@arcadis-us.com]
Sent: Tuesday, June 25, 2013 9:10 AM
To: Steve Frey
Subject: RE: Modeling run Update - BRS

From our conversation last night, Shawn is running a reduced grid to confirm PM2.5. Their 1-Hour NO2 and PM2.5 annual runs appear to be on a similar schedule to our own, which should finish sometime today (not necessarily before 5).

Shawn expanded the receptor grid for PM10 instead of accepting the SIA that we submitted in March and put receptors right over some sources, giving him impacts over 4,000 ug/m3 at times and not running a max file or contribution file to determine BRS impacts to any of those days. I am trying to understand Darryl's SIA calculation spreadsheet so I can assure Shawn that we aren't contributing to actual exceedances.

When I connect with Shawn I'll try to get a sense about how he expects the day to go and the timing of his runs.

-Rob

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 10:05 AM
To: Kallin, Robert
Subject: RE: Modeling run Update - BRS
Importance: High

Thanks

Just to confirm Shawn is also making model runs and we are essentially making the same runs. Seems like Tom Rheaume may not be in the loop regarding what is being done by ADEQ.

Steve

From: Kallin, Robert [mailto:Robert.Kallin@arcadis-us.com]
Sent: Tuesday, June 25, 2013 9:02 AM
To: Steve Frey
Subject: RE: Modeling run Update - BRS

The final runs for PM2.5 annual and 1-hour NO2 NAAQS are still running. The full PM2.5 24-hour run is what caused confusion the other day. Since this run takes the longest to complete, both Shawn and I are running multiple instances of the nearby receptor grid to confirm impacts.

Since we are right at NAAQS on the PM2.5 annual around the Bunge sources, if a nearby receptor peaks over, we can still take credit for seasonal emissions at Bunge, which we are currently doing for only one source. If needed, we should be able to demonstrate this quickly on individual receptors.

I'll call Shawn and check in with him.

-Rob

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 9:57 AM
To: Kallin, Robert
Subject: FW: Modeling run Update - BRS
Importance: High

See note below. My assumption is that we are running same thing Shawn is running?

Please let me know which pollutants are still running and the purpose of these runs. Also is Shawn running the same thing?

I know some of the answers to my questions, but I don't want to state something that is not true

Thanks

Steve

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 8:52 AM
To: Steve Frey; Robert.Kallin@arcadis-us.com
Cc: Hutchings, Shawn; dstickler@globalprincipal.com; jpayne@globalprincipal.com; Kristin Frey; Karen Thirman
Subject: RE: Modeling run Update - BRS

What models are you still running?

We need final runs to issue this permit

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 8:51 AM
To: Robert.Kallin@arcadis-us.com
Cc: Hutchings, Shawn; Rheaume, Thomas; dstickler@globalprincipal.com; jpayne@globalprincipal.com; Kristin Frey; karenthirman@kennedyjenks.com
Subject: Modeling run Update - BRS
Importance: High

Good Morning Rob,

Please let me know how modeling runs are going throughout the day. Also periodically check in with Shawn to make sure were on schedule and on the same page.

Thanks

Steve

Steven Frey
Manager Air Quality

Kennedy/Jenks Consultants
1515 East Woodfield Road, Suite 360
Schaumburg, Illinois 60173
Office Phone: 847-278-7705
Email: stevefrey@kennedyjenks.com

ATTACHMENT 1

From: Kallin, Robert [Robert.Kallin@arcadis-us.com]
Sent: Tuesday, June 25, 2013 10:59 AM
To: Steve Frey; Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing
Attachments: Addendum.zip.zip

Attached is the file from the FTP site, also emailed to Shawn yesterday, that contains final runs and outputs for:

- NO2 NAAQS Bunge
- NO2 NAAQS PPES
- NO2 NAAQS Viskase
- PM2_5 24h Bunge
- PM2_5 24h PPES
- PM2_5 24h Viskase
- PM2_5 An Bunge
- PM2_5 An PPES
- PM2_5 an Viskase; and
- PM10 24hour

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From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 11:43 AM
To: Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Kallin, Robert; Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing

I have asked Rob to send the files ASAP.

Steve

ATTACHMENT 1

From: Steve Frey [SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 11:00 AM
To: Kallin, Robert; Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing

Thank you

Steve

From: Kallin, Robert [mailto:Robert.Kallin@arcadis-us.com]
Sent: Tuesday, June 25, 2013 10:59 AM
To: Steve Frey; Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
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Robert Kallin | Environmental Scientist | Robert.Kallin@arcadis-us.com

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www.arcadis-us.com

Ex. A

From: Steve Frey [SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 10:26 AM
To: Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Robert.Kallin@arcadis-us.com; Kristin Frey; karenthirman@kennedyjenks.com; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing

Importance: High

Folks,

As of yesterday all of the runs provided below except for the following have been provided to Shawn at the ADEQ. The lead modeling provided in March is final and no updates required to that model are required.

The runs that are ongoing are as follows:

NO2 NAAQS – This run in to confirm the maximum impact throughout a 30 kilometer impact area. The maximum point of impact should be on the property boundary for BRS or slightly north of that property. We do not anticipate any issues with sources within the 30 kilometer impact areas since this was already done back in March (approximately 50 KM). This modeling run (which is only confirmatory will not be done until later today) is not critical for determining the maximum impact. To support the maximum impact which is close to BRS we will run a set of critical receptors and provide that to the ADEQ prior to noon. We had initially redone this modeling because of proposed increases in NOx emission rates. Since that time we have significantly reduced the NOx rates by committing to more stringent NOx BACT levels. Thus concentration should be going down.

PM2.5 24-hr and annual – Multi source runs are still going (however these runs are confirmatory and will not be done until later today). The peak impacts should be captured in the PM2.5 Viskas runs for 24-hour and for PM2.5 annual the maximum impact was at a point near Bungee. Previous modeling has already defined the maximum point of impact.

To allow ADEQ to complete the permit support documentation we will make a few quick runs that will utilize the critical receptors. We will then provide ADEQ with those results around noon today. The results to be provided will be the NO2 NAAQS maximum 1-hour and PM2.5 annual. Again this information was previous provided as part of the March modeling analysis. We are only reconfirming since we had some minor changes to sources that are now showing no significant impact to the predicted concentrations.

Rob will inform Shawn as soon as the runs are done and will email and also place them on the FTP.

Steve

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 9:53 AM

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 10:37 AM
To: Steve Frey; Bates, Mike; Hutchings, Shawn
Cc: Robert.Kallin@arcadis-us.com; Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing

We are going off what was on your CD and the FTP site.

1. We cannot locate the lead model run in the final package. Please resend it
2. NO2. We have no model that has been run from you at all. Please send what you have run.
3. PM2.5. your files did not contain any runs

If you are just doing some refined model of critical receptors, we still need the model that identified these.

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 10:26 AM
To: Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Robert.Kallin@arcadis-us.com; Kristin Frey; karenthirman@kennedyjenks.com; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing
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Subject: these are the final runs we are missing

From: Hutchings, Shawn
Sent: Tuesday, June 25, 2013 9:47 AM
To: Rheaume, Thomas
Subject: list

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$PM_{2.5}$ VISKAS 24HR

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$PM_{2.5}$ PPES AN

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$PM_{2.5}$ MULTI 25

$PM_{2.5}$ MULTI AN

PM_{10} 24HR

Also need the lead model they want us to review as final.

From: Steve Frey [SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 10:53 AM
To: David Stickler; Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Robert.Kallin@arcadis-us.com; Kristin Frey; Karen Thirman; Julie Payne
Subject: RE: these are the final runs we are missing

This is a priority for us and we are trying to exchange information as quickly as possible. We are working with ADEQ to try to resolve any open items

Steve

From: David Stickler [mailto:dstickler@globalprincipal.com]
Sent: Tuesday, June 25, 2013 10:48 AM
To: 'RHEAUME@adeq.state.ar.us'; Steve Frey; 'BATES@adeq.state.ar.us'; 'HUTCHINGS@adeq.state.ar.us'
Cc: 'Robert.Kallin@arcadis-us.com'; Kristin Frey; Karen Thirman; Julie Payne
Subject: Re: these are the final runs we are missing

Steve, I know all have the exchange of information as a priority. Please make sure ADEQ receives what they need.

ADEQ, please continue to reach out to the group so we can confirm what you have and don't have. Our results show that we are fine on all matters. Thus, I hope that we simply to make sure we provide you with the necessary support data.

Dave

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 10:36 AM Central Standard Time
To: Steve Frey <SteveFrey@KennedyJenks.com>; Bates, Mike <BATES@adeq.state.ar.us>; Hutchings, Shawn <HUTCHINGS@adeq.state.ar.us>
Cc: Robert.Kallin@arcadis-us.com <Robert.Kallin@arcadis-us.com>; Kristin Frey <KristinFrey@KennedyJenks.com>; karenthirman@kennedyjenks.com <karenthirman@kennedyjenks.com>; David Stickler; Julie Payne
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3. PM2.5. your files did not contain any runs

If you are just doing some refined model of critical receptors, we still need the model that identified these.

From: Kallin, Robert [Robert.Kallin@arcadis-us.com]
Sent: Tuesday, June 25, 2013 10:55 AM
To: Steve Frey; Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing
Attachments: Pb.7z

Attached is the final lead modeling submitted with the previous version of the application.

Robert Kallin | Environmental Scientist | Robert.Kallin@arcadis-us.com

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www.arcadis-us.com

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 11:43 AM
To: Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Kallin, Robert; Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing

I have asked Rob to send the files ASAP.

Steve

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 10:37 AM
To: Steve Frey; Bates, Mike; Hutchings, Shawn
Cc: Robert.Kallin@arcadis-us.com; Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
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ATTACHMENT 1

From: Kallin, Robert [Robert.Kallin@arcadis-us.com]
Sent: Tuesday, June 25, 2013 11:20 AM
To: Steve Frey; Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing
Attachments: NO2 Peak.zip; No2, all_bg, 1-hr, 8th high.plt; PM2_5 An Peak.zip; Pm25, all, annual.plt

Attached are runs with receptors selected at the locations where we have identified peak impacts for 1-hour NO2 and PM2.5 Annual. I have attached the appropriate plot files the modeling submitted in March for comparison of the area of peak impact to the selected receptors.

Robert Kallin | Environmental Scientist | Robert.Kallin@arcadis-us.com

ARCADIS U.S., Inc. | One Executive Drive, Suite 303 | Chelmsford, MA, 01824
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- PM2_5 An Bunge
- PM2_5 An PPES
- PM2_5 an Viskase; and
- PM10 24hour

Robert Kallin | Environmental Scientist | Robert.Kallin@arcadis-us.com

Ex. A

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Sent: Tuesday, June 25, 2013 11:43 AM
To: Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Kallin, Robert; Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
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To: Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Robert.Kallin@arcadis-us.com; Kristin Frey; karenthirman@kennedyjenks.com; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing
Importance: High

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As of yesterday all of the runs provided below except for the following have been provided to Shawn at the ADEQ. The lead modeling provided in March is final and no updates required to that model are required.

The runs that are ongoing are as follows:

NO2 NAAQS – This run in to confirm the maximum impact throughout a 30 kilometer impact area. The maximum point of impact should be on the property boundary for BRS or slightly north of that property. We do not anticipate any issues with sources within the 30 kilometer impact areas since this was already done back in March (approximately 50 KM). This modeling run (which is only confirmatory will not be done until later today) is not critical for determining the maximum impact. To support the maximum impact which is close to BRS we will run a set of critical receptors and provide that to the ADEQ prior to noon. We had initially redone this modeling because of proposed increases in NOx emission rates. Since that time we have significantly reduced the NOx rates by committing to more stringent NOx BACT levels. Thus concentration should be going down.

PM2.5 24-hr and annual – Multi source runs are still going (however these runs are confirmatory and will not be done until later today). The peak impacts should be captured in the PM2.5 Viskas runs for 24-hour and for PM2.5 annual the maximum impact was at a point near Bungee. Previous modeling has already defined the maximum point of impact.

To allow ADEQ to complete the permit support documentation we will make a few quick runs that will utilize the critical receptors. We will then provide ADEQ with those results around noon today. The results to be provided will be the NO2 NAAQS maximum 1-hour and PM2.5 annual. Again this information was previous provided as part of the March modeling analysis. We are only reconfirming since we had some minor changes to sources that are now showing no significant impact to the predicted concentrations.

Rob will inform Shawn as soon as the runs are done and will email and also place them on the FTP.

Steve

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 9:53 AM
To: Steve Frey; Bates, Mike; Hutchings, Shawn
Subject: these are the final runs we are missing

From: Hutchings, Shawn
Sent: Tuesday, June 25, 2013 9:47 AM
To: Rheaume, Thomas
Subject: list

NO2 NAAQS

Ex. A

Hutchings, Shawn

From: Kallin, Robert <Robert.Kallin@arcadis-us.com>
Sent: Tuesday, June 25, 2013 2:45 PM
To: Rheaume, Thomas; Steve Frey
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

My apologies, the note in the table indicated that impacts were from PPES, not Bunge. The two events occur at a single receptor located basically on top of the PPES fly ash unloading operation, well within the PPES site boundary.

Should I pursue this any further?

-Rob

From: Kallin, Robert
Sent: Tuesday, June 25, 2013 3:33 PM
To: 'Rheaume, Thomas'; Steve Frey
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

We could. The impacts from each of those days is at about 30.5 ug/m3 and the Bunge unloading accounts for approximately 20 ug/m3 of it. The unloading operation was run as 24/7 during this round of modeling.

-Rob

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 3:29 PM
To: Kallin, Robert; Steve Frey
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

Is this the Bunge you just re-ran in the 2.5 model? Can you re-run it here too?

From: Kallin, Robert [mailto:Robert.Kallin@arcadis-us.com]
Sent: Tuesday, June 25, 2013 2:26 PM
To: Rheaume, Thomas; Steve Frey
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

Regarding Bunge, at each of those receptors there is a higher impact during the same year during which time BRS is below SIL. BRS therefore can't significantly affect the days of maximum impact at those receptors.

-Rob

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 3:17 PM
To: Kallin, Robert; Steve Frey
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

Okay, you are mixing two separate issues here.

One is that your impact is below the SIL for anytime the increment is expected to be exceeded. That is what the spreadsheet would be used for (can you resolve the Bunge issue?).

The other is that AR says that if you consume more than 50/80 percent you need to discuss the effects of the proposed construction on the economic development, and alternative to consumption.

From: Kallin, Robert [mailto:Robert.Kallin@arcadis-us.com]
Sent: Tuesday, June 25, 2013 2:01 PM
To: Steve Frey; Rheaume, Thomas
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

The "BRS PM10 PSD Increment Plot-Max File Analysis" spreadsheet evaluates the following:

The spreadsheet evaluates the following data:

- Highest 2nd high (H2H) plot files for each modeling year
- MaxFile impacts from All sources for each modeling year with impacts above increment
- MaxFile impacts from BRS sources for each modeling year with impacts above increment

The evaluation for each model year identifies the receptor days which show exceedances of the PM10 increment, and documents that BRS impacts are below SIL at all except two receptor points on the border with Bunge in 2010.

Accordingly, the areas with increases above PM10 increments are overwhelmingly not attributable to BRS and BRS would not prohibit construction of other projects.

-Rob

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 2:49 PM
To: Rheaume, Thomas; Kallin, Robert
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

Will do right now

Steve

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 1:48 PM
To: Steve Frey
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

Need the explanation too, not just the spreadsheet

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 1:37 PM

To: Rheaume, Thomas
Subject: RE: pm10 increment

We will be sending an excel spreadsheet that show that predicted exceedances of the Class II increment resulted in BRS having an insignificant impact. This would support the conclusion that BRS is not limiting other companies for growth in the area.

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 12:32 PM
To: Steve Frey
Subject: pm10 increment

Page C-18 says that it is below 30 wherever BRS has a significant impact. Where does that come from, i.e. which model do we look at to get that? Also I think the latest application leaves out the Arkansas increment discussion. The 50/80% consumption

Thomas Rheaume
Permit Branch Manager
Arkansas Department of Environmental Quality
Air Division
5301 Northshore Drive
North Little Rock, AR 72118-5317
501 682 0762 Phone
501 682 0880 Fax

ATTACHMENT 1

Hutchings, Shawn

From: Steve Frey <SteveFrey@KennedyJenks.com>
Sent: Tuesday, June 25, 2013 2:44 PM
To: Hutchings, Shawn; Rheaume, Thomas; Kallin, Robert
Subject: RE: pm10 increment

As stated in Arkansas Regulation 19.904, subsection (c) (1), where air quality impact analysis required under this subpart indicated that the issuance of a permit for any major stationary source or for any major modification would result in the consumption of more than fifty (50%) of any available annual increment or eighty percent (80%) of any short term increment, the person applying for such a permit shall submit to the Department an assessment of the following factors:

(a) Effect that the proposed consumption would have upon the industrial and economic development within the area of the proposed sources; and
(b) Alternatives to such consumption, including alternative siting of the proposed source or portion thereof.

The proposed BRS plant project will have potential emission in an by itself that will be well below 80% of the Class II increment. Combined impacts from BRS and other increment consuming sources have shown predicted concentrations to exceed 30 ug/m3, however BRS impacts on those predicted concentration have been shown to be at or below significant impact levels. The specific point of predicted concentrations typically reside within close proximity of a facility or in the case of the proposed project along the facility property boundary or with a relative short distance of that boundary. Since the predicted concentration is representative of time and space, future growth in the area should not be limited. It is highly unlikely that future growth will take place near or in close proximity to the BRS property or an existing facilities property. For any future project going through PSD review a separate analysis will be required as part of that application process and primary point of increment consumption will also be based on time and space and will most likely occur in the immediate vicinity of that source as well.

BRS has selected the proposed plant based on the availability of land, close proximity to major road ways, as well as access to a river. The proposed plant site has been zoned industrial and has access to infrastructure to support the plant being proposed. BRS as part of the property selection process as evaluated this site and other sites as well. This site meets the criteria for this plant and ranked the highest in terms of plant site selection. BRS does not have the ability to select an alternative site, since an alternative site would not meet the site qualifications for a project of this nature.

From: Hutchings, Shawn [mailto:HUTCHINGS@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 2:26 PM
To: Rheaume, Thomas; Kallin, Robert; Steve Frey
Subject: RE: pm10 increment

I am still waiting on 2 issues.

The spreadsheet you submitted shows you are above the SIL on two days that exceed the PM10 24 hour increment. We need this resolved.

I need the explanation of for the Arkansas 50/80% increment consumption requirement Tom outlined below.

I just got the modeling files. I will look at those now.

Shawn

Ex. A

From: Rheaume, Thomas
Sent: Tuesday, June 25, 2013 2:17 PM
To: Kallin, Robert; Steve Frey
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

Okay, you are mixing two separate issues here.

One is that your impact is below the SIL for anytime the increment is expected to be exceeded. That is what the spreadsheet would be used for (can you resolve the Bunge issue?).

The other is that AR says that if you consume more than 50/80 percent you need to discuss the effects of the proposed construction on the economic development, and alternative to consumption.

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Accordingly, the areas with increases above PM10 increments are overwhelmingly not attributable to BRS and BRS would not prohibit construction of other projects.

-Rob

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 2:49 PM
To: Rheaume, Thomas; Kallin, Robert
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

Will do right now

Steve

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 1:48 PM
To: Steve Frey
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

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From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
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To: Rheaume, Thomas
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Thomas Rheaume
Permit Branch Manager
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Air Division
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North Little Rock, AR 72118-5317
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Thomas Rheaume
Permit Branch Manager
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5301 Northshore Drive
North Little Rock, AR 72118-5317
501 682 0762 Phone
501 682 0880 Fax

Hutchings, Shawn

From: Kallin, Robert <Robert.Kallin@arcadis-us.com>
Sent: Tuesday, June 25, 2013 1:15 PM
To: Hutchings, Shawn
Cc: Steve Frey (SteveFrey@KennedyJenks.com)
Subject: RE: these are the final runs we are missing

Shawn,

Annual average values for BRS and MULTISRC source groups without background are included in each NO2 run that has been submitted. We didn't update the increment calculations from March, but in looking at our runs it looks like peak annual BRS impacts are about 6.5 ug/m3 with a MULTSRC impact of about 1.4 ug/m3 (assuming all multisource sources are increment contributing). This brings us to 7.9 ug/m3, which is still much less than half the increment level. I'll send you the March backup as I track it down.

-Rob

From: Kallin, Robert
Sent: Tuesday, June 25, 2013 1:42 PM
To: 'Hutchings, Shawn'
Cc: Steve Frey (SteveFrey@KennedyJenks.com)
Subject: RE: these are the final runs we are missing

Shawn,

I will track the run down and send it to you shortly.

-Rob

From: Hutchings, Shawn [mailto:HUTCHINGS@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 1:37 PM
To: Kallin, Robert
Subject: RE: these are the final runs we are missing

I am having trouble locating a NO2 model which shows the annual increment number. Your most recent NO2 models include background. And I cant find a previous model which doesn't include it. Could you dig up that model and send it to me as soon as possible.

Shawn

From: Kallin, Robert [mailto:Robert.Kallin@arcadis-us.com]
Sent: Tuesday, June 25, 2013 11:20 AM

To: Steve Frey; Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing

Attached are runs with receptors selected at the locations where we have identified peak impacts for 1-hour NO2 and PM2.5 Annual. I have attached the appropriate plot files the modeling submitted in March for comparison of the area of peak impact to the selected receptors.

Robert Kallin | Environmental Scientist | Robert.Kallin@arcadis-us.com

ARCADIS U.S., Inc. | One Executive Drive, Suite 303 | Chelmsford, MA, 01824
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www.arcadis-us.com

From: Kallin, Robert
Sent: Tuesday, June 25, 2013 11:59 AM
To: 'Steve Frey'; Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing

Attached is the file from the FTP site, also emailed to Shawn yesterday, that contains final runs and outputs for:

- NO2 NAAQS Bunge
- NO2 NAAQS PPES
- NO2 NAAQS Viskase
- PM2_5 24h Bunge
- PM2_5 24h PPES
- PM2_5 24h Viskase
- PM2_5 An Bunge
- PM2_5 An PPES
- PM2_5 an Viskase; and
- PM10 24hour

Robert Kallin | Environmental Scientist | Robert.Kallin@arcadis-us.com

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www.arcadis-us.com

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 11:43 AM
To: Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Kallin, Robert; Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing

I have asked Rob to send the files ASAP.

Steve

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 10:37 AM
To: Steve Frey; Bates, Mike; Hutchings, Shawn
Cc: Robert.Kallin@arcadis-us.com; Kristin Frey; Karen Thirman; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing

We are going off what was on your CD and the FTP site.

1. We cannot locate the lead model run in the final package. Please resend it
2. NO2. We have no model that has been run from you at all. Please send what you have run.
3. PM2.5. your files did not contain any runs

If you are just doing some refined model of critical receptors, we still need the model that identified these.

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 10:26 AM
To: Rheaume, Thomas; Bates, Mike; Hutchings, Shawn
Cc: Robert.Kallin@arcadis-us.com; Kristin Frey; karenthirman@kennedyjenks.com; dstickler@globalprincipal.com; jpayne@globalprincipal.com
Subject: RE: these are the final runs we are missing
Importance: High

Folks,

As of yesterday all of the runs provided below except for the following have been provided to Shawn at the ADEQ. The lead modeling provided in March is final and no updates required to that model are required.

The runs that are ongoing are as follows:

NO2 NAAQS – This run in to confirm the maximum impact throughout a 30 kilometer impact area. The maximum point of impact should be on the property boundary for BRS or slightly north of that property. We do not anticipate any issues with sources within the 30 kilometer impact areas since this was already done back in March (approximately 50 KM). This modeling run (which is only confirmatory will not be done until later today) is not critical for determining the maximum impact. To support the maximum impact which is close to BRS we will run a set of critical receptors and provide that to the ADEQ prior to noon. We had initially redone this modeling because of proposed increases in NOx emission rates. Since that time we have significantly reduced the NOx rates by committing to more stringent NOx BACT levels. Thus concentration should be going down.

PM2.5 24-hr and annual – Multi source runs are still going (however these runs are confirmatory and will not be done until later today). The peak impacts should be captured in the PM2.5 Viskas runs for 24-hour and for PM2.5 annual the maximum impact was at a point near Bungee. Previous modeling has already defined the maximum point of impact.

To allow ADEQ to complete the permit support documentation we will make a few quick runs that will utilize the critical receptors. We will then provide ADEQ with those results around noon today. The results to be provided will be the NO2 NAAQS maximum 1-hour and PM2.5 annual. Again this information was previous provided as part of the March modeling analysis. We are only reconfirming since we had some minor changes to sources that are now showing no significant impact to the predicted concentrations.

Rob will inform Shawn as soon as the runs are done and will email and also place them on the FTP.

Steve

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 9:53 AM
To: Steve Frey; Bates, Mike; Hutchings, Shawn
Subject: these are the final runs we are missing

From: Hutchings, Shawn
Sent: Tuesday, June 25, 2013 9:47 AM
To: Rheaume, Thomas
Subject: list

NO2 NAAQS

NO2 BUNGEE

NO2 PPES

NOS VISKASE

$PM_{2.5}$ PPES 24HR

$PM_{2.5}$ VISKAS 24HR

$PM_{2.5}$ BUNGEE AN

$PM_{2.5}$ PPES AN

$PM_{2.5}$ VISKASE AN

$PM_{2.5}$ MULTI 25

$PM_{2.5}$ MULTI AN

PM_{10} 24HR

Also need the lead model they want us to review as final.

Hutchings, Shawn

From: Rheaume, Thomas
Sent: Monday, June 24, 2013 3:48 PM
To: Hutchings, Shawn; Murphy, Phil
Subject: fyi - passes Class I screening for Visibilty and Deposition

Visibility Screening Results

Year	Number of days with Delta-Deciview => 0.50	Number of days with Delta-Deciview =>1.00	Largest Delta-Deciview
2001	0	0	0.152
2002	0	0	0.152
2003	0	0	0.255

Deposition

Year	Nitrogen Depostion kg/ha/yr	Sulfur Deposition kg/ha/yr
2001	0.0022575	0.0023191
2002	0.0030659	0.0037545
2003	0.0020811	0.00252
Screening Level	0.010	0.005

Pollutant Impacts

Year	1 hour High NO2	Annual NO2	24 Hour PM10	Annual PM10	24 hour PM2.5	Annual PM2.5	SO2 1 Hour
2001	0.34026	0.0042571	0.02676	0.0012539	0.042819	0.022942	0.18266
2002	0.28417	0.0036721	0.021011	0.0010807	0.037125	0.0019525	0.19148
2003	0.34345	0.0027553	0.28543	0.0011072	0.048981	0.0019364	0.25439

Thomas Rheaume
Permit Branch Manager
Arkansas Department of Environmental Quality
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5301 Northshore Drive
North Little Rock, AR 72118-5317
501 682 0762 Phone
501 682 0880 Fax

Hutchings, Shawn

From: Kallin, Robert <Robert.Kallin@arcadis-us.com>
Sent: Monday, June 24, 2013 2:44 PM
To: Hutchings, Shawn
Cc: Steve Frey (SteveFrey@KennedyJenks.com); Kristin Frey (KristinFrey@KennedyJenks.com); Collins, Marjorie
Subject: RE: PM2.5 24-Hour

Shawn,

I reviewed the model input files that you sent and believe that I've identified the cause of the discrepancy.

The input files you sent excluded all of the variable emissions scenarios, including the variable emissions by wind speed for the W_SLAG and W_SCRAP sources.

These sources should only have emissions when the threshold friction velocity is exceeded and erosion potential greater than zero exists. We found the threshold wind speed to be 14 m/s based on the Durst curve conversion from 5-second wind speed to hourly average wind speed, as noted in Table C-4 of Appendix C.

Please let me know if you have any questions about the wind speed scenario.

-Rob

From: Hutchings, Shawn [mailto:HUTCHINGS@adeq.state.ar.us]
Sent: Monday, June 24, 2013 1:36 PM
To: Kallin, Robert
Subject: RE: PM2.5 24-Hour

Here are the input and output files.

Are the files on the CD we received today the most recent versions of your models?

Shawn

From: Kallin, Robert [mailto:Robert.Kallin@arcadis-us.com]
Sent: Monday, June 24, 2013 11:22 AM
To: Hutchings, Shawn
Cc: Steve Frey (SteveFrey@KennedyJenks.com); Kristin Frey (KristinFrey@KennedyJenks.com); Collins, Marjorie
Subject: PM2.5 24-Hour

Shawn,

Steve mentioned that you were getting some very high results on the PM2.5 24-hour run. Can you send me the input file and outputs with the high numbers so we can determine what is causing them? Our full receptor model is still processing, but none of our smaller runs have had such high results.

Robert Kallin | Environmental Scientist | Robert.Kallin@arcadis-us.com
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ARCADIS, Imagine the result

Ex. A

Please consider the environment before printing this email.

COMMENTS OF NUCOR STEEL – ARKANSAS AND
NUCOR-YAMATO STEEL COMPANY

ADEQ DRAFT OPERATING AIR PERMIT 2305-AOP-R0
BIG RIVER STEEL, LLC, AFIN #47-0091

EXHIBIT B

ATTACHMENT 1

APSC FILED Time: 3/21/2013 12:52:04 PM: Recvd 3/21/2013 12:51:57 PM: Docket 13-032-p-Doc. 21

BEFORE THE
ARKANSAS PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE AGREEMENT FOR ELECTRIC SERVICE BETWEEN ENTERGY ARKANSAS, INC. AND BIG RIVER STEEL LLC	))))	DOCKET NO. 13-032-P

DIRECT TESTIMONY

OF

GRANT TENNILLE

EXECUTIVE DIRECTOR

ARKANSAS ECONOMIC DEVELOPMENT COMMISSION

ON BEHALF OF
ENTERGY ARKANSAS, INC.

2
1

MARCH 21, 2013

Ex. B

III. FUTURE OF THE BRS INDUSTRIAL SITE

Q. WHAT IS THE POTENTIAL FOR INDUSTRIAL GROWTH IN THE AREA?

A. Steel mills of this size act as powerful magnets, attracting new businesses that will serve the mill as vendors of products or services or as customers who want to locate near the source of an important input.

Dr. John Shelnutt of the Arkansas Department of Finance and Administration predicts that the mill will generate 1,000 indirect jobs by 2017, with a predicted payroll of more than $25 million annually. That is in addition to the payroll of more than $38 million, annually, of the mill's 500 employees, which is the employment level projected at the end of BRS' expansion plans. These numbers do not include the impact that could be felt from mill customers who choose to locate near the mill to take advantage of a steady supply of steel and reduced transportation costs.

Q. IS THERE SOME HISTORICAL BASIS TO JUSTIFY AN EXPECTATION THAT OTHER INDUSTRIES WOULD LOCATE NEAR BRS?

A. Yes. One needs to look no further than Blytheville to know that these types of locations are a strong possibility. Tenaris, an Argentine pipe and tube manufacturer, located its facility within a few miles of the existing Nucor mill near Blytheville to have ready access to Nucor's steel. The AEDC and BRS are already pursuing potential customers for the BRS mill's output.

IV. SUMMARY AND CONCLUSIONS

Q. DO YOU BELIEVE THAT APPROVAL OF THE AGREEMENT BETWEEN EAI AND BRS IS IN THE BEST INTEREST OF THE STATE?

A. Yes. Approval of the Agreement is an essential factor in BRS' decision to locate its mill in the state. The mill would provide significant benefits itself, and attract other industry investment and jobs.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

APSC FILED Time: 3/21/2013 12:50:52 PM: Recvd 3/21/2013 12:50:48 PM: Docket 13-032-p-Doc. 20

BEFORE THE
ARKANSAS PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE AGREEMENT FOR ELECTRIC SERVICE BETWEEN ENTERGY ARKANSAS, INC. AND BIG RIVER STEEL INC	))))	DOCKET NO. 13-032-P

DIRECT TESTIMONY

OF

JOHN D. CORRENTI

CHAIRMAN & CEO

BIG RIVER STEEL LLC

ON BEHALF OF

ENTERGY ARKANSAS, INC.

PORTIONS OF THIS TESTIMONY CONSIDERED HIGHLY SENSITIVE PROTECTED INFORMATION HAVE BEEN REDACTED. THE UNREDACTED TESTIMONY IS BEING FILED UNDER SEAL PURSUANT TO INTERIM PROTECTIVE ORDER NO. 1 IN THIS DOCKET DATED MARCH 7, 2013

MARCH 21, 2013

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III. ECONOMIC BENEFITS

Q. WHAT BENEFIT DO YOU SEE BRS BRINGING TO THE COMMUNITY OF OSCEOLA AND THE SURROUNDING REGION?

A. In the short term, the benefits include the 2,000 peak period construction jobs created by constructing a $1.1 billion facility over a 20- to 24-month period. Longer term benefits include the economic impact created by the 525 jobs that the mill will create, paying an average of $75,000 per year plus benefits. This means that over $39 million of compensation will be paid annually in an area of the state that has a level of unemployment and underemployment well above both the state and national averages. Beyond BRS's payroll, there will likely be a number of suppliers and customers that also locate in the area. While these jobs may not pay the same $75,000 per year, they will be good quality industrial jobs that BRS estimates will pay on average $40,000 or more per year.

Q. WHAT TYPE OF INDUSTRIES OR COMPANIES TYPICALLY ESTABLISH A BUSINESS PRESENCE NEAR OR IN CLOSE PROXIMITY TO A STEEL MILL?

A. From a customer perspective, we typically see steel service centers, steel processors, and pipe mills locate in close proximity to new mills in an attempt to reduce transportation costs and gain direct access to steel. From a support industry perspective, the BRS mill will have a number of support entities that will provide BRS with raw materials, maintenance

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services, material handling services, and various day-to-day needs such as cafeteria services.

IV. BRS BENEFITS

Q. IS THE AGREEMENT FOR ELECTRIC SERVICE WITH EAI BENEFICIAL TO BRS?

A. Yes. The Agreement provides BRS assurance of long-term competitive access to electrical power. Without the contract, as submitted and filed in this proceeding, BRS will not locate its new flat-rolled mill in Arkansas. After the cost of scrap metal (our primary raw material), electricity is projected to be BRS's second largest cost.

Q. WHAT IS THE TIME FRAME IN WHICH BRS NEEDS THE ARKANSAS PUBLIC SERVICE COMMISSION ("COMMISSION") TO MAKE A RULING ON THE APPROVAL OF THIS CONTRACT?

A. It is critical that BRS receive final approval of the contract from the Commission no later than May 20, 2013. This date is important because it allows BRS to continuing moving forward with the other aspects of the project. BRS will not continue to spend time and money advancing the project if there is uncertainty over the terms of the Agreement.

Q. IF YOU DO NOT BUILD THE BRS MILL IN ARKANSAS, WILL YOU BUILD IT SOMEWHERE ELSE?

NUCOR PETITION TO OBJECT

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT NO. 2305-AOP-R0

BIG RIVER STEEL, LLC

ATTACHMENT NO. 3

FINAL PERMIT AND RESPONSE TO COMMENTS

RESPONSE TO COMMENTS

BIG RIVER STEEL LLC
PERMIT #2305-AOP-R0
AFIN: 47-00991

On June 27, 2013, the Director of the Arkansas Department of Environmental Quality gave notice of a draft permitting decision for the above referenced facility. During the comment period, written comments on the draft permitting decision were submitted by Big River Steel, Nucor and Nucor Yamato Steel Co, EPA Region 6, and the USFWS, the Federal Land Manager for the Mingo Wilderness. During the public hearing a number of the public made comments. The Department's response to these issues follows.

Note: The following page numbers and condition numbers refer to the draft permit. These references may have changed in the final permit based on changes made during the comment period.

Big River Steel Comments

BRS Comment 1: Section II, Page 8 – Please note that the predicted air dispersion modeling concentrations provided in the National Ambient Air Quality Standards (NAAQS) compliance table on page 8 should be updated. The total impact ($\mu g/m^3$) for NO_2 1-hour which is listed as 37.6 should actually be 181.8 $\mu g/m^3$ as presented in Appendix C of the PSD application (Revision#2) provided by BRS and dated June 24, 2013.

Response: The Department agrees. The requested change was made.

BRS Comment 2: Section II, Page 10 – The table on page 10 presents the abbreviation "EMF". This should be changed (as well as any other reference throughout the Permit) to EAF. EAF is the defined term of "electric arc furnace."

Response: The Department agrees. The requested change was made.

BRS Comment 3: Section II, Page 11 (other additional pages as well). In the table listed on page 11 an SO_2 BACT limit is listed as 0.0005 lbs/MMBtu. This limit was established based on the EPA emission factor for natural gas which is expressed as 0.6 lbs/million cubic feet of natural gas. As defined in the BRS application, dated June 24, 1013 (Revision #2), the AP-42 emission factor was adjusted by a natural gas heating value of 1020 BTUs per cubic foot. This results in a SO_2 emission factor of (0.6/1020= 0.000588 lbs/MMBtu). All references to 0.0005 lbs/MMBtu should be adjusted to 0.000588. BRS would also like to request that rounding of emission limits be consistent throughout the permit following acceptable engineering practices and reflect what was evaluated as part of the air quality ambient air quality impact analysis that was performed in support of this permit.

Response: The adjustment from 0.0005 lb/MMBtu to 0.000588 lb/MMBtu was made. The 0.000588 lb/MMBtu value was the number used to in the calculations and modeling. The

Department does try to round emission limits in its permit consistently. This error was due to rounding of the emission factor and emission limits in the calculations in the application

BRS Comment 4: Section II, Page 11 – The table on page 11 states a BACT limit of 0.0723 tons of CO_2e/ton of liquid steel produced. This emission factor was provided by BRS as an initial estimate of potential CO_2e emissions as a result of a predefined product mix. This estimate was provided as a representative rate to reflect the potential of CO_2 emissions for regulatory applicability purposes. As defined in the Permit, a BACT limit for CO_2 has been established and was initially based on a preliminary future product mix. The establishment of this limit inherently limits and does not provide operational flexibility to produce future products that could be produced by BRS. Any future change in product mix could cause CO_2e emissions to be below or higher than this BACT limit. Since this will be one of the first Permits issued in the United States that contains a formal CO_2e BACT limit expressed in tons of CO_2e/ton of liquid steel produced, BRS is requesting that this limit be adjusted to reflect a worst case production output for the plant. BRS could be severely penalized and could allow other steel manufacturing facilities an unfair operating advantage if relief is not granted in terms of CO_2e/ton of liquid steel produced. As stated in the BACT evaluation, operations connected to emission sources SN-01, SN-02 and SN-03 will be using various energy efficient options to decrease the overall energy demands of the EAFs', LMFs and RH Degasser. These energy efficient options will result in this equipment being the most energy efficient design being used by any similar steel plant in operation today.

In review of future products that could be produced by BRS, production of one of the potential steel products could result in an estimated CO_2 emission rate of approximately 309.3 lbs of CO_2e /ton of liquid steel produced. This translates to an emission factor of 0.155 tons of CO_2e/ton of liquid steel produced. BRS is requesting that the proposed BACT limit of 0.0723 tons of CO_2e/ton of liquid steel be revised to reflect a worst case product to be produced at the plant of 0.155 tons of CO_2e/ton of liquid steel produced averaged over a 30-day period. This limit is for the combined exhaust stacks for SN-01 (#1 EAF and LMF baghouse exhaust), SN-02 (#2 EAF and LMF baghouse exhaust) and SN-03 (RH Degasser / Flare exhaust) Refer to attached Exhibit B which provides supporting documentation on how the CO_2e factor was derived. Other emission units in the Melt-shop (i.e., natural gas combustion devices) have established BACT limits based on lbs/MMBtu.

Response: The limit was updated to 0.155 tons of CO_2e per ton of liquid steel. The averaging time was not specified to 30 days as the compliance for the limit will be shown during compliance tests and there is no additional data which could be averaged over a long term averaging time.

BRS Comment 5: Section II, Page 16 – The table on page 16 states a BACT limit of 0.035lbs/MMBtu for NO_x from SN-28 and SN-29 (Galvanizing Line Preheaters). Big River initially proposed a BACT limit of 0.15 lbs/MMBtu to reflect other similar preheaters in operation today. After discussions with ADEQ and further engineering review, Big River proposed the incorporation of post combustion controls which could achieve a NO_x limit of 0.06 lbs/MMBtu; incorporation of post combustion controls was proposed to ADEQ in Revision #2 of the PSD application. ADEQ has elected to define the BACT limitation at 0.035 lbs/MMBtu per a

limit established for an existing operation in Arkansas. Big River has evaluated the ability to incorporate additional post combustion control technology and has determined it is technically feasible and will incorporate this technology in the final design. The incorporation of this design will require additional capital expenditure and operational costs to install and operate this technology. Big River is formally agreeing to the NO_x BACT emission limit of 0.035 lbs/MMBtu for emission sources SN-28 and SN-29.

Response: The comment requested no changes. The permit was updated to assure the lb/hr and tpy limits match the lb/MMBtu rate.

BRS Comment 6: Section II, Page 17 – The table on page 17 states a BACT limit of 0.1 lbs/MMBtu for NO_x from SN-39 (proposed Batch Annealing Furnaces). BRS conducted a detailed BACT evaluation and has provided the results of that evaluation to ADEQ. A BACT limit of 0.2 lbs/MMbtu was requested for this emission source. This limit is necessary to reflect the nature of the BRS batch operation. Since these furnaces will operate in batch mode, the combustion characteristics are completely different than a furnace that is continuous in operation. As stated on page 188 of Appendix A of Volume II of the PSD air Permit application (Revision #2),as well as information previously provided to ADEQ, frequent opening and closing of these furnaces and the inability to regulate intrusion of building air, additional NO_x emissions can form from a batch versus continuous furnace. Because of these technical issues, BRS had proposed a BACT emission limit of 0.2 lbs/MMBtu. The use of this limit is also reflected in the air quality impact evaluation that was performed in support of this proposed project. BRS is formally requesting that ADEQ change this BACT limit to 0.2 lbs of NO_x/MMBtu in the final Permit for emission source SN-39 (Batch Annealing Furnaces). This change should be made where appropriate throughout the Permit.

Response: BRS was asked to provide information to support the comment that the annealing furnaces at other facilities were not achieving the lower 0.1 emission limit and that the 0.2 lb/MMBtu limit was BACT. BRS provided an updated BACT analysis which showed other annealing furnaces were also batch furnaces and achieving a 0.1 lb/MMBtu limit. BRS also proposed a 0.1 lb/MMBtu limit in that revised BACT. The permitted limit was not changed.

BRS Comment 7: Section II, Page 19 – The table on page 19 states a BACT limit of 0.0054 lbs/MMBtu and 0.0824 lbs/MMBtu for CO and VOC emissions, respectively from emission source SN-53. These limits have been entered incorrectly and should be reversed. The CO emission limit should be 0.0824 lbs/MMBtu and the VOC emission limit should be 0.0054 lbs/MMBtu. The Permit should be reviewed to make sure these limits are consistent throughout the Permit.

Response: The Department agrees. The requested change was made.

BRS Comment 8: Section II, Pages 21 and 22 – BRS requests that ADEQ provide flexibility on the defined BACT limits for SN-82 through SN-91. Initial engineering reflected enclosed receiving systems and enclosed conveyor systems for each source. The BACT limit reflects inclusion of fabric filter control devices with a BACT limit of 0.003 gr/dscf. BRS is requesting that ADEQ adjust the BACT limit so that it also reflects a mass emission rate similar to emission

source SN-92. As detailed engineering proceeds it is possible that the design of SN-84 and SN-85 will change to a pneumatic system with sealed conveyors, thus resulting in the same level of emissions if the equipment was being ducted to a fabric filter baghouse. BRS is not requesting a relaxation of the BACT limit defined, rather an option to comply with an alternative limit. The use of a pneumatic system and sealed conveyor system would also be a more efficient mechanism for minimizing the potential for fugitive dust and would require less monitoring in the event a baghouse design is not selected. A fugitive dust control plan would also be part of the BACT determination for these emission sources. The appropriate changes would be required throughout the Permit.

Response: The option of a sealed conveyor or pneumatic conveyor system with no emission points has been added for SN-84 and SN-85.

BRS Comment 9: Section IV, Page 48 - Condition #4 states a steel production limit of 3,400,000 tons for SN-01 and SN-02, respectively. These limits should be changed to 1,700,000 tons for SN-01 and SN-02, respectively based on the information provided by BRS during air permit processing phase.

Response: The Department agrees. The requested change was made.

BRS Comment 10: Section IV, Page 48 – There is a discrepancy between Permit condition #6 and Permit condition #26 (page 53). The Permit condition on page 53 should be changed to reflect testing on an annual cycle. BRS is aware of conditions #26 and #29 that would not require stack testing if continuous emission monitors are installed for individual regulated air pollutants.

Response: There is no discrepancy. Specific Condition 6 requires testing of PM_{10} according to NSPS Subpart AAa and also requires $PM_{2.5}$ testing on an annual basis. Specific Condition 26 requires testing of other criteria pollutants on a semiannual basis. The testing intervals are correct. No changes to the permit were made.

BRS Comment 11: Section IV, Page 54 – The following statement was found on this page and should be corrected "Error! Reference Source Not Found"

Response: The Department agrees. The requested change was made.

BRS Comment 12: Section IV, Page 62 – Permit condition #48 includes a material throughput limitation of 680,000 tons/year of alloying materials through SN-91. Condition #49 includes a requirement to record the monthly alloy material throughput rate. The potential PM emission rate from this source is less than 1.0 tons/year. Because of the insignificant level of potential emissions from this source, BRS requests that this limitation be removed. Inclusion of a fugitive dust control plan will be implemented to ensure minimal fugitive PM emissions from this source.

Response: The calculation of the emission rate was based on a throughput of alloying material. Due to that basis of calculation the throughput limit is the only method which will ensure compliance with the limit. The fugitive dust plan does not directly limit the emissions from the

source. Due to the basis of calculation, the throughput limit must remain to show compliance with the emission limit.

BRS Comment 13: Section IV, Page 70 – Permit condition #56 requires $PM_{2.5}$ and PM_{10} stack testing for small natural gas combustion sources (SN-05 thru SN-09, SN-10 or SN-11, SN-12 or SN-13 and one of SN-16 thru SN-19). All of these natural gas sources will exhaust into the building air associated with the melt shop. Since these sources will not be exhausted through common stacks designed with appropriate sampling ports [etc.], it is not technically feasible to perform a stack test following the methodologies stated in the Permit. As an alternative, BRS proposes to maintain appropriate documentation on site that supports the $PM_{2.5}$ and PM_{10} emission factors utilized for these natural gas emission sources. This would be consistent with the established normal convention for not requiring testing for sources that used emission factors obtained from EPA's AP-42 reference document. The emission factors used were obtained from a study conducted by the Minnesota Pollution Control Agency in conjunction with EPA. The results of this study are available on the agencies web page (see link below) http://www.pca.state.mn.us/index.php/air/air-monitoring-and-reporting/air-emissionsmodeling-and-monitoring/criteria-air-pollutant-emission-inventory/air-emission-inventoryforms-and-instructions.html. BRS is also requesting since it is the established normal convention to not require stack testing for sources using established or EPA derived emission factors, that reference to stack testing for $PM/PM_{10}/PM_{2.5}$ for natural gas combustion sources be removed. BRS will maintain appropriate documentation within the plant environmental files that reflects the study noted above.

Response: There is no "established normal convention" for not testing sources relying on AP-42 factors. AP-42 factors can be highly variable and source specific. It is necessary for a facility to show compliance with proposed BACT limits. The study cited for EPA factors is based on "some limited data from a pilot-scale dilution sampling method." These BACT limits have been relied on to demonstrate compliance with the NAAQS for $PM_{2.5}$. The proposed $PM_{2.5}$ limits are significantly lower than the current level for BACT for these types of sources. Testing for these sources is necessary to demonstrate that the sources can achieve the proposed emission limits and ensure the NAAQS are protected. It is technically feasible to test the sources in question. Temporary stacks can be built to allow the testing to be performed.

BRS Comment 14: Section IV, Page 71 – The source description on this page states that each tunnel furnace has a combined total heat input of 269 MMBtu/hr. This should be updated to reflect information submitted previously to ADEQ and also presented in Revision #2 of the Permit application. The correct heat input is 234 MMBtu/hr for SN-20 and 192 MMBtu/hr for SN-21.

Response: The Department agrees. The requested change was made.

BRS Comment 15: Section IV, Page 73 – Permit condition #61 makes reference to annual stack testing and testing every 5 years. This condition should be written to state initial stack testing for each emission source and repeated testing every 5 years.

Response: The condition was revised.

BRS Comment 16: Section IV, Page 75 – The reference to the heat input for the galvanizing line preheaters (SN-28 and SN-29) should be 87.4 MMBtu/hr for each preheater. This is consistent with the rates provided in Revision #2 of the Permit application and reflected in the air quality impact evaluation. On that same page, the heat input for SN-39 should be changed to 98.25MMBtu/hr, the total number of furnaces should be changed from 20 to 15 and the average individual heat input should reflect 6.6 MMBtu/hr. The entire cycle time will be 54 hours instead of 36 hours.

Response: The process descriptions were updated.

BRS Comment 17: Section IV, Page 79 – The emission rate (tons/year) expressed for lead under source SN-39 should be changed to 0.00021 to reflect the lower heat input stated above in comment #16. Due to rounding the pound per hour rate does not need to be revised. The tons/year emission rates provided on Page 89 for emission source SN-39 should also be revised. This change should be made throughout the Permit. The correct emission rates are as follows: Arsenic – 0.000084 tpy Cadmium – 0.000464 tpy Formaldehyde – 0.0316 tpy Manganese – 0.00016 tpy Mercury – 0.00011 tpy.

Response: The corrections were made.

BRS Comment 18: Section IV, Page 92 – Permit condition #74 should be revised to include the following statement "The non-resettable hour meter on SN-25, SN-38, SN-44, SN-45 and SN-46 should be operational during periods with stable operation when steel product is actually moving through each mill in order to be rolled with activated emulsion and fume exhaust system.

Response: The condition was revised to require recording hours of operation only when steel is passing through the mills. The specific requested wording had too many provisional requirements as to when the hour meter needed to record, does not address emissions at all times, and would not be enforceable.

BRS Comment 19: Section IV, Page 92 – Permit condition #75 should be revised to include the statement immediately below. This statement is critical so that plant operations understand the limit as expressed. The limitation on hours was based on the following operational requirements: "8,760 calendar hours reduced by periodic maintenance time is equivalent to 7,600 hours of general working time."; and "7,600 hours of general working time multiplied by a production factor of 0.8 results in 6,080 net operating hours."

Response: The requested wording is not necessary, confusing and could result in permit violations. The requested language could be misread to actually require shutdowns for the specified reasons or could be interpreted as allowing continuous operation or no recordkeeping of hours of operation. Accordingly, the condition was not revised.

BRS Comment 20: Section IV, Page 96 – Permit condition #83 establishes a limit of 100 hours per year of operation for each of the emergency engines (SN-62 thru SN-66). BRS is requesting that this Permit condition be revised to state this hour limitation pertains to required monthly testing and maintenance. This limitation does not pertain to emergency situations.

Response: The annual emission limits were based on 100 hours of operation. MACT Subpart ZZZZ does not limit emergency operation; however the limit in Specific Condition 83 is to show compliance with the annual emission limits for the source. The condition will remain as written.

BRS Comment 21: Section IV, Page 107 - Permit condition #96 includes material throughput limitations (tons/year of materials). Condition #97 includes a requirement to record the monthly material throughput rates. The potential PM emission rate from each of the sources listed Specific Condition #96 are each well below 1.0 tons/year. Because of the insignificant level of potential emissions from these sources and the possible restrictions it would place on BRS's ability to modify its product mix in the face or changes in market and competitive conditions, BRS requests that these limitations be removed. Inclusion of a fugitive dust control plan will be implemented to ensure minimal fugitive PM emissions from this source.

Response: Since these sources are not considered insignificant activities, the Department cannot treat their potential emissions as insignificant. The calculations for the emissions of these sources were directly based on their throughput. BRS was given the opportunity to change the basis for the calculations and did not. The throughput limits are necessary to show compliance with the proposed limits based on the calculations provided in the application. No changes to the permit were made.

BRS Comment 22: Section VI, Page 111 – Permit condition #7 under this section requires the installation, operation and maintenance of ambient monitors for PM_{10}, $PM_{2.5}$ and NO_2. As part of the Permit process, BRS conducted a thorough air quality impact evaluation using approved air dispersion modeling techniques and tools. This air quality impact evaluation also included the gathering and inclusion of emissions data associated with other existing sources out to a distance of over 50 kilometers from the proposed steel plant location.

BRS requests that this Permit condition be altered to include the wording "The permittee may be required to install...." Big River is proposing that the following language be added to Permit condition #7:

"At the completion of all required testing as outlined in Permit condition #3, the permittee is required to perform an air quality impact evaluation for each Phase (Phase I and Phase II as defined in the initial air permit application) of completed construction. The evaluation shall be performed for emissions of PM_{10}, $PM_{2.5}$ and NO_2. Emission rates should be based on tested rates, vendor guarantees and/or engineering estimates with supporting calculations. The "as built" location of emission sources, as well as constructed building structures should be included in this evaluation. An emissions inventory of other existing sources should be compiled and provided to ADEQ for review in the air quality impact evaluation. The permittee shall submit data presenting the results of this evaluation to ADEQ within 120 days after completion of all required testing for Phase I and Phase II, respectively. The evaluation of Phase II must include the emission sources associated with Phase I. Based on the outcome of each evaluation, ADEQ will evaluate the need for actual ambient monitoring to be performed for PM_{10}, $PM_{2.5}$ and NO_2 based on the reasonable likelihood that air quality standards could be exceeded".

Response: The Department required monitoring for the facility based on the application submitted by BRS. If BRS wishes to have the requirement for monitoring re-evaluated due to future changes to the facility, BRS can then submit the additional information and request the permit be modified to remove the monitoring requirement.

BRS Comment 23: Section VII, Page 113 – The list of insignificant activities has been defined as "none." BRS provided a list of insignificant activities that it requested to be incorporated into its air Permit and BRS requests that the listed activities be incorporated as "insignificant activities." Tables 28 and 28A of the Permit application, Revision #2 provides the list. Refer to Exhibit C which contains the list of insignificant activities identified by BRS during the permit process, as well as the completed ADEQ application form.

Response: BRS has been asked by the Department many times during the permitting process to provide the necessary information required to add an insignificant activity to the permit. After this comment was made BRS was asked again to provide that information. BRS provided the Department's insignificant forms with general categories of the types of activities the facility might have, but offered no calculations to verify or justify why these items would be insignificant. If BRS wishes to add insignificant activities to the permit they can provide the proper forms listing specific pieces of equipment and the necessary calculations to demonstrate the activities are insignificant, and these items can be added to the permit in an administrative amendment. Based on the information provided there are no activities which were demonstrated to qualify as insignificant and none were added to the permit.

Nucor Comments

Nucor Comment 1: The Draft Permit is more than two hundred pages long, BRS's Revision #2 to its Air Permit Application ("the Application, Rev. 2") is two volumes consisting of more than 750 pages, and the modeling files supporting the Application, Rev. 2 contain several Gigabytes of data; however, the Department's Statement of Basis ("SOB") for the Draft Permit is only seven pages long. Consequently, the Statement of Basis does not adequately explain the basis for the Director's decision and does not permit adequate administrative or judicial review. Furthermore, as explained in subsequent comments, both the SOB and the Draft Permit contain significant errors that are not explained. The Draft Permit should be withdrawn in order to afford time for ADEQ to do an adequate analysis of the permit application, and, if a new draft permit is issued another public comment period should be provided.

Response: There is no requirement for the length of a statement of basis in relation to permit or application size. As this comment raises no specific items which are allegedly not properly explained in the SOB, no changes will be made to the permit in response to this comment. The Department will review and respond to the subsequent comments elsewhere in this Response to Comments.

Nucor Comment 2: BRS submitted its Application, Rev. 2 to ADEQ on June 24, 2013. As of June 24, 2013, modeling for the facility did not pass regulatory requirements. The next day, ADEQ issued the Draft Permit and released the public notice of the Draft Permit to the newspaper. Notice of the Draft Permit was published in the newspaper two days later, on June

27, 2013. However, the email correspondence attached to these comments as Ex. A indicate that as late as mid-afternoon on June 25, 2013, ADEQ still did not have information that it needed to finalize the Draft Permit and that ADEQ Air Division technical staff were still trying to cross-check the model results reported by BRS versus the raw model output files. ADEQ did not have, and could not have had, sufficient time to adequately analyze the Application, Rev. 2 and issue the Draft Permit. Release of the public notice was premature, and should have been delayed until the technical review was complete. Consequently, the Draft Permit should be withdrawn in order to give ADEQ sufficient time to analyze the information submitted by BRS in support of its Application, Rev. 2 and a draft permit re-issued once all the technical quality assurance/quality control can be completed.

Response: The Department has been reviewing the application from BRS since December 2012. The revision 2 of the application represents the latest version of all submitted information. The Department requested BRS update the entire application as one complete document for ease of review by the public before issuing the draft permit. The final revision submitted changed only a few items. There is no requirement to how long after an application or specific updated piece of information until the Department can issue a draft permit.

Nucor Comment 3: ADEQ's judgment on the BRS permit is subject to bias due to the direct financial Investment of an agency of the State of Arkansas, the Arkansas Teachers Retirement System, in the BRS project. This is evidenced among other things by the fact that ADEQ issued the Draft Permit the day after it received the second revised permit application from BRS, even though ADEQ had not completed, and could not have completed, an adequate analysis of the BRS permit application. This is also evidenced by the fact that ADEQ prepared the extensive Class I modeling analysis for BRS, a practice that ADEQ has not extended to other facilities seeking an air permit. Together with the fact that the air quality modeling analysis submitted with the Application, Rev. 2 demonstrates the predicted cumulative impact for annual $PM_{2.5}$ is equal to the National Ambient Air Quality Standard ("NAAQS") of 12 μg/ml, plus the fact that earlier modeling submitted by BRS predicted that PM10 concentrations would exceed the NAAQS, ADEQ's analysis of the BRS permit application requires extra scrutiny. The Draft Permit should be withdrawn in order to afford ADEQ adequate time to analyze the application and to adequately explain its permitting decision, and to afford the public an opportunity to comment after its Draft Permit decision is re-issued.

Response: The Commenter's allegation that ADEQ's decision on the BRS permit is subject to bias is unfounded, wholly without merit and is not germane to the technical basis for the final permitting decision. As such, no response is legally required. However, several points are worth noting.

The permit application does not contain, nor is there a statutory or regulatory basis for ADEQ to take into consideration, the source of funding for any given project. Furthermore, ADEQ, as with all delegated environmental programs run by state environmental agencies, is specifically authorized by EPA to routinely issue permits to state entities that both fund and operate regulated sources.

As is very common, numerous revisions need to be made to the original application in order to respond to ADEQ's technical review process. Ultimately, all modifications need to be consolidated into one document for ease of public and EPA review; this is the second revised permit application referenced in this question. This final submission was requested by ADEQ in order to simplify the draft permit's administrative record.

It is not uncommon for an application to initially contain emission levels that, when modeled, predict an exceedance of a NAAQS. The review process for this and all applications ensure that those predicted exceedances are eliminated through some type of operational or pollution reduction technology controls, as was done in this process. Final emission limits for criteria pollutants contained in the draft permit are protective of the NAAQS.

As for assistance with modeling, prior to the passage of Act 1302, ADEQ routinely conducted screening modeling for applicants and will continue to do so when voluntarily proposed and agreed to by an applicant if within our ability to perform. The screening Class I visibility modeling ADEQ performed did not identify unacceptable impacts to Class I areas, therefore there was no need for further modeling or more site-specific analysis by the applicant.

Nucor Comment 4: BRS has not finalized the design and placement of all emission sources. This is evident from comments in the Application, Rev. 2, as well as media reports issued the week that the Draft Permit was issued. As noted elsewhere in these comments, past modeling of the facility demonstrated exceedances of the PM_{10} NAAQS, and the current modeling supporting the Draft Permit demonstrates impacts that equal the NAAQS for $PM_{2.5}$. Because changes in design and placement of emission sources could affect the accuracy of modeling results, and possibly other applicable requirements, and because the air quality impacts in the case of the BRS permits are so close to the NAAQS, the Draft Permit should be withdrawn until the plant design is completed by BRS.

Response: The Department can only issue a permit decision based on the application it receives. The draft permit only addresses the facility as it is currently designed. If BRS changes its design it will have to modify its permit and ensure at that time that the NAAQS are still protected.

Nucor Comment 5: The history of heavy manufacturing is that additional support facilities and customer/supplier facilities likely will be built in proximity to BRS. This also is borne out by press accounts prior to the issuance of the Draft Permit as well as economic impact projections proposed to justify this project. This also is demonstrated by testimony provided in support of the BRS project. (See, Arkansas Public Service Commission, Docket 13-032-P, Testimony of G. Tennille, March 21, 2013, p. II; Testimony of J. Correnti, March 21, 2013, pp. 9-10, attached here to as Ex. B.) Neither the Draft Permit nor the Application, Rev. 2 takes this likelihood into account. Furthermore, SECTION II: INTRODUCTION, Prevention of Significant Deterioration, Growth Analysis of the Draft Permit, indicates that the "only" increase in emissions from associated growth is due to commuting workers automobiles and that the emissions from commuting are assumed to be "insignificant". This analysis is inadequate and is in contrast to official state reports and news media reports regarding the economic impact of this project. The Growth Analysis should consider emissions from the following: population growth due to relocation of skilled workers, commercial and other industrial development that will most

certainly occur to support BRS, the truck and rail traffic that will deliver raw materials and ship out BRS' finished product. In addition, ADEQ should provide at least a qualitative assessment, if not a quantitative assessment (using mobile source air quality models), of the commuter traffic emissions, and not simply dismiss them as insignificant.

Response:

The scope and breadth of the information provided by BRS in its Additional Impact Analysis (AIA) is consistent with that provided by applicants in historical PSD permit application packets. The requirement to conduct an AIA is contained in federal regulations, specifically 40 C.F.R. 52.21(o), and is incorporated into our regulations at Reg. 19.904 (A). As the Analysis is borne of a federal requirement, it is important to note that EPA was provided with an opportunity to review BRS's Analysis. EPA made no comments as to any deficiencies or inadequacies in the BRS Analysis.

Nucor Comment 6: The SOB, the Draft Permit and the Application, Rev. 2 are unclear as to the production capacity of the BRS mill. In some places, it is stated that the production capacity is 3.4 million tons per year of product and in other places the production capacity is stated at 6.8 million tons per year. See, e.g. SOB, p. 5, paragraph 16. Similarly, the capacity of the mill as stated in the application is confusing. Page 21 of the Application, Rev. 2 states that the combined target production rate for the EAFS is 500 TPH which equates to 4.38 million TPY, but the emission rate tables for SN-01 and SN-02 state that the maximum production rate for each source is 3.4 million TPY. This discrepancy should be further scrutinized and explained, since all criteria pollutants from these operations depend on the production rate.

Response: The correct total production is 3.4 million tons total; 1.7 million from each EAF. The permit has been updated accordingly.

Nucor Comment 7: Section IV of the Draft Permit, SPECIFIC CONDITIONS, Meltshop SN-01/02 EAFs and LMFs, Specific Condition 4. The limit on the amount of steel processed in the EAFs listed in this Condition (3,400,000 tons per 12 months for each EAF) is inconsistent with the 250 ton per hour (TPH) EAF capability mentioned in the Source Description. 250 TPH corresponds to 6,000 tons per day, or 2,190,000 tons per year, significantly less than the amount listed in SC4. ADEQ should resolve this discrepancy.

Response: The correct total production is 3.4 million tons of steel per year for both furnaces; 1.7 million tons from each EAF. The permit has been updated to make these clarifications.

Nucor Comment 8: The SOB is inconsistent with the Application, Rev. 2 with respect to the Insignificant Activities list. The SOB states that no list of Insignificant Activities was submitted, however, the Application, Rev. 2 contains a list of insignificant Activities in Table 2-28. This is additional evidence that the Draft Permit was issued without adequate review by ADEQ, and should be withdrawn.

Response: The SOB is not inconsistent. The SOB states:

The application contained many references to activities which it states are insignificant. The applicant was asked multiple times to provide forms and calculations to include activities. No forms were provided and no activities were added to the permit.

The review by ADEQ was adequate enough to determine that the list of insignificant activities the comment refers to is not sufficient to demonstrate that the activities qualify as insignificant. BRS was asked to provide the necessary forms and calculations multiple times. BRS has yet to provide an adequate demonstration that any specific activity qualifies as insignificant and notes were added to the permit. Therefore, no insignificant activities are added to the permit. If BRS wishes to permit insignificant activities, it will have to amend its permit to do so.

Nucor Comment 9: The Draft Permit does not contain conditions limiting opacity for dust handling equipment consistent with 40 CFR §60.272a(b), even though this is discussed in the Application, Rev. 2, p. 63.

Response: A condition with this limit was added.

Nucor Comment 10: Neither the SOB nor the Draft Permit appears to contain a statement that the requirements of PSD review have been met.

Response: The Department knows of no requirement for the permit or SOB to contain that specific statement. As this comment does not contain any specific reason that the requirements of PSD review have not been met, no changes were made to the permit.

Nucor Comment 11: The discussion on page 7-8 of the Draft Permit in connection with consumption of $PM_{2.5}$ and PM_{10} increment by the BRS mill is inadequate and does not comply with Reg. 19. The Draft Permit states that "It is highly unlikely that future growth· will take place near or in close proximity to the BRS property or an existing facility's property." However, as indicated in Comment 5 above, the BRS mill likely will result in the construction of support, service and customer facilities in proximity to the mill. The Application, Rev. 2, p. 86, states that "the construction and operation of the proposed steel plant should not result in any noticeable residential growth in the area." Yet, the USEPA has agreed to provide assistance to Mississippi County in developing residential facilities that are anticipated to result from the BRS project. In addition, press reports indicate substantial interest in other facilities locating in the area of the BRS mill. These statements are inconsistent and should be explained. Furthermore, there is no discussion or analysis in the Draft Permit of any alternatives to increment consumption, and no such alternatives, including alternative site locations, were presented in the Application, Rev. 2. See, e.g., p. 86.

Response: See Response to Comment 5.

Nucor Comment 12: The Growth Analysis discussion on page 8 of the Draft Permit is inadequate. It states that the "only increase in emissions from associated growth results from the increase in workers traveling to and from work." However, as indicated in Comments 5 and 11 above, the BRS mill likely will result in the construction of support, service and customer facilities in proximity to the mill.

Response: See Response to Comment 5.

Nucor Comment 13: In the Draft Permit, p. 9, ADEQ used a BACT limit of 0.035 lb/MMBtu for the galvanizing line, even though BRS requested a higher limit. BRS did not provide any justification as to why it could not meet ADEQ's proposed BACT limit, even though it requested a higher limit. ADEQ should review BRS's permit application as presented to determine whether the facility as proposed satisfies applicable requirements; not issue a permit based on different operating characteristics than proposed by the permit applicant that ADEQ thinks satisfies applicable requirements. ADEQ's decision and rationale on this point should be explained, and an additional public comment period should be provided.

Response: ADEQ is responsible for the determination of BACT. The application provided all relevant information but requested a value that was not representative of BACT. ADEQ determined the BACT value as 0.035 lb/MMBtu based on that same information in the application. No additional analysis or information was necessary.

Nucor Comment 14: In the Draft Permit, page 10, there is a discrepancy between the factors used to model emissions for natural gas sources, and the emissions for natural gas sources requested by BRS as BACT limits. Modeling and ADEQ's review and permit decision should have been conducted based on the requested BACT emission limits and not on limits or operating conditions that ADEQ thinks will satisfy applicable requirements. ADEQ should review BRS's permit application as it was presented to determine whether the facility as proposed satisfies applicable requirements and not issue a permit based on different operating characteristics than proposed by the permit applicant that ADEQ thinks satisfies applicable requirements. ADEQ's decision and rationale on this point should be explained, and an additional public comment period should be provided.

Response: The limits used in the model were lower than the limits determined as BACT. This was necessary in order demonstrate compliance with NAAQS. These two issues, BACT and a NAAQS evaluation, do not have to arrive at the same result as to emission rates, yet the lower of the two must be incorporated into the permit. No changes or additional information is necessary.

Nucor Comment 15: In numerous places in the Draft Permit, for example on page 46, the justification for specific permit conditions is stated as 40 CFR Part 52, Subpart (E). This is insufficient to describe whether the basis for the permit condition is the PSD regulations in 40 CFR Part 52, Subpart (E), or some other provision in the Arkansas SIP, and should be clarified.

Response: The example on page 46 includes a reference to Reg.19.901, which is PSD as contained in Arkansas regulations. The comment is inaccurate in its statement. Similarly, other conditions in the permit contain the same reference where necessary.

Nucor Comment 16: In March 2013, BRS submitted air quality modeling showing air quality impacts, including impacts that exceeded the PM_{10} NAAQS, The Air Quality Modeling Analysis submitted with the Application, Rev. 2 on June 25, 2013 (Appendix C), shows different impacts, and includes the assertion by BRS that its emissions will not cause or contribute to any NAAQS

exceedance. Application, Rev. 2, p. 84. The SOB and the Draft Permit do not explain what changes were made to resolve the originally modeled NAAQS exceedances and do not demonstrate ADEQ's analysis of and justification for such changes. These decisions by ADEQ should be explained and an additional public comment period should be provided, due to inadequate information supporting the Draft Permit.

Response: The Department is not required to explain changes in modeling or applications. It is only required to ensure the final version of the model shows that the NAAQS is protected, which was done in this case.

Nucor Comment 17: The Draft Permit does not contain a source number for the meltshop vent, even though there are emission limits for the meltshop under the applicable New Source Performance Standards (Subpart AAa), and even though there are sources that will evacuate through the meltshop vents. See Application, Rev. 2, p. 22.

Response: The applicable provisions of NSPS Subpart AAa for the meltshop are contained in the permit. Neither Subpart AAa nor Arkansas Regulations require it to have a source number.

Nucor Comment 18: In Specific Condition 64, the Draft Permit establishes emission limits for certain emission sources under the authority of APC&EC Reg. 18, but in Specific Condition 77 the authority for testing requirements for some of these sources is APC&EC. Reg. 19.

Response: The reference was changed to the appropriate Regulation 18 reference.

Nucor Comment 19: In Specific Condition 93 concerning testing of TDS in the cooling towers, no test method is specified.

Response: The condition was updated to state that testing be conducted by a method approved by the Department prior to testing.

Nucor Comment 20: Plantwide Condition No. 6 in the Draft Permit is irrelevant and should be removed. This is a new greenfield permit and there are no previous permits. This is further evidence that the Draft Permit was not adequately developed and issued without proper analysis and review. The Draft Permit should be withdrawn and if a new draft permit is issued and an additional public comment period should be provided.

Response: While it is true there are no previous permits for the facility, the permit makes it clear that this is the initial air permit for the facility. This is a standard condition in all Title V air permits and will remain in the permit.

Nucor Comment 21: Plantwide Condition No.7 requires post-construction ambient air monitoring for PM_{10}, $PM_{2.5}$ and NO_2. Given the fact that modeling submitted in support of the Application, Rev. 2 shows that the impact from BRS's emissions is equal to the NAAQS for annual $PM_{2.5}$, and that the earlier modeling for the facility showed exceedances of the PM_{10} NAAQS, ADEQ should require pre-construction ambient air monitoring. As noted in other comments, questions exist about BRS's use of background concentrations for $PM_{2.5}$ from

monitors at Dyersburg, Tennessee. Where the air quality impact analysis demonstrates impacts so close to the NAAQS, the public deserves to understand what the background concentration in the locale actually is. In addition, the authority cited for post-construction monitoring is the 1999 version of the Arkansas State Implementation Plan, although there is no explanation why ADEQ is relying on this version of the SIP, instead of the current version. Neither the SOB nor the Permit adequately explains why ADEQ chose to require post-construction ambient air monitoring, but not preconstruction monitoring. In light of the decision in Sierra Club v. EPA, 705 F.3d 548 (D.C. Cir. Jan. 22, 2013), ADEQ should require site-specific pre-construction ambient air monitoring for this facility.

Response: The requirement for monitoring is not dependent on "earlier modeling that showed exceedences". The permit decision is not based on this modeling.

The questions about the Dyersburg monitor are addressed in other responses in this document.

The references to the 1999 SIP are in error and will be corrected to the current version our ADEQ regulations.

The Sierra Club vs EPA case involved "EPA's arguments that it has de minimis authority to exempt the preconstruction monitoring requirement" by the establishment of Significant Monitoring Concentrations (SMC). This decision rendered in that case does not affect the permitting authority's ability to evaluate the use of existing monitor data in place of site specific data.

In this permit, ADEQ has relied on existing monitors to establish background values.

Nucor Comment 22: Plantwide Condition No.8 requires final calculation of bag house loading rates after the BRS mill is constructed and submission of a permit modification if the as-constructed emission rates are higher. Furthermore, Figure 2-7 of the Application, Rev. 2 which concerns the dust collection system states that "all flow rates are estimates and subject to change pending final engineering." Because changes in the baghouse loading rates and the flow rates for the dust collection system may affect modeling results, and because the current modeling predicts emissions of $PM_{2.5}$ that equal the annual $PM_{2.5}$ NAAQS, the Draft Permit should be withdrawn until final engineering for the facility is complete and additional modeling can be completed.

Response: The Department can only permit the sources referenced in a permit application. Accordingly, this permit addresses only the sources that were applied for by BRS. As the application did mention possible changes due to final engineering designs, the permit condition was added as a check to make sure the facility only constructs the sources contained in the application. Otherwise, BRS is required to submit a permit modification.

Nucor Comment 23: The Application, Rev. 2 does not contain a disclosure form as required by APC&EC Reg. §8.204. A new disclosure form should be submitted to reflect any changes in the operation and ownership of the BRS facility and ADEQ's analysis of such disclosure should be explained.

Response: The facility has submitted a disclosure form with the application. If there have been any changes in ownership of BRS. BRS is required to update its disclosure accordingly.

Nucor Comment 24: The Application, Rev. 2 states that the BRS facility is located "away from sensitive receptors, such as hospitals, schools, nursing homes and highly populated residential areas." However, the BRS slag pile appears to be located immediately adjacent to the Viskase facility, which manufactures products used in the food industry. The Draft Permit should specifically address any potential impacts of the BRS facility on Viskase's operations.

Response: BRS demonstrated through modeling that the NAAQS are protected which are designed to protect human health. The Department knows of no specific reason why BRS would impact Viskase's operation. The commenter raises no specific points in this comment on how BRS would have any impact on Viskase.

Nucor Comment 25: The Application, Rev. 2 contains emission factors for EAFs in Table 2-1 A(ii) and Table 2-2a, consisting of .0018 gr/dscf for PM and .0024 gr/dscf for $PM_{2.5}$. Neither the Application, the Draft Permit-nor the SOB adequately explain the derivation of the emission factor for $PM_{2.5}$. An emission factor of 0.0052 gr/dscf for $PM_{2.5}$ should be used to establish emission rates from the EAFs, including in modeling.

Response: The comment does not explain why the higher limit is appropriate for this source. In a BACT analysis, a facility can propose a limit less than those achieved by other facilities. In this case BRS proposed a lower limit and is required to show compliance with that emission rate through testing.

Nucor Comment 26: The Application, Rev. 2 states that the rolling mills have no potential to emit regulated air pollutants, and thus there are no emission sources associated with this equipment. However, neither the Application, the Draft Permit nor the SOB adequately explain why these sources have no potential to emit.

Response: The application contains the rolling mills as sources and calculates their emissions. The permit contains those sources. It is unclear as to where in the application the comment refers, but the permit addresses the emissions from the rolling mills.

Nucor Comment 27: Recent draft EPA guidance (March 4, 2013) $PM_{2.5}$ modeling indicates that projects that have significant emissions of both $PM_{2.5}$ and $PM_{2.5}$ precursors (SO_2 and NO_x) should evaluate secondary formation of $PM_{2.5}$. It is not clear that secondary $PM_{2.5}$ emissions were included in the $PM_{2.5}$ air quality analysis submitted by BRS. Table III-I from EPA's Draft Guidance/or $PM_{2.5}$ Permit Modeling shows the recommended approaches for assessing primary and secondary $PM_{2.5}$ impacts, depending on the level of emissions from the proposed facility.

[Table not copied into Response Document; see the original comment]

As shown in the table, BRS meets Case 3 since emissions from the proposed mill exceed the PSD significant emission rate for direct emissions of $PM_{2.5}$ as well as for NO_x and SO_2. Case 3

calls for assessment of both primary and secondary impacts of PM2.5, and provides three options for assessing secondary impacts of $PM_{2.5}$. It is not clear that BRS has conducted any form of secondary impacts assessment for $PM_{2.5}$. Given that the current $PM_{2.5}$ analysis results in impacts very near or equal to the $PM_{2.5}$ NAAQS, ADEQ should properly assess the impacts of secondary $PM_{2.5}$ formation and document this assessment in the permitting record.

Response: ADEQ is not obligated to follow draft guidance. The draft guidance referred to was first issued on March 4, 2013, after the initial application for this permit had been received and review started.

Nucor Comment 28: For PM_{10} modeling, the Significant Impact Area (SIA) was determined using only two years of meteorological data and an impact threshold of 80% of the Significant Impact Level (SIL). This methodology was used to save time during modeling. (Page C-ll of BRS permit application). However, this approach does not comply with established EPA policy regarding using five years of meteorological data. It is understood that the SILs were exceeded thereby requiring comprehensive modeling; nevertheless, proper definition of the SIA is required in order to determine the appropriate distance at which receptors should be placed for NAAQS and increment modeling analyses. A properly defined SIA may result in an expanded receptor area and an expanded inventory of sources for modeling. ADEQ should properly evaluate the SIA for this project and document its evaluation in the permitting record.

Response: The Department did evaluate the modeling to determine if the facility's modeled SIA was correct with 5 years of meteorological data. The Department did not find any locations in the model which were outside the SIA proposed by BRS which should have been included in the modeling. It was not necessary to expand the receptor grid or to expand the inventory area.

Nucor Comment 29: BRS has selected incorrect minor source baseline dates for developing an inventory of minor source facilities to include in full impact modeling analyses. A separate minor source baseline date is established for each Air Quality Control Region (AQCR), and is based on the date when the first PSD application is received by the Department from a source or proposed source within the AQCR. The minor source baseline date for AQCR 020 (Northeast Arkansas Intrastate) for both PM_{10} and SO_2 is October 13, 1977. BRS used a baseline date of May 31, 1983 for PM_{10} and SO_2. This error may result in fewer facilities being included in increment analyses, and could result in lower increment consumption than would have other have been realized. ADEQ should withdraw the Draft Permit, re-evaluate BRS's minor source baseline date, and if a new draft permit is re-issued, provide an additional public comment period. BRS also selected the incorrect minor source baseline date for NO_x but the BRS baseline date of August 31, 1989 is before the true minor source baseline date for AQCR 020 of January 1, 1991. Nevertheless, this error is indicative of the inadequate analysis in the Application, Rev.2 and ADEQ's review of the Application.

Response: The Department could find no source excluded from the model due to the incorrect minor source baseline date. The commenter provided no specific examples of sources which should have been included and were not. The modeling includes all sources it should and therefore there is no reason to withdraw the draft permit.

Nucor Comment 30: NAAQS and increment modeling files appear to include only the receptors that were significant in the significance modeling, rather than all receptors within the radius of impact (ROI). ADEQ should verify that the proper receptors were included in the NAAQS and increment modeling analyses. Following are some excerpts from EPA's New Source Review(NSR) Workshop Manual regarding the ROI: The proposed project's impact area is the geographical area for which the required air quality analyses/or the a NAAQS and PSD increments are carried out ... The impact area is a circular area with a radius extending from the source to (1) the most distant point where approved dispersion modeling predicts a significant ambient impact will occur, or (2) a modeling receptor distance of 50 km, whichever is less. Usually the area of modeled significant impact does not have a continuous, smooth border. (It may actually be comprised of pockets of significant impact separated by pockets a/insignificant impact.) Nevertheless, the required air quality analysis is carried out within the circle that circumscribes the significant ambient impacts.

In general, modeling receptors/or both the NAAQS and the PSD increment analyses should be placed at ground level points anywhere except on the applicant's plant property if it is inaccessible to the general public. It is important to note that ground level points of receptor placement could be over bodies of water, roadways, and property owned by other sources.

Response: Modeling requirements are found in 40 CFR Apart 51 Appendix W, not the NSR Workshop Manual. The manual is a procedure designed to satisfy the requirements of Appendix W but in itself is not a requirement.

Modeling by BRS met the requirements of Appendix W. Areas where BRS had an insignificant impact, as determined by the SIL, were excluded from modeling as allowed by EPA guidance.

Nucor Comment 31: Modeled PM_{10} impacts are above the 24-hour PM_{10} increment. BRS has excused the impacts above the increment standard by stating that BRS's contributed impacts were below the PM_{10} significant impact level at all times that the cumulative modeled impacts exceed the increment. If this is true, EPA policy allows a permit to be issued to BRS, but ADEQ would be required to take remedial action through the SIP process to address the other sources that do have significant contributing impacts at the time and place of the increment violations. However, the Draft Permit and/or the SOB do not clearly show how the cause and contribute analysis was conducted. Furthermore, to the extent that ADEQ is required to conduct a cause and contribute analysis on other facilities and sources as a result of the air quality modeling analysis submitted by BRS, ADEQ should include an explanation to that effect in the Public Notice, and notify affected facilities and sources directly prior to closing of the public comment period and the issuance of a final permit so that the public and affected sources and facilities have a meaningful opportunity to evaluate and comment on the air quality analysis submitted by BRS.

Response: There is no requirement to take remedial action through the SIP process for PSD increment. The only requirement is that BRS not cause or contribute to an exceedance of the increment. PSD increment is only evaluated by modeling for a PSD permit application. It is not value that can be measured by a monitor. Other facilities would only have to show they are in compliance with the PSD increment should they go through a PSD permit application for that pollutant.

Nucor Comment 32: The meteorological data files used were found to have missing data. Per section 5.3.2 of EPA's Meteorological Monitoring Guidance for Regulatory Modeling Application, the meteorological data base must be 90 percent complete (before substitution) in order to be acceptable for use in regulatory dispersion modeling. AERMINUTE was developed to provide users with more complete data sets from Automated Surface Observing Systems (ASOS) meteorological data. A March 8, 2013 EPA memo titled "Use of ASOS meteorological data in AERMOD dispersion modeling" states:

> If NWS data completeness is less than 90% by quarter with the use of AERMINUTE, then the representativeness of the data may be suspect and alternative sources of meteorological data should be considered.

The meteorological data used in the modeling analysis by BRS did not meet this completeness requirement, as less than 90 percent of the data was available from the Blytheville meteorological station for the following quarters: Q3 2008 is missing 350 hours (84% complete), QI 2009 is missing 64 hours (83% complete), Q4 2011is missing 240 hours (89% complete). Because of this error, the modeling supporting the Draft Permit is inadequate to properly evaluate the project. The Draft Permit should be withdrawn, and if a new draft permit is issued, another public comment period should be provided.

Response: The comment quotes EPA Guidance stating "If NWS data completeness is less than 90% by quarter with the use of AERMINUTE, then the representativeness of the data may be suspect and alternative sources of meteorological data should be considered. However, such cases are likely to be rare." However, the commenter omits the previous and following sentences: "Although the *Guideline* does not establish a minimum requirement on data completeness for NWS data, the 90% joint capture by quarter serves as a useful benchmark, and If NWS data completeness is less than 90% by quarter with the use of AERMINUTE, then the representativeness of the data may be suspect and alternative sources of meteorological data should be considered. However, such cases are likely to be rare."

The meteorological data used is sufficient to meet Appendix W and EPA guidance for PSD and Title V review, even with the missing hours in the three quarters mentioned of the 5 year meteorological data.

Nucor Comment 33: There are several conflicting reports of modeled impacts in the permit application, the draft permit, and the modeling files that have been posted to ADEQ's website for review. These conflicts make a public review of the proposed facility difficult, if not impossible. A few instances of these conflicts are provided below:

a. The draft permit indicates a modeled annual impact for the NAAQS analysis of 2.47 $\mu g/m^3$ $PM_{2.5}$. The draft permit also indicates a modeled annual impact for the significance and increment analyses of 2.53 $\mu g/m^3$ $PM_{2.5}$.These results bring into question the validity of the modeling analyses, since the significance and increment modeling analyses include emissions from only the proposed facility and the NAAQS analysis should include emissions from the proposed facility and all "inventory" sources within a distance equal to the radius of impact plus

50 km. It is not apparent (in fact, it is contrary to common sense) how adding inventory emissions sources to a modeling analysis would result in a lower modeled impact.

b. The draft permit indicates a modeled annual impact for the NAAQS analysis of 2.47 μg/m$_3$ $PM_{2.5}$. Page 500 of Application Volume II indicates a modeled annual impact for the NAAQS analysis of 2.56 μg/m^3 $PM_{2.5}$, resulting in a predicted cumulative impact of 12.00 μg/m^3 $PM_{2.5}$, based on a background concentration of 9.44 μg/m^3. A predicted cumulative impact that is exactly at the NAAQS standard requires additional scrutiny, especially in concert with some other concerns presented in these comments (e.g., no secondary PM2.5 formation has been considered, the receptor grid may not be complete, incomplete meteorological data, possibility of an improper background concentration).

c. In some cases, the modeling files presented on the ADEQ website are incomplete or nonexistent, making a check of actual model results impossible. The following model plot files (file extension .plt) are not readable: $PM_{2.5}$ Multi An, $PM_{2.5}$ Multi 24h, NO_2 NAAQS. The increment modeling files are not provided on the website.

Response: a) The modeling for PM2.5 increment was performed at an earlier point in the permitting process. The PM2.5 NAAQS model was performed later and included emission reductions at the proposed facility. Since the earlier versions of the PSD increment model showed BRS did not cause or contribute to an exceedance of the increment, the increment model was not further refined. Though the NAAQS modeling includes all increment consuming sources, as the comment indicates, the PSD increments should be equal or less than the NAAQS modeling result. Therefore, the impact listed in the permit was updated to the NAAQS number.

b) The Department agrees and the modeling was given additional scrutiny. This comment references concerns raised in other comments. Those specific issues were addressed in the referenced comments.

c) The files on the website were provided as a courtesy to the public. There were no requests for this information nor any indication that there were issues with any of the files posted during the comment period. Nucor could have, but did not, contacted the Department for any files.

Nucor Comment 34: The map on page 496 of 533 in Application Volume II indicates that the background concentration for $PM_{2.5}$ from the Dyersburg, TN monitor is 10.4 μg/m^3. BRS has applied a background concentration of 9.44 μg/m^3 to the modeled NAAQS impacts to determine the cumulative impact. The 3-year average of annual PM2.5 monitoring data from U.S. EPA's AIRS website is 10.42 μg/m^3, as shown in the following table. Using the background concentration of 10.42 μg/m^3 a cumulative annual PM2.5 impact of at least 12.89 μg/m$_3$, which is 7.4% above the 12 μg/m^3 annual NAAQS. ADEQ should verify the background concentration and determine if additional $PM_{2.5}$ NAAQS analyses are required.

[Table omitted see comments]

A copy of the raw data from these data files is attached hereto as Ex. C. In addition, ADEQ should explain why use of the Dyersburg, TN monitoring data is representative of air quality in

Osceola in lieu of site-specific pre-construction monitoring for this project. Site-specific pre-construction monitoring should be required.

Response: There are two different types of PM2.5 monitors at Dyersburg. One is the reference method monitor which is used in NAAQS determinations for attainment and the SIPs. The other is a speciated monitor which shows which of the different items that make up PM2.5 are contributing to the overall concentration of PM2.5; this is the monitoring data provided as part of the comment. It is not the reference method monitor used in NAAQS analysis. BRS used the appropriate type of PM2.5 monitor in the modeling analysis.

Appendix W states that "If there are no monitors located in the vicinity of the source, a "regional site" may be used to determine background."

Nucor Comment 35: SECTION II: INTRODUCTION, Prevention of Significant Deterioration, Best Available Control Technology - General Comments. TheBACT section of the draft permit does not properly describe ADEQ's decision making process with regards to the selected BACT emission limits and/or work practice standards. This description also does not appear in the Statement of Basis. The permit's reference to the applicant's BACT discussion in the permit application is inappropriate, as the permit record should reflect ADEQ's decision not the applicant's. All BACT emission limits should have an averaging period specified either globally or as part of each Specific Condition that contains a BACT limit. A review of Appendix A of the March 5 application (pp. 109-110) shows that BRS eliminated several NO_x control technologies, including SCR and SNCR, on the basis of "technical infeasibility". These technologies were eliminated as possible NO_x controls for all natural gas combustion less than 100 MMBtu/hr, the Tunnel Furnaces, the Degasser Boiler, equipment in the Pickling and Galvanizing Lines, and the Annealing Furnaces. However, ADEQ contradicts this blanket determination by listing SCR as the control technology for the Galvanizing Line Preheaters (SN-28/29), which have a listed heat input capacity of only 85 MMBtu/hr each (see SC 63, permit page 84)

The application does not provide any reasoning or explanation as to why the eliminated technologies are infeasible. This explanation is required for any BACT analysis, especially for SCR and SNCR which are widely available and proven technologies for NO_X control on gas fired boilers. In many applications, these technologies may achieve emission rates below BRS' 0.035 lb/MMBtu (when combined with low NO_X burners). ADEQ should explain why these technologies are infeasible and if they are not infeasible, then additional consideration (especially for the boilers) for these controls should be made.

Response: This comment references the BACT analysis from the March 2013 application. This is not the most recent submittal of the application or the BACT analysis. The BACT analysis has been updated many times since March 2013. For the most recent BACT discussion for these sources please reference the most recent application.

Nucor Comment 36: SECTION IV: SPECIFIC CONDITIONS, Meltshop SN-01/02 EAFs and LMFs, SC 26-30. These conditions describe the stack testing requirements for the EAFs, and as an option in lieu of testing, the use of CEMS. The stack testing option requires tests for NO_X,

SO_2, CO, CO_2, and VOC every six months. Given the magnitude of emissions and the fact that the emission limits represent BACT, ADEQ should give strong consideration to requiring CEMS for these pollutants for an extended period of time (for example, from startup until at least a year after the facility reaches full production) in order to demonstrate compliance, and at a minimum for NO_X. Both NO_X and SO_2 have 1-hour ambient air quality standards and a twice per year stack test is not adequate to ensure that short-term emissions of these pollutants (and therefore short-term ambient impacts) are below permit levels on a continual basis. The U.S. EPA has indicated the importance of BACT emission limits and the associated compliance monitoring: The emissions limits must be included in the proposed permit submitted for public comment, as well as the finial permit. BACT emission limits or conditions must be met on a continual basis at all levels of operation (e.g., limits written in pounds/MMbtu or percent reduction achieved), demonstrate protection of short term ambient standards (limits written in pounds/hour) and be enforceable as a practical matter (contain appropriate averaging times, compliance verification procedures and recordkeeping requirements.

Response: The testing for these sources is consistent with testing requirements for all of the EAFs at the steel mills in the state. The EPA guidance quoted only means it would be inappropriate to give a facility a 30 day averaging time on a pollutant with a 1 hour NAAQS standard. It does not require that every source emitting NO_x and SO_2 with 1-hour standards must have continuous monitoring of the pollutants. All BACT limit averaging times are 3 hour averages as that is the minimum requirement for a reference method test for a pollutant. The emissions limits are standardized, do apply at all times, are enforceable, and are enforceable as a practical matter as EPA outlines.

Nucor Comment 37: Draft Permit, Meltshop SN-01/02 EAFs and LMFs, SC 29. This condition describes the CEMS option and requires reporting of CEMS data in concentration (parts per million) and mass emission rate (lb/hr). However, CEMS measure only the concentration of pollutant in the exhaust gas and the permit does not require exhaust flow monitoring. Therefore, it is unclear how BRS will determine mass emission rate from the concentration measurements. To insure the accuracy of mass emission rate calculations, the permit should specify exhaust flow monitoring or prescribe a technically accurate method for estimating exhaust flow rate.

Response: A requirement for exhaust flow monitoring was added to the permit.

Nucor Comment 38: SN-26/27, Galvanizing Line Boiler. As mentioned earlier, ADEQ should explain why SCR and SNCR were eliminated as possible control options.

Response: This was discussed in the referenced comment.

Nucor Comment 39: SN-28/29, Galvanizing Line Preheater. The permit indicates that SCR is the required NO_X control technology for these heaters (see SC 63, page 84). However, this designation only appears in a table. The permit should include a condition requiring installation of the SCR (or equivalent technology) and a compliance demonstration. This comment also applies to the decarburizing line furnaces (SN-40/42) and the annealing coating line furnace (SN-51). In addition, since an add-on control device will be used to achieve compliance with the

NO_X BACT limit, a single test (as indicated in SC 78) is not adequate to insure compliance. The permit should require a more frequent compliance demonstration.

Response: The comment is unclear. It states that the Department is requiring SCR for the galvanizing line preheaters SCR was selected as BACT for these sources. It further states the comment also applies to the SN-40, 42, and 51. The permit does not require SCR as BACT for those sources.

The testing in Specific Condition 78 was increased to annual testing.

Nucor Comment 40: Miscellaneous Operations, SC 95 and Roadway Sources SC 103. These conditions refer to the Control Technology as a "'Dust Control Plan." However, there is no Condition requiring development and/or submittal of this Plan (SC 103 refers to the dust control plan for roadways, but not raw material handling operations). In order to be enforceable, the permit should specify when the dust control plan must be prepared and should list the minimum required Plan elements or criteria.

Response: The requirement for a dust control plan for miscellaneous sources was added with the same due date as the roadway dust control plan.

Nucor Comment 41: Typographical errors. There are several typographical errors and incorrect cross references in the draft permit. Some of these are identified as follows: a. Page 7, last paragraph. First line "in an by itself'. Seventh line "property boundary or with a". b. Page 8, first paragraph. Fourth line "as" should be "has". c. Page 10, second paragraph. Fifth line "calculated" should be "calculate". d. Page 47, SC 2 table. "EMFs" should be "EAFs". e. Page 54, SC 29 and 30. Several Word cross-reference errors. f. Page 55, SC 34. "Contaminates" should be "contaminants". g. Page 76, Decarburizing Line, first paragraph. "secton" should be "section". h. Page 91, SC 67 and 70. The references to "SN-52" should be "SN-53", the Annealing Coating Line Drying Furnace which cures the insulating coating applied at the annealing coating line.

These and other errors throughout the Draft Permit are indicative of the fact that ADEQ did not properly or adequately analyze the Application, Rev. 2 or prepare a proper Draft Permit based on the information submitted by the permit applicant. (See, ADEQ email correspondence attached hereto as Ex. D). The purpose of the public comment period is not to proofread the permit or work through a permitting punch list. Such an approach frustrates the public's ability to properly understand and analyze ADEQ's permitting decision.

Response: The errors were corrected. The Department understands the frustration with the typographical errors as it has to deal constantly with errors submitted in applications and comments.

Nucor Comment 42: Draft Permit, Page 46, Source Description - The Draft Permit does not mention or take into account any impacts of material delivery and product shipment by barge. This is inconsistent with the statement that there are no alternative site locations for the facility because of the need for access to the Mississippi River. (Application, Rev. 2, p. 86). In addition,

if BRS intends to use river transportation by barges, the failure to include this activity affects the additional impacts analysis and possibly NAAQS modeling of activities associated with barge loading and unloading. These discrepancies should be explained.

Response: BRS is not permitted to receive or ship product by barge. The Department can only permit those sources for which an application was received. If BRS wishes to include barge unloading and loading as a source, it will need to submit an application to do so.

Nucor Comment 43: Draft Permit Page 54, SC-29 and SC-30 contain the statement, "Error! Reference source not found." This obviously is incorrect, and is further evidence that ADEQ issued the Draft Permit without adequate analysis, as stated in Comment 41, above.

Response: As stated in comment 41 above, the errors were corrected.

Nucor Comment 44: Draft Permit, Page 55, SC-36 and SC-37, should include a reference to SN-02.

Response: The conditions were updated.

Nucor Comment 45: Draft Permit, SC 60, p. 62 - This condition contains a visible emission limit, but does not require any compliance demonstration.

Response: Specific Condition 60 is located on page 72 of the draft permit. Specific Condition 60 was updated to include compliance shown by combustion of natural gas only and Plantwide Condition 5.

Nucor Comment 46: Draft Permit, p. 108, Slag handling - this source contains no visible emission limits or compliance demonstration for slag processing.

Response: Opacity limits and observations were added for these sources.

Nucor Comment 47: There is no discussion in the SOB, Draft Permit, the Application, Rev. 2 or the Public Notice about any community outreach, other than a single public hearing to be held on July 30, 2013. Due to the technical nature of these comments and documents and because of the fact that air quality impacts from the project are equal to the NAAQS, additional outreach should be considered. Furthermore, there is no discussion in the Draft Permit, the SOB, the Application, Rev. 2, or the Public Notice about how this permitting process complies with Environmental Justice considerations, including EPA's September 2011 guidance on implementing such considerations in the permitting process. Because of the State of Arkansas's direct interest and involvement in this project, consideration should be given to not finalizing the Draft Permit at this time and providing adequate funding for an independent review and analysis (including modeling demonstrations) of the Draft Permit, the SOB, and the Application, Rev. 2.

Response: Throughout the course of processing the BRS permit application and issuance of the draft permit, the public has been fully apprised of the status of the permitting action pursuant to the requirements of Ark. Code Ann. § 8-4-203 and APC&EC Regulation 8. Specifically, Ark.

Code Ann. § 8-4-203(d)(1) holds that "[w]hen an application for the issuance of a new permit or a major modification of an existing permit is filed with the department, the department shall cause notice of the application to be published in a newspaper of general circulation in the county in which the proposed facility is to be located." See also APC&EC Reg. 8.205. Notice of the BRS permit application was published on March 21, 2013 in the Osceola Times. Furthermore, Ark. Code Ann. § 8-4-203 (e)(1)(A)(i)-(ii) holds that "[w]henever the department proposes to grant or deny any permit application, it shall cause notice of its proposed action to be published in either... [a] newspaper of general circulation in the county in which the facility that is the subject of the application is located; or [i]n the case of a statewide permit, in a newspaper of general circulation in the state. See also APC&EC Reg. 8.207. Notice of the BRS draft permit was published on June 27, 2013 in both the Osceola Times and the Arkansas Democrat-Gazette. Additionally, as noted in the comment, a public hearing was held on public hearing to be held July 30, 2013.

As this project has received extensive local and state-wide press coverage during the permit review process, it is not reasonable to believe that the local communities were not aware of the project and the pending air permit application. ADEQ received no requests to hold additional public meetings or hearings nor did we receive a request to extend the public comment period. Also, in its comments on the BRS draft permit, EPA Regional VI made no comment asserting that there are Environmental Justice obligations that ADEQ has not met.

EPA Comments

EPA Comment 1. Page 5 of 7, Section 14, TESTING REQUIREMENTS: No testing requirements information regarding for process related to annealing process. (SNs-39, 51, 58, 60, 53, 54-56) Please explain how ADEQ would verify those sources' compliance with imposed emission limit without testing the source.

Response: Those sources were required to test for PM_{10} and $PM_{2.5}$ as these emission limits proposed as BACT are much lower than any BACT limits from similar sources. Testing was required for these to verify that they were achievable in practice both for this facility and to prove the limits are achievable for future similar sources subject to BACT. The SO_2 and CO_2 emission limits for these sources are based on a mass balance of fuel fed. So long as the source is installed with the proper heat input it is impossible for the source to exceed those limits. The sources' other BACT limits are consistent with BACT limits met by most smaller natural gas sources. They are not difficult limits for any of these sources to achieve. Testing them will provide no benefit. Compliance will be shown indirectly by Plantwide Condition 5 which requires the permittee to maintain the source in good working order and operate it properly.

EPA Comment 2. Page 46, Specific Condition #1, the emission rates table list GHG emissions of "121781 tpy". Please be specific what GHG means (CO_2e or CO_2). Specific Condition 26 imposed stack testing requirement for CO_2. If "121781" is for CO_2e, then permitting authority should explain how to calculate GHG emission rates from CO_2 data.

Response: The emission rates in the table were changed to CO_2e instead of GHG. The definition of CO_2e is defined by regulation and it is not necessary to define how to calculate CO_2e from CO_2 data in the permit.

EPA Comment 3. Page 48, Specific Condition #3 it states, "The permittee shall not exceed the emission rates set forth in the following table. Compliance with these emission limits shall be demonstrated by compliance with Conditions 6 and 13-25 and 31 through 37."

Source	Pollutant	lb/hr	tpy
SN-01	Arsenic	0.002	0.006
	Cadmium	0.002	0.005
	Manganese	0.08	0.3
	Mercury	0.03	0.1
SN-02	Arsenic	0.002	0.006
	Cadmium	0.002	0.005
	Manganese	0.08	0.3
	Mercury	0.03	0.1

After reviewing the above stated Specific Conditions, the reviewer does not find the appropriate instructions that would lead to verify the lb/hr and tpy emission rates in the Table. Please explain.

Response: As these pollutants are heavy metals, compliance is shown by the same methods to show compliance with particulate emissions which is periodic testing and NSPS requirements for PM emissions.

EPA Comment 4. Page 47, Specific Condition 2, BACT Analysis Summary, the Opacity for EMFs from SN-01 and SN-02 states, "3% as a 6 minute average 6% from melt shop". Does it mean that "3% as a 6 minute average" is opacity for SN-01 EMF and "6% from melt shop which includes SN-01, SN-02 and SN-03"? Please clarify the phrase. The same question applies to next row opacity BACT limit for SN-01 and SN-02 LMFs.

Response: The entry in the table was split over two rows to make it clear the Condition is stating two separate limits..

EPA Comment 5. Page 54, Specific Conditions # 29 and #30, the reviewer found three (3) places which the following sentence blocked the original texts. "Error! Reference source found." Please make appropriate correction.

Response: The cross reference errors were corrected.

EPA Comment 6. Page 55, Specific Condition 36, it states, "The permittee must not discharge from SN-01 any gasses from an EAF which exhibit a 6% opacity or greater or contain in excess of 0.0052 gr/dscf. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart YYYYY]"

BRS proposed the opacity BACT limit for EMFs and LMFs is "3% as a 6 minute average." Accordingly, BRS must comply with the more stringent opacity BACT limit of 3% instead of 6% as required by 40 CFR Part 63, § 63.10686.

Response: This condition only references the requirements of MACT Subpart YYYYY. Other conditions in the permit reference the requirements of NSPS Subpart AAa and BACT. The Title V permit is required to include all Federal and State requirements and the Subpart YYYYY opacity limit is a requirement of BRS. Both opacity limits apply. If the facility exceeds 3% opacity, it will be in excess of its BACT and NSPS limits but not necessarily in excess of the MACT 6% limit. If the facility exceeds 6% opacity it would be in excess of the BACT, NSPS and MACT limits. No changes to the permit are necessary.

EPA Comment 7. Page 70, Melt Shop Natural Gas Sources, Specific Condition 52, it states, "The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition 56 and Plantwide Condition 5..."

Specific Condition 56, it states, "The permittee shall test the sources in the table below for $PM_{2.5}$ and PM_{10}. The test shall be conducted in accordance with Plantwide Condition 3 and EPA ..."

The Plantwide Condition 5 is stated as following, "The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Regulation 19 §19.303 and A.C.A. §8-4-203 as referenced by §8-4-304 and§8-4-311]"

The Emission Rates Table listed PM, PM_{10}, $PM_{2.5}$, SO_2, VOC, CO, NO_X and GHG...etc., please explain why Specific Condition 56 only selects PM_{10} and $PM_{2.5}$ to be tested instead all pollutants. Besides, no future testing except the initial testing is scheduled in the Draft Permit. Since those emission sources are new and subject to various BACT limits, they shall be able to demonstrate compliance with the established BACT limits on continual basis. ADEQ should establish periodic testing to ensure that these sources continue to meet their respective BACT limits. [40 CFR Part 70, §70.6(a)(3)(i)(B)]

Response: The emission limits in permits are established in the referenced condition. This condition lists the other conditions in the permit by which the permittee will show compliance with the limit. The referenced conditions may not show compliance with each and every pollutant listed but only one or a few of them. The permit only requires testing for PM_{10} and $PM_{2.5}$ from these sources as these emission limits proposed as BACT are much lower than any BACT limits from similar sources. Testing was required for these to verify that they were achievable in practice both for this facility and to prove the limits are achievable for future similar sources subject to BACT. The SO_2 and CO_2 emission limits for these sources are based on a mass balance of fuel fed. So long as the source is installed with the proper heat input it is impossible for the source to exceed those limits. The sources other BACT limits are consistent with BACT limits met by most smaller natural gas sources. They are not difficult limits for any of these sources to achieve. Testing them will provide no benefit. Compliance will be shown

indirectly by Plantwide Condition 5 which requires the permittee to maintain the source in good working order and operate it properly. Additionally, these sources are in the Meltshop which is controlled by the EAF Baghouses. The EAF Baghouses are tested periodically although not for the specific lb/MMBtu limits for each of these small sources.

EPA Comment 8. Page 66, Specific Condition 53, it states,

"The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Condition 5..."

Please show correlations between the emission rates and compliance of Plantwide Condition 5. (See Comment #7) ADEQ should establish initial testing and periodic monitoring to ensure sources compliance with respective limits in the Permit.

Response: Plantwide Condition 5 requires the permittee to maintain the source in good working order and operate it properly. Specific Condition 53 establishes HAP limits for the natural gas fired sources in the meltshop. The HAPs in this limit are metal particulate HAPs from small natural gas sources. Testing is not necessary and in all likelihood the permitted emission rates would be below the detection levels of any reference method testing.

EPA Comment 9. Page 68, Specific Condition 54, it states,

"The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be show compliance with Specific Condition 56 and Plantwide Condition 5."

Since those emission sources are new and subject to various BACT limits, ADEQ should establish initial testing each emission source, not one from the same kind sources, to verify those BACT limits, and following testing to demonstrate compliance with the established BACT limits on continual basis.

Response: Specific Condition 54 contains the standardized BACT limits for the same pollutants listed in Specific Condition 52. Additional testing is not necessary for the same reasons discussed in Comment 7.

EPA Comment 10. Page 71, Specific Condition 57 for Tunnel Furnaces. (SN-20 and SN-21)

Please explain: 1. why emission rates for those two tunnel furnaces are different since each furnace has a combined total heat input of 269 MMBTU/hr; 2. why initial test of these two furnaces only applies to $PM_{2.5}$, NO_x and CO, instead of testing other pollutants BACT limits including GHG.

Response: 1. The process description was incorrect and has been corrected.

2. Testing for the other criteria pollutants is not necessary. The SO_2 and CO_2 emission limits for these sources are based on a mass balance of fuel fed. So long as the source is installed

with the proper heat input it is impossible for the source to exceed those limits. The only criteria pollutant left is VOC. The VOC BACT limits for natural gas burners were not low enough to justifying requiring facilities to test and gain any benefit from the testing. If the facility designs and operates the source such that it does not exceed its NO_x, $PM_{2.5}$, and CO limits verified through testing, there is no need to make the facility test the other pollutants.

EPA Comment 11. Page 91, Specific Condition 72, it states,

"The permittee shall test the Boilers SN-22, 26, and 27 for $PM_{2.5}$, CO, and NO_x emissions. The test shall be conducted in accordance with Plantwide Condition 3...". Between the initial test and retest 5 year later, we recommend ADEQ establish periodic testing to ensure that the source continues to meet the BACT limit. [40 CFR Part 70, §70.6(a)(3)(i)(B)]

Response: Five year testing is periodic testing. Testing for the other criteria pollutants is not necessary. The SO_2 and CO_2 emission limits for these sources are based on a mass balance of fuel fed. So long as the source is installed with the proper heat input it is impossible for the source to exceed those limits. The only criteria pollutant left is VOC. The VOC BACT limits for natural gas burners were not low enough to justifying requiring facilities to test and gain any benefit from the testing. If the facility designs and operates the source such that it does not exceed its NO_x, $PM_{2.5}$, and CO limits verified through testing, there is no need to make the facility test the other pollutants.

EPA Comment 12. Through the permit, BACT limits for sulfur dioxide and nitrogen oxides are on a lb/ton of steel produced. Please clarify what is the time averaging period. (Ex. 3-hour average) Due to 1 hour NAAQS standard for sulfur dioxide and for nitrogen oxides, limits for these pollutants should be on a similar short term basis, (i.e. on a 1 hour basis). If the time average period is longer than one hour, please make appropriate revision of the time averaging period.

Response: All limits unless otherwise specified are 3-hour averages. As the emission rates for limits are verified via testing and the reference method test requires three 1-hr averages and is therefore the shortest averaging time possible.

EPA Comment 13. The Draft Permit established GHG BACT limits of CO_2e, N_2O and CH_4 for those source groups; but no applicable compliance requirements in the Draft Permit which leads to verification of GHG BACT limits on those sources. ADEQ should establish appropriate monitoring and reporting requirements according to 40 CFR Part 98, Subpart Q, Iron and Steel Production.

Response: The permittee is required to test CO_2 from the Meltshop using methods similar to Part 98. All other sources of GHG emissions from the facility are due to emissions from fuel combustion. GHG emissions from fuel combustion are based on a mass balance assuming 100% conversion of the carbon in the fuel to CO_2 emissions. ADEQ placed appropriate monitoring and reporting on the source to show compliance with the BACT limits. ADEQ regulations do not contain provisions to allow ADEQ to enforce 40 CFR Part 98. Therefore, ADEQ does not place its requirements into Title V permits.

FLM Comment

The FLM for the Mingo Wilderness made a single comment that the NO_x limit used in the CALPUFF Class I modeling was not the same as the permitted rate. They further suggested we require the AQRV modeling to be updated to address the issues.

Response: The NO_x value used in the CALPUFF model was copied from the AERMOD modeling performed for the source. A standard conversion ratio for the permitted NO_x to a concentration of NO_2 was used. NO_2 is the basis for the NAAQS Standard. The Department had the CALPUFF model reran with the permitted NO_x limit instead of the NO_2 limit. Additionally, since this ratio was taken for all the sources, the CALPUFF model was re-run and all the emission rates were corrected.

Public Comments from Hearing

During the public hearing eight people spoke and one submitted a written comment. The majority of the comments were not about the technical merits of the permit or air pollution but were general comments on the economic effect of such a facility. The one written comment was about air pollution.

Comment 1: One written comment from the hearing was about air pollution. "How will the pollution affect the crops of North East Arkansas. The commenter also spoke at the hearing also asking about the effects of the air pollution considering there are also already two other steel mills in the area.

Response: EPA has established National Ambient Air Quality Standards (NAAQS). These standards were designed to protect public health in addition to protecting crops and native plant life. The BRS facility was required to model its emissions and the emissions of neighboring sources in the region and then add the background level of the pollutant from monitoring values. This modeling included the other steel mills in the area as well as other sources. The modeling showed no exceedances of the ambient air quality standards EPA established to protect crops.

ADEQ OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation 26:

Permit No. : 2305-AOP-R0

IS ISSUED TO:

Big River Steel LLC
2027 E. State Hwy 198
Osceola, AR 72307
Mississippi County
AFIN: 47-00991

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

SEP 1 8 2013 AND SEP 1 7 2018

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Mike Bates
Chief, Air Division

SEP 1 8 2013
Date

Big River Steel LLC
Permit #: 2305-AOP-R0
AFIN: 47-00991

Table of Contents

Big River Steel LLC
Permit #: 2305-AOP-R0
AFIN: 47-00991

List of Acronyms and Abbreviations

A.C.A.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
CFR	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
lb/hr	Pound Per Hour
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO_x	Nitrogen Oxide
PM	Particulate Matter
PM_{10}	Particulate Matter Smaller Than Ten Microns
SNAP	Significant New Alternatives Program (SNAP)
SO_2	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

Big River Steel LLC
Permit #: 2305-AOP-R0
AFIN: 47-00991

SECTION I: FACILITY INFORMATION

PERMITTEE:	Big River Steel LLC
AFIN:	47-00991
PERMIT NUMBER:	2305-AOP-R0
FACILITY ADDRESS:	2027 E. State Hwy 198 Osceola, AR 72307
MAILING ADDRESS:	1425 Ohlendorf Road Osceola, Arkansas 72370
COUNTY:	Mississippi County
CONTACT NAME:	David Stickler
CONTACT POSITION:	Senior Managing Director
TELEPHONE NUMBER:	330-908-0813
REVIEWING ENGINEER:	Shawn Hutchings
UTM North South (Y):	Zone 16: 232790.6 m
UTM East West (X):	Zone 16: 3948661.2 m

Big River Steel LLC
Permit #: 2305-AOP-R0
AFIN: 47-00991

SECTION II: INTRODUCTION

Summary of Permit Activity

Big River Steel, LLC is proposing to construct and operate a steel mill located at 2027 E. State Hwy 198 in Osceola, AR. This permit is the initial permit for a new steel mill and will include all the sources at the facility. The facility required prevention of significant deterioration review to ensure the new source will not cause a significant deterioration of the local ambient air quality. PSD review is required for NO_X, CO, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC, lead, and greenhouse gasses.

Process Description

The facility will consist of two Electric Arc Furnaces to melt scrap iron and steel, Ladle Metallurgy Furnaces (LMF) to adjust the chemistry, a RH Degasser and boiler for further refinement, and Casters.

The facility will also include:

- Ladle Preheaters, Ladle Dryout Heaters, Vertical Ladle Holding Station, and Tundish Preheaters.
- A Pickling Line to clean steel coil of its rust, dirt and oil.
- Galvanizing Lines to produce galvanized strips.
- Annealing Furnaces.
- A Decarburizing Line to reduce the carbon content at intermediate strip thickness.
- A Reversing Cold Mill to reduce the thickness of the steel to the desired specifications.
- An Annealing Pickling Line.
- An Annealing Coating Line for annealing of the cold rolled steel strip and application of an insulating coating.
- MgO Coating Lines to apply magnesia to the strip steel surface.
- Final Annealing and Coating Lines to coat the steel strip with an insulation layer and subsequent flatness improvements.
- Emergency generators, cooling towers and other miscellaneous source.

Specifics on each operation are found in the Specific Condition section.

Prevention of Significant Deterioration

Big River Steel is classified as a new major source under Prevention of Significant Deterioration (PSD) regulations. Due to the proposed emission rates, PSD review is required for NO_X, CO, PM, PM_{10}, $PM_{2.5}$, SO_2, VOC, lead, and greenhouse gasses.

An applicant for a Prevention of Significant Deterioration (PSD) permit is required to conduct an air quality analysis of the ambient impacts associated with the construction and operation of the

proposed new source or modification. The primary purpose of the air quality analysis is to demonstrate that new emissions emitted from a major stationary source, in conjunction with other applicable emissions from existing sources (including secondary emissions from growth associated with the new project), will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS) or PSD increment.

PSD modeling is performed in two stages: the significance analysis and the full impact analysis. The significance analysis considers the net emissions change associated with PSD affected emissions units to determine if the increased emissions will have a significant impact upon the surrounding area. If the results of the significance analysis are below the corresponding Modeling Significance Levels, the full impact analysis is not required. A summary of the results of the significance analysis is in the table below.

Pollutant	Averaging Period	Modeled Concentration ($\mu g/m^3$)	Significance Level ($\mu g/m^3$)
CO	1 – hour	296	2,000
	8 – hour	137	500
PM_{10}	24 – hour	14.1	5
	Annual	2.6	1.0
$PM_{2.5}$	24 – hour	9.1	1.2
	Annual	2.53	0.3
SO_2	1 – Hour	25.1	7.8
	3 – Hour	6.1	25
	24 – Hour	5.9	5
	Annual	0.6	1.0
NO_2	Annual	188	1.0
	1 – hour	6.7	7.52

Full impact analysis required for $PM_{2.5}$, PM_{10}, SO_2, and NO_2. The full impact analysis modeling must show that the emissions from the facility and surrounding existing sources will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS) or PSD increment. The PM_{10} 24-hour increment modeling predicted exceedances of the increment for all sources. However, on the days where the modeling predicted an increment exceedance the contribution from Big River Steel was below the significance level. The following table shows the results of the PSD increment modeling.

Big River Steel LLC
Permit #: 2305-AOP-R0
AFIN: 47-00991

Pollutant	Averaging Period	Maximum Predicted Increment Consumption ($\mu g/m^3$)	PSD Class II Increment ($\mu g/m^3$)	Percent of Class II Increment (%)
PM_{10}	24 – hour	The facility is below the SIL on any day over the Increment.	30	<100%
	Annual	12	17	70.5
SO_2	3 – Hour	30.8	512	6.0
	24 – Hour	11.5	91	12.6
NO_2	Annual	5.9	25	23.6
$PM_{2.5}$	24 – hour	7.3	9	81.1
	Annual	2.53	4	63.3

Arkansas Regulation 19 requires that if the issuance of a permit for any major stationary source or any major modification would result in the consumption of more than fifty percent of the available annual increment or eighty percent of any short term increment, the person applying for such a permit shall submit to the Department an assessment of the effects that the proposed consumption would have upon the industrial and economic development within the area of the proposed source and the alternatives to such consumption including alternate siting of the proposed source. To address this requirement Big River submitted the following.

> As stated in Arkansas Regulation 19.904, subsection (c) (1), where air quality impact analysis required under this subpart indicated that the issuance of a permit for any major stationary source or for any major modification would result in the consumption of more than fifty (50%) of any available annual increment or eighty percent (80%) of any short term increment, the person applying for such a permit shall submit to the Department an assessment of the following factors:

(a) Effect that the proposed consumption would have upon the industrial and economic development within the area of the proposed sources; and
(b) Alternatives to such consumption, including alternative siting of the proposed source or portion thereof.

> The proposed BRS plant project will have potential emission in an by itself that will be well below 80% of the Class II increment. Combined impacts from BRS and other increment consuming sources have shown predicted concentrations to exceed 30 $\mu g/m^3$, however BRS impacts on those predicted concentration have been shown to be at or below significant impact levels. The specific point of predicted concentrations typically reside within close proximity of a facility or in the case of the proposed project along the facility property boundary or with a relative short distance of that boundary. Since the predicted concentration is representative of time and space, future growth in the area should not be limited. It is highly unlikely that future growth will take place near or in close

proximity to the BRS property or an existing facilities property. For any future project going through PSD review a separate analysis will be required as part of that application process and primary point of increment consumption will also be based on time and space and will most likely occur in the immediate vicinity of that source as well.

BRS has selected the proposed plant based on the availability of land, close proximity to major road ways, as well as access to a river. The proposed plant site has been zoned industrial and has access to infrastructure to support the plant being proposed. BRS as part of the property selection process as evaluated this site and other sites as well. This site meets the criteria for this plant and ranked the highest in terms of plant site selection. BRS does not have the ability to select an alternative site, since an alternative site would not meet the site qualifications for a project of this nature.

The full impact modeling analysis also requires modeling to show that the emissions from the facility and surrounding existing sources will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS). A summary of the results of the NAAQS analysis is in the table below.

Pollutant	Averaging Period	Maximum Modeled Impact ($\mu g/m^3$)	Background Concentration ($\mu g/m^3$)	Total Impact ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)
PM_{10}	24 – hour	62.8	36.7	99.5	150
$PM_{2.5}$	24 – hour	10.6	19.47	30.1	35
	Annual	2.47	9.44	11.91	12
SO_2	1 – Hour	54.9	46.30	101.2	196
	3 – Hour	30.8	30.6	61.4	1,300
	24 – Hour	11.5	25.9	37.4	365
NO_2	1 - Hour	181.8	Integrated within the modeling processor	181.8	188
	Annual	55.1		55.1	100
Lead	3 – month	0.005	0.01	0.015	0.15

Additional Impact Review

An applicant for a Prevention of Significant Deterioration (PSD) permit must prepare additional impact analyses for each pollutant subject to the regulation under the Clean Air Act Amendments. Three areas constitute the Additional Impact Review: a growth analysis, a soils and vegetation analysis, and a visibility analysis.

Growth Analysis

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The Growth Analysis estimates the impact of atmospheric emissions that will be generated by the projected growth from industrial, commercial, and residential growth associated with the project. The only increase in emissions from associated growth results from the increase in workers traveling to and from work. Emissions from this are assumed to be insignificant and would not have a minor impact (if any) to the area.

Soils and Vegetation Analysis

A PSD applicant must also conduct a soil and vegetation air pollution impact analysis based on an inventory of the soils and vegetation types found in the impact area. For most types of soils and vegetation ambient concentrations of criteria pollutants below the secondary NAAQS will not result in harmful effects.

Class I Analysis

A screening analysis for visibility and deposition on the nearest Class I area was conducted. Based on these results, no further analysis was required. Results are summarized in the following tables.

Visibility Screening Results

Year	Number of days with Delta-Deciview ≥ 0.50	Number of days with Delta-Deciview ≥ 1.00	Largest Delta-Deciview
2001	0	0	0.159
2002	0	0	0.165
2003	0	0	0.284

Deposition

Year	Nitrogen Deposition kg/ha/yr	Sulfur Deposition kg/ha/yr
2001	0.0025087	0.0023191
2002	0.0034680	0.0037545
2003	0.0023555	0.00252
Screening Level	0.010	0.005

Best Available Control Technology

The PSD regulations mandate that a case-by-case Best Available Control Technology (BACT) analysis be performed on all new or modified affected sources at which a net emissions increase will occur. The following table is a summary of the BACT determinations made in this permit.

For more detailed discussion of BACT see the BACT analysis section of the permit application. The following items were changed from what was in the BACT analysis.

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The galvanizing line was given a limit of 0.035 lb/MMBTU and SCR as the control technology. Earlier versions of the application proposed this limit. Later versions requested a higher limit. BRS was asked multiple times to explain why they could not meet the same BACT limit as other sources and apply the same controls. BRS did not provide an adequate explanation to show they could not install SCR and meet limit other sources were meeting. Therefore, the lower limit was given.

The proposed BACT limits for the cooling towers were drift eliminators and low TDS. The RBLC clearing house lists many similar sources which define low TDS as less than 1000 ppm. BRS had proposed 1500 ppm. BRS was asked to provide more information as to why they could not meet the 1000 ppm limit. The information provided did not adequately explain why BRS could not meet the same BACT limits as other similar sources. Therefore a limit of 1000 ppm was placed on those cooling towers.

All the proposed natural gas sources used emission factors for PM and CO in the calculations of limits and the modeling relied on to demonstrate compliance with the NAAQS and PSD increment which were lower than the proposed BACT limits for those sources. BRS was asked to correct these emission limits and modeling. Since the latest version of the modeling and application used the lower emission factors to calculate the emission rates and in the modeling, those lower emission factors were as applied as BACT limits for the natural gas sources.

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
01 and 02	EAFs	PM	Fabric Filter	0.0018 gr/dscf (filterable only)
		PM_{10}	Fabric Filter	0.0024 gr/dscf
		$PM_{2.5}$	Fabric Filter	0.0024 gr/dscf
		Opacity	Fabric Filter	3% as a 6 minute average 6% from melt shop
		SO_2	Scrap management plan	0.18 lb/ton of steel produced
		VOC	Scrap management plan and good operating practices	0.088 lb/ton steel produced
		CO		2 lb/ton of steel produced
		NO_X		0.3 lb/ton of steel produced
		Lead	Fabric Filter	0.00056 lb/ton of steel produced
01 and 02	LMFs	PM	Fabric Filter	0.0018 gr/dscf (filterable only)
		PM_{10}	Fabric Filter	0.0024 gr/dscf

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		$PM_{2.5}$	Fabric Filter	0.0024 gr/dscf
		Opacity	Fabric Filter	3% as a 6 minute average 6% from melt shop
		SO_2	Scrap management plan	0.02 lb/ton of steel produced
		VOC	Scrap management plan and good operating practices	0.005 lb/ton of steel produced
		CO		0.02 lb/ton of steel produced
		NO_X		0.05 lb/ton of steel produced
		Lead	Fabric Filter	
SN-01, 02, and 03	Meltshop	GHG	Energy Efficiency improvements.	0.155 tons of CO_2e/Ton of Liquid steel produced.
SN-03	RH Degasser	CO (from degasser)	Flare	0.04 lb/ton of steel produced
		PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X		1.0 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-04	RH Degasser Boiler	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.035 lb/MMBTU

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Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Good operating practices Minimum Boiler Efficiency	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU 75%
SN-04A SN-04B SN-04C SN-04D	RH Vessel Preheater Station, Vessel Top Part Dryer, RH Vessel Nozzle Dryer RH Degasser Burner/Lance	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.08 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-05 – SN-09	Ladle Preheaters	PM	Combustion of Natural gas and Good Combustion Practices	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.08 lb/MMBTU

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-10 and SN-11	Ladle Dryout Station	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.08 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-12 and 13	Vertical Ladle Holding Station	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.08 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-16 through 19	Tundish Preheaters #1 through #4	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

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Source	Description	Pollutant	Control Technology	BACT Limit
		NO_X	Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.08 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-20 and SN-21	Tunnel Furnaces	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-22	Pickle Line Boiler	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.035 lb/MMBTU

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Good operating practices Minimum Boiler Efficiency	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU 75%
SN-23	Pickle Line Scale Exhaust	PM	Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-23A	Tension Leveler Dust Exhaust	PM	Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-25	Tandem Cold Mill	PM	Mist Eliminator	0.0025 gr/dscf (filterable only)
		PM_{10}		0.0066 gr/dscf
		$PM_{2.5}$		0.0066 gr/dscf
		Opacity		
SN-26, SN-27	Galvanizing Line Boiler	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.035 lb/MMBTU
		GHG	Good operating practices Minimum Boiler Efficiency	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU 75%
SN-28, SN-29	Galvanizing Line Preheater	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	SCR, Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.035 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-34, SN-35, SN-36, SN-37	Galvanizing Line Caustic Cleaning and Post Treatment	PM	Mist Eliminator	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-38	Skin Pass Mill	PM	Mist Eliminator	0.0025 gr/dscf
		PM_{10}		0.0066 gr/dscf
		$PM_{2.5}$		
		Opacity		5%
SN-39	Annealing Furnaces	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-40, SN-42	Decarburizing Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners SCR Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-41, SN-43	Decarburizing Line Cleaning Sections	PM	Mist Eliminator	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		
SN-44, SN-45, SN-46	Reversing Cold Mills	PM	Mist Eliminator	0.0025gr/dscf 0.0066 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		
SN-47	Annealing Pickling Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners SCR Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-48, SN-49	Annealing Pickling Line Scale Dust	PM	Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
	Exhaust and Shotblast	Opacity		5%
SN-51	Annealing Coating Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners SCR Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-52	Annealing Coating Line Cleaning Section	PM	Mist Eliminator	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-53	Annealing Coating Line Drying Furnace	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		CO		0.0824 lb/MMBTU
		VOC Natural gas Combustion	RTO	0.0054 lb/MMBTU
		NO_X	Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-54,	MgO Coating	PM	Combustion of	0.00052 lb/MMBTU

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-56	Lines Drying Sections	PM_{10}	Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-55, SN-57	MgO Coating Lines Cleaning Sections	PM	Mist Eliminator	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		
SN-58, SN-60	Final Annealing and Coating Lines Furnace Sections	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NO_x burners SCR Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-62	Emergency Generator #1	PM	Good Operating Practices, limited hours of operation, Compliance with NSPS Subpart IIII	0.02 g/kW-Hr
		PM_{10}		0.02 g/kW-Hr
		$PM_{2.5}$		0.02 g/kW-Hr
		Opacity		20%
		SO_2		<0.0015% sulfur in fuel
		VOC		0.19 g/kW-Hr

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		CO		3.5 g/kW-Hr
		NO_X		0.4 g/kW-Hr
		GHG	Good Combustion Practices	CO_2 163 lbs/MMBTU CH_4 0.0061 lbs/MMBTU N_2O 0.0013 lbs/MMBTU
SN-63 through 67	Emergency Generators 2 through 6	PM	Good Operating Practices, limited hours of operation, Compliance with NSPS Subpart IIII	0.04 g/kW-Hr
		PM_{10}		0.04 g/kW-Hr
		$PM_{2.5}$		0.04 g/kW-Hr
		Opacity		20%
		SO_2		<0.0015% sulfur in fuel
		VOC		0.19 g/kW-Hr
		CO		3.5 g/kW-Hr
		NO_X		0.67 g/kW-Hr
		GHG	Good Combustion Practices	CO_2 163 lbs/MMBTU CH_4 0.0061 lbs/MMBTU N_2O 0.0013 lbs/MMBTU
SN-68 through 73	Non-Contact Cooling Towers	PM	Drift Eliminators Low TDS	0.0005 percent drift loss
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-73 through 79	Contact Cooling Towers	PM	Drift Eliminators Low TDS	0.0005 percent drift loss
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-80	Charge Crane	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM_{10}		0.1 lb/hr, 0.1 tpy 0.1 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
SN-81	Scrap yard Stockpiling	PM	Dust Control Plan	0.1 lb/hr, 0.5 tpy
		PM_{10}		0.1 lb/hr, 0.2 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
SN-82	EAF Flux Receiving System	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-83	EAF Flux Storage and Handling System	PM PM_{10} $PM_{2.5}$	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf 0.01 gr/dscf
		Opacity		5%
SN-84	Carbon Injection Receiving	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-85	Carbon Injection Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		0.01 gr/dscf
		Opacity		5%
SN-86	LMF Flux Receiving	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
87	LMF Flux Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		0.01 gr/dscf
		Opacity		5%
88	Alloy Receiving System	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
89	Alloy Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		0.01 gr/dscf
		Opacity		5%
90	Alloy Delivery	PM	Dust Control Plan, Enclosed	0.003 gr/dscf
		PM_{10}		

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Source	Description	Pollutant	Control Technology	BACT Limit
	System – LMF	$PM_{2.5}$	Conveyors with Fabric Filters Enclosed Receiving System with Fabric Filter Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf 0.01 gr/dscf
		Opacity		5%
91	Alloy Deliver System – RH Degasser	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Enclosed Receiving System with Fabric Filter Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf 0.003 gr/dscf 0.01 gr/dscf
		PM_{10}		0.003 gr/dscf 0.003 gr/dscf 0.01 gr/dscf
		$PM_{2.5}$		0.003 gr/dscf 0.003 gr/dscf 0.01 gr/dscf
		Opacity		5%
92	Inside Drop Point - Spent Refractory and Other Waste	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM_{10}		0.1 lb/hr, 0.1 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
93	Outside Drop Point - Spent Refractory and Other Waste	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM_{10}		0.1 lb/hr, 0.1 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
94	Inside Drop Point – EAF Dust	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM_{10}		0.1 lb/hr, 0.1 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
95	Drop Points Slag	PM	Dust Control Plan	0.2 lb/hr, 0.8 tpy
		PM_{10}		0.1 lb/hr, 0.4 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
93	Outside Drop Point - Spent Refractory	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM_{10}		0.1 lb/hr, 0.1 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
	and Other Waste	Opacity		20%
94	Inside Drop Point – EAF Dust	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM_{10}		0.1 lb/hr, 0.1 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
95	Drop Points Slag	PM	Dust Control Plan	0.2 lb/hr, 0.8 tpy
		PM_{10}		0.1 lb/hr, 0.4 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
96	Slag Handling and Conveying	PM	Dust Control Plan	0.2 lb/hr, 0.5 tpy
		PM_{10}		0.1 lb/hr, 0.2 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
97	Paved Roads	PM	Dust Control Plan	0.7 lb/hr, 2.9 tpy
		PM_{10}		0.2 lb/hr, 0.6 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.2 tpy
98	Unpaved Roads	PM	Dust Control Plan	2.2 lb/hr, 9.6 tpy
		PM_{10}		0.6 lb/hr, 2.6 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.3 tpy
99A	Feed Stock Piles - Wind Erosion	PM	Dust Control Plan	0.9 lb/hr, 3.7 tpy
		PM_{10}		0.5 lb/hr, 1.9 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.3 tpy
		Opacity		20%
99B	Slag Piles – Wind Erosion	PM	Dust Control Plan	0.2 lb/hr, 0.6 tpy
		PM_{10}		0.1 lb/hr, 0.3 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective June 18, 2010
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective November 18, 2012

Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective November 18, 2012
40 CFR 52.21, *Prevention of Significant Deterioration*
40 CFR Part 60, Subpart Dc - *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*
40 CFR Part 60, Subpart AAa - *Standards of Performance for Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983*
40 CFR Part 60, Subpart TT – Standards of Performance for Metal Coil Surface Coating
40 CFR Part 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustions Engines
40 CFR Part 63 Subpart YYYYY, National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steel Making Facilities.

Emission Summary

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
Total Allowable Emissions		PM	63.3	238.1
		PM_{10}	87.2	321.3
		$PM_{2.5}$	86.2	315.9
		SO_2	190.4	350.3
		VOC	64.2	194.1
		CO	1194.5	3949.7
		NO_X	294.6	1067.7
		Lead	0.2808336	0.963618
		CO_2e	--	1,203,020
HAPs		Arsenic	0.0042977	0.013419
		Cadmium	0.005827	0.017776
		Formaldehyde	0.1236	0.4523
		HCl	1.0	3.5
		Manganese	0.1605743	0.602735
		Mercury	0.0603949	0.201912
Air Contaminants **		H_2SO_4	6.4	0.6

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
01	EAF I and LMF I	PM	16.2	71.0
		PM_{10}	21.6	94.7
		$PM_{2.5}$	21.6	94.7
		SO_2	50.0	170.0
		VOC	23.3	79.1
		CO	505.0	1717.0
		NO_X	87.5	297.5
		Lead	0.14	0.48
		CO_2e	--	258,060
		Arsenic	0.002	0.006
		Cadmium	0.002	0.005
		Manganese	0.08	0.3
		Mercury	0.03	0.1
02	EAF II and LMF II	PM	16.2	71.0
		PM_{10}	21.6	94.7
		$PM_{2.5}$	21.6	94.7
		SO_2	50.0	170.0
		VOC	23.3	79.1
		CO	505.0	1717.0
		NO_X	87.5	297.5
		Lead	0.14	0.48
		CO_2e	--	258,060
		Arsenic	0.002	0.006
		Cadmium	0.002	0.005
		Manganese	0.08	0.3
		Mercury	0.03	0.1
03	Vacuum Tank Degasser (RH Degasser)	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.2
		CO	9.8	29.8
		NO_X	0.4	1.8
		Lead	0.000003	0.00002
		CO_2e	--	4,760
		Arsenic	0.000001	0.000005
		Cadmium	0.000006	0.00003
		Formaldehyde	0.004	0.0002
		Manganese	0.000002	0.000009
		Mercury	0.000002	0.00006

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Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
04	RH Degasser Boiler	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
		SO_2	0.1	0.2
		VOC	0.3	1.2
		CO	4.2	18.4
		NO_X	1.8	7.9
		Lead	0.00003	0.0002
		CO_2e	--	26,136
		Arsenic	0.00001	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00002	0.00009
		Mercury	0.00002	0.00006
04A	RH Degasser Preheater Station	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.2
		CO	0.5	2.2
		NO_X	0.5	2.1
		Lead	0.000003	0.00002
		CO_2e	--	3,075
		Arsenic	0.000002	0.000006
		Cadmium	0.000007	0.00003
		Formaldehyde	0.0005	0.002
		Manganese	0.000003	0.00001
		Mercury	0.000002	0.000007

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Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
04B	RH Degasser Top Part Dryer	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.1
		CO	0.2	0.5
		NO_X	0.2	0.5
		Lead	0.0000007	0.000004
		CO_2e	--	717
		Arsenic	0.0000003	0.000002
		Cadmium	0.000002	0.000007
		Formaldehyde	0.0002	0.0005
		Manganese	0.0000006	0.000003
		Mercury	0.0000004	0.000002
04C	RH Degasser Nozzle Dryer	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.1
		CO	0.2	0.7
		NO_X	0.2	0.7
		Lead	0.0000009	0.000004
		CO_2e	--	922
		Arsenic	0.0000004	0.000002
		Cadmium	0.000002	0.000009
		Formaldehyde	0.0002	0.0006
		Manganese	0.0000007	0.000003
		Mercury	0.0000005	0.000003

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Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
04D	RH Degasser Burner/Lance	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	0.8	3.3
		NO_X	0.8	3.2
		Lead	0.000005	0.00002
		CO_2e	--	4,612
		Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
05	Ladle Preheater 1	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
		Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
06	Ladle Preheater 2	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
		Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002
07	Ladle Preheater 3	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
		Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
08	Ladle Preheater 4	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
		Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002
09	Ladle Preheater 5	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
		Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
10	Ladle Dryout Heater 1	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
		Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002
11	Ladle Dryout Heater 2	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
		Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002

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Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
12	Vertical Ladle Holding Station 1	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	1.0	4.0
		NO_X	0.9	3.9
		Lead	0.000006	0.00003
		CO_2e	--	5,637
		Arsenic	0.000003	0.00001
		Cadmium	0.00002	0.00006
		Formaldehyde	0.0009	0.004
		Manganese	0.000005	0.00002
		Mercury	0.000003	0.00002
13	Vertical Ladle Holding Station 2	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	1.0	4.0
		NO_X	0.9	3.9
		Lead	0.000006	0.00003
		CO_2e	--	5,637
		Arsenic	0.000003	0.00001
		Cadmium	0.00002	0.00006
		Formaldehyde	0.0009	0.004
		Manganese	0.000005	0.00002
		Mercury	0.000003	0.00002

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
16	Tundish Preheater 1	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	0.9	3.7
		NO_X	0.8	3.5
		Lead	0.000005	0.00003
		CO_2e	--	5,125
		Arsenic	0.000002	0.000009
		Cadmium	0.00002	0.00005
		Formaldehyde	0.0008	0.004
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00002
17	Tundish Preheater 2	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	0.9	3.7
		NO_X	0.8	3.5
		Lead	0.000005	0.00003
		CO_2e	--	5,125
		Arsenic	0.000002	0.000009
		Cadmium	0.00002	0.00005
		Formaldehyde	0.0008	0.004
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00002

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
18	Tundish Preheater 3	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	0.9	3.7
		NO_X	0.8	3.5
		Lead	0.000005	0.00003
		CO_2e	--	5,125
		Arsenic	0.000002	0.000009
		Cadmium	0.00002	0.00005
		Formaldehyde	0.0008	0.004
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00002
19	Tundish Preheater 4	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	0.9	3.7
		NO_X	0.8	3.5
		Lead	0.000005	0.00003
		CO_2e	--	5,125
		Arsenic	0.000002	0.000009
		Cadmium	0.00002	0.00005
		Formaldehyde	0.0008	0.004
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00002

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
20	Tunnel Furnace 1	PM	0.2	0.6
		PM_{10}	0.2	0.6
		$PM_{2.5}$	0.2	0.6
		SO_2	0.2	0.6
		VOC	1.3	5.6
		CO	19.3	84.5
		NO_X	23.4	102.5
		Lead	0.0002	0.0006
		CO_2e	--	119,919
		Arsenic	0.00005	0.0003
		Cadmium	0.0003	0.002
		Formaldehyde	0.02	0.08
		Manganese	0.00009	0.0004
		Mercury	0.00006	0.0003
21	Tunnel Furnace 2	PM	0.2	0.5
		PM_{10}	0.2	0.5
		$PM_{2.5}$	0.2	0.5
		SO_2	0.2	0.5
		VOC	1.1	4.6
		CO	15.9	69.3
		NO_X	19.2	84.1
		Lead	0.0001	0.0005
		CO_2e	--	98,395
		Arsenic	0.00004	0.0002
		Cadmium	0.0003	0.001
		Formaldehyde	0.02	0.07
		Manganese	0.00008	0.0004
		Mercury	0.00005	0.0003

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
22	Pickle Line Boiler	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
		SO_2	0.1	0.2
		VOC	0.4	1.6
		CO	5.6	24.2
		NO_X	2.4	10.3
		Lead	0.00004	0.0002
		CO_2e	--	34,336
		Arsenic	0.00002	0.00006
		Cadmium	0.00008	0.0004
		Formaldehyde	0.005	0.03
		Manganese	0.00003	0.0002
		Mercury	0.00002	0.00008
23	Pickle Line Scale Dust	PM	1.0	4.4
		PM_{10}	1.0	4.4
		$PM_{2.5}$	1.0	4.4
23A	Push Pull Pickle Line Tension Leveler Scale Dust Exhaust	PM	0.4	1.7
		PM_{10}	0.4	1.7
		$PM_{2.5}$	0.4	1.7
24	Pickling Section	HCl	0.2	0.6
24A	Push Pull Pickle Line Pickling Section	HCl	0.2	0.8
25	Tandem Cold Mill	PM	4.8	14.4
		PM_{10}	12.5	37.9
		$PM_{2.5}$	12.5	37.9

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Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
26	Galvanizing Line Boiler 1	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.2	0.6
		CO	2.1	8.9
		NO_X	0.9	3.8
		Lead	0.00002	0.00006
		CO_2e	--	12,556
		Arsenic	0.000005	0.00003
		Cadmium	0.00003	0.0002
		Formaldehyde	0.002	0.008
		Manganese	0.00001	0.00004
		Mercury	0.000007	0.00003
27	Galvanizing Line Boiler 2	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.2	0.6
		CO	2.1	8.9
		NO_X	0.9	3.8
		Lead	0.00002	0.00006
		CO_2e	--	12,556
		Arsenic	0.000005	0.00003
		Cadmium	0.00003	0.0002
		Formaldehyde	0.002	0.008
		Manganese	0.00001	0.00004
		Mercury	0.000007	0.00003

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
28	Galvanizing Line Preheater 1	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
		SO_2	0.1	0.3
		VOC	0.5	2.1
		CO	7.2	31.6
		NO_X	3.1	13.4
		Lead	0.00005	0.0002
		CO_2e	--	44,790
		Arsenic	0.00002	0.00008
		Cadmium	0.0001	0.0004
		Formaldehyde	0.007	0.03
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0001
29	Galvanizing Line Preheater 2	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
		SO_2	0.1	0.3
		VOC	0.5	2.1
		CO	7.2	31.6
		NO_X	3.1	13.4
		Lead	0.00005	0.0002
		CO_2e	--	44,790
		Arsenic	0.00002	0.00008
		Cadmium	0.0001	0.0004
		Formaldehyde	0.007	0.03
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0001
34	Galvanizing Line Caustic Cleaning 1	PM	0.2	0.9
		PM_{10}	0.2	0.9
		$PM_{2.5}$	0.2	0.9
35	Galvanizing Line Caustic Cleaning 2	PM	0.2	0.9
		PM_{10}	0.2	0.9
		$PM_{2.5}$	0.2	0.9
36	Galvanizing Line Post Treatment 1	PM	0.1	0.3
		PM_{10}	0.1	0.3
		$PM_{2.5}$	0.1	0.3
37	Galvanizing Line Post Treatment 2	PM	0.1	0.3
		PM_{10}	0.1	0.3
		$PM_{2.5}$	0.1	0.3

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Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
38	Skin Pass Mill	PM	0.6	1.8
		PM_{10}	1.5	4.6
		$PM_{2.5}$	1.5	4.6
39	Annealing Furnaces	PM	0.1	0.3
		PM_{10}	0.1	0.3
		$PM_{2.5}$	0.1	0.3
		SO_2	0.1	0.3
		VOC	0.6	2.4
		CO	8.1	35.5
		NO_X	9.9	43.1
		Lead	0.00005	0.0003
		CO_2e	--	50,351
		Arsenic	0.00002	0.00009
		Cadmium	0.0002	0.0005
		Formaldehyde	0.008	0.04
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0002
40	Decarburizing Line 1 Furnace Section	PM	0.5	2.1
		PM_{10}	0.5	2.1
		$PM_{2.5}$	0.5	2.1
		SO_2	0.1	0.1
		VOC	0.2	0.9
		CO	3.0	13.0
		NO_X	3.6	15.8
		Lead	0.00002	0.00008
		CO_2e	--	18,449
		Arsenic	0.000008	0.00004
		Cadmium	0.00004	0.0002
		Formaldehyde	0.003	0.02
		Manganese	0.00002	0.00006
		Mercury	0.00001	0.00005
41	Decarburizing Line 1 Cleaning Section	PM	0.3	1.2
		PM_{10}	0.3	1.2
		$PM_{2.5}$	0.3	1.2

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Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
42	Decarburizing Line 2 Furnace Section	PM	0.3	1.3
		PM_{10}	0.3	1.3
		$PM_{2.5}$	0.3	1.3
		SO_2	0.1	0.1
		VOC	0.2	0.6
		CO	1.9	8.0
		NO_X	2.2	9.7
		Lead	0.00002	0.00005
		CO_2e	--	11,274
		Arsenic	0.000005	0.00002
		Cadmium	0.00003	0.0002
		Formaldehyde	0.002	0.008
		Manganese	0.000009	0.00004
		Mercury	0.000006	0.00003
43	Decarburizing Line 2 Cleaning Section	PM	0.3	1.1
		PM_{10}	0.3	1.1
		$PM_{2.5}$	0.3	1.1
44	Reversing Cold Mill 3	PM	1.5	4.6
		PM_{10}	4.0	12.1
		$PM_{2.5}$	4.0	12.1
45	Reversing Cold Mill 1	PM	1.5	4.6
		PM_{10}	4.0	12.1
		$PM_{2.5}$	4.0	12.1
46	Reversing Cold Mill 2	PM	1.5	4.6
		PM_{10}	4.0	12.1
		$PM_{2.5}$	4.0	12.1
47	Annealing Pickling Line – Annealing Furnace	PM	0.9	3.8
		PM_{10}	0.9	3.8
		$PM_{2.5}$	0.9	3.8
		SO_2	0.1	0.2
		VOC	0.4	1.6
		CO	5.5	23.9
		NO_X	6.6	29.0
		Lead	0.00004	0.0002
		CO_2e	--	33,823
		Arsenic	0.00002	0.00006
		Cadmium	0.00008	0.00004
		Formaldehyde	0.005	0.003
		Manganese	0.00003	0.0002
		Mercury	0.00002	0.00008

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
48	Annealing Pickling Line – Scale Dust Exhaust	PM	0.7	3.0
		PM_{10}	0.7	3.0
		$PM_{2.5}$	0.7	3.0
49	Annealing Pickling Line – Shot Blast	PM	0.7	3.0
		PM_{10}	0.7	3.0
		$PM_{2.5}$	0.7	3.0
50	Annealing Pickling Line Pickling Section	HCl	0.2	0.7
51	Annealing Coating Line - Annealing Furnace	PM	0.6	2.7
		PM_{10}	0.6	2.7
		$PM_{2.5}$	0.6	2.7
		SO_2	0.1	0.2
		VOC	0.3	1.1
		CO	3.8	17.6
		NO_X	4.6	20.2
		Lead	0.00003	0.0002
		CO_2e	--	23,574
		Arsenic	0.00001	0.00004
		Cadmium	0.00005	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00002	0.00008
		Mercury	0.00002	0.00006
52	Annealing Coating Line – Cleaning Section	PM	0.3	1.1
		PM_{10}	0.3	1.1
		$PM_{2.5}$	0.3	1.1
53	Annealing Coating Line – Drying Furnace	PM	0.3	1.1
		PM_{10}	0.3	1.1
		$PM_{2.5}$	0.3	1.1
		SO_2	0.1	0.1
		VOC	0.5	2.4
		CO	1.5	6.5
		NO_X	1.8	7.9
		Lead	0.000009	0.00004
		CO_2e	--	9,225
		Arsenic	0.000004	0.00002
		Cadmium	0.00002	0.00009
		Formaldehyde	0.002	0.006
		Manganese	0.000007	0.00003
		Mercury	0.000005	0.00003

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
54	MgO Coating Line 1 – Drying Furnace	PM	0.2	0.8
		PM_{10}	0.2	0.8
		$PM_{2.5}$	0.2	0.8
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.2	4.8
		NO_X	1.4	5.9
		Lead	0.000007	0.00003
		CO_2e	--	6,816
		Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00007
		Formaldehyde	0.001	0.005
		Manganese	0.000005	0.00003
		Mercury	0.000004	0.00002
55	MgO Coating Line 1 – Cleaning Section	PM	0.3	1.1
		PM_{10}	0.3	1.1
		$PM_{2.5}$	0.3	1.1
56	MgO Coating Line 2 – Drying Furnace	PM	0.2	0.8
		PM_{10}	0.2	0.8
		$PM_{2.5}$	0.2	0.8
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.2	4.8
		NO_X	1.4	5.9
		Lead	0.000007	0.00003
		CO_2e	--	6,816
		Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00007
		Formaldehyde	0.001	0.005
		Manganese	0.000005	0.00003
		Mercury	0.000004	0.00002
57	MgO Coating Line 2 – Cleaning Section	PM	0.3	1.1
		PM_{10}	0.3	1.1
		$PM_{2.5}$	0.3	1.1

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
58	Final Annealing and Coating Line 1 – Furnace	PM	0.5	1.9
		PM_{10}	0.5	1.9
		$PM_{2.5}$	0.5	1.9
		SO_2	0.1	0.1
		VOC	0.2	0.8
		CO	2.7	11.6
		NO_X	3.2	14.1
		Lead	0.00002	0.00007
		CO_2e	--	16,399
		Arsenic	0.000007	0.00003
		Cadmium	0.00004	0.0002
		Formaldehyde	0.003	0.002
		Manganese	0.00002	0.00006
		Mercury	0.000009	0.00004
59	Final Annealing and Coating Line 1 – Cleaning Section	HCl	0.2	0.7
60	Final Annealing and Coating Line 2 – Furnace	PM	0.5	1.9
		PM_{10}	0.5	1.9
		$PM_{2.5}$	0.5	1.9
		SO_2	0.1	0.1
		VOC	0.2	0.8
		CO	2.7	11.6
		NO_X	3.2	14.1
		Lead	0.00002	0.00007
		CO_2e	--	16,399
		Arsenic	0.000007	0.00003
		Cadmium	0.00004	0.0002
		Formaldehyde	0.003	0.002
		Manganese	0.00002	0.00006
		Mercury	0.000009	0.00004
61	Final Annealing and Coating Line 2 – Cleaning Section	HCl	0.2	0.7

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
62	Emergency Generator 1 Diesel Fired, 625 hp	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	5.1	0.3
		VOC	1.5	0.1
		CO	3.6	0.2
		NO_X	0.4	0.1
		CO_2e	--	32
		H_2SO_4	0.4	0.1
63	Emergency Generator 2 Diesel Fired, 1500 kW	PM	0.3	0.1
		PM_{10}	0.3	0.1
		$PM_{2.5}$	0.3	0.1
		SO_2	16.3	0.9
		VOC	1.4	0.1
		CO	11.9	0.6
		NO_X	2.2	0.1
		CO_2e	--	119
		H_2SO_4	1.2	0.1
64	Emergency Generator 3 Diesel Fired, 1500 kW	PM	0.3	0.1
		PM_{10}	0.3	0.1
		$PM_{2.5}$	0.3	0.1
		SO_2	16.3	0.9
		VOC	1.4	0.1
		CO	11.9	0.6
		NO_X	2.2	0.1
		CO_2e	--	119
		H_2SO_4	1.2	0.1
65	Emergency Generator 4 Diesel Fired, 1500 kW	PM	0.3	0.1
		PM_{10}	0.3	0.1
		$PM_{2.5}$	0.3	0.1
		SO_2	16.3	0.9
		VOC	1.4	0.1
		CO	11.9	0.6
		NO_X	2.2	0.1
		CO_2e	--	119
		H_2SO_4	1.2	0.1

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
66	Emergency Generator 5 Diesel Fired, 1500 kW	PM	0.3	0.1
		PM_{10}	0.3	0.1
		$PM_{2.5}$	0.3	0.1
		SO_2	16.3	0.9
		VOC	1.4	0.1
		CO	11.9	0.6
		NO_X	2.2	0.1
		CO_2e	--	119
		H_2SO_4	1.2	0.1
67	Emergency Generator 6 Diesel Fired, 1500 kW	PM	0.3	0.1
		PM_{10}	0.3	0.1
		$PM_{2.5}$	0.3	0.1
		SO_2	16.3	0.9
		VOC	1.4	0.1
		CO	11.9	0.6
		NO_X	2.2	0.1
		CO_2e	--	119
		H_2SO_4	1.2	0.1
68	Non-Contact Cooling Tower 1 – Melt Shop	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
69	Non-Contact Cooling Tower 2 – Melt Shop	PM	0.1	0.3
		PM_{10}	0.1	0.3
		$PM_{2.5}$	0.1	0.3
70	Non-Contact Cooling Tower 3 – Caster and Hot Mill	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
71	Non-Contact Cooling Tower 4 – Caster and Hot Mill	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
72	Non-Contact Cooling Tower 5 – Cold Mill	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
73	Non-Contact Cooling Tower 6 – Cold Mill	PM	0.1	0.4
		PM_{10}	0.1	0.4
		$PM_{2.5}$	0.1	0.4
74	Contact Cooling Tower 1 – Melt Shop	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1

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Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
75	Contact Cooling Tower 2 – Melt Shop	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
76	Contact Cooling Tower 3 – Caster and Hot Mill	PM	0.2	0.7
		PM_{10}	0.2	0.7
		$PM_{2.5}$	0.2	0.7
77	Contact Cooling Tower 4 – Caster and Hot Mill	PM	0.2	0.7
		PM_{10}	0.2	0.7
		$PM_{2.5}$	0.2	0.7
78	Contact Cooling Tower 5 – Caster and Hot Mill	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
79	Contact Cooling Tower 6 – Laminar	PM	0.2	0.5
		PM_{10}	0.2	0.5
		$PM_{2.5}$	0.2	0.5
80	Charging Crane	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
81	Scrap Yard Stockpiling	PM	0.1	0.5
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.1
82	EAF Flux Receiving System	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
83	EAF Flux Storage and Handling System	PM	0.2	0.6
		PM_{10}	0.1	0.3
		$PM_{2.5}$	0.1	0.1
84	Carbon Injection Receiving System	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
85	Carbon Injection Storage and Handling System	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
86	LMF Flux Receiving System	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
87	LMF Flux Storage and Handling System	PM	0.2	0.6
		PM_{10}	0.1	0.3
		$PM_{2.5}$	0.1	0.1

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Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
88	Alloy Receiving System	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
89	Alloy Storage and Handling System	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
90	Alloy Delivery System – LMF	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
91	Alloy Deliver System – RH Degasser	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
92	Inside Drop Point - Spent Refractory and Other Waste	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
93	Outside Drop Point - Spent Refractory and Other Waste	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
94	Inside Drop Point – EAF Dust	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
95	Drop Points Slag	PM	0.2	0.8
		PM_{10}	0.1	0.4
		$PM_{2.5}$	0.1	0.1
96	Slag Handling and Conveying	PM	0.2	0.5
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.1
97	Paved Roads	PM	0.7	2.9
		PM_{10}	0.2	0.6
		$PM_{2.5}$	0.1	0.2
98	Unpaved Roads	PM	2.2	9.6
		PM_{10}	0.6	2.6
		$PM_{2.5}$	0.1	0.3
99A	Feed Stock Piles - Wind Erosion	PM	0.9	3.7
		PM_{10}	0.5	1.9
		$PM_{2.5}$	0.1	0.3
99B	Slag Piles – Wind Erosion	PM	0.2	0.6
		PM_{10}	0.1	0.3
		$PM_{2.5}$	0.1	0.1

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*HAPs included in the VOC totals. Other HAPs are not included in any other totals unless specifically stated.
**Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

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SECTION III: PERMIT HISTORY

This is the initial permit for the facility.

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SECTION IV: SPECIFIC CONDITIONS

MeltShop

SN-01 EAF I and LMF I
SN-02 EAF II and LMF II

Source Description

The steel facility will receive scrap iron and steel by rail and truck. The scrap will be unloaded and stockpiled on site. The scrap will be moved from the storage piles and placed in charging buckets. These charging buckets will be used to load one of the plants two Electric Arc Furnaces, EAF I or EAF II. In the EAF additional raw materials are added through various feed systems and the charged steel is melted using electric arc applied through carbon electrodes. The two EAFs are capable of producing 250 tons per hour of liquid steel each. The liquid steel is then transferred to the Ladle Metallurgy Furnaces (LMF) or the RH Degasser for further refinement.

In the LMF the chemistry and temperature of the molten steel is further refined while it is still in the ladle. The liquid steel proceeds from the LMF to the RH Degasser, SN-03, or to the Casters, SN-14 and 15 depending on the type of steel being produced.

EAF I and LMF I are routed to a single baghouse. EAF II and LMF II are also routed to a single baghouse.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions 4, 5, 6 and 13-30. [Regulation 19 §19.901 and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
01	EAF I and LMF I	PM	16.2	71.0
		PM_{10}	21.6	94.7
		$PM_{2.5}$	21.6	94.7
		SO_2	50.0	170.0
		VOC	23.3	79.1
		CO	505.0	1717.0
		NO_X	87.5	297.5
		Lead	0.14	0.48
		CO_2e	--	258,060

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SN	Description	Pollutant	lb/hr	tpy
02	EAF II and LMF II	PM	16.2	71.0
		PM_{10}	21.6	94.7
		$PM_{2.5}$	21.6	94.7
		SO_2	50.0	170.0
		VOC	23.3	79.1
		CO	505.0	1717.0
		NO_X	87.5	297.5
		Lead	0.14	0.48
		CO_2e	--	258,060

2. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the following table. Compliance with these emission limits shall be demonstrated by compliance with Specific Conditions 6 and 13-30. [Regulation 19, §19.901 and 40 CFR Part 52, Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
01 and 02	EAFs	PM	Fabric Filter	0.0018 gr/dscf (filterable only)
		PM_{10}	Fabric Filter	0.0024 gr/dscf
		$PM_{2.5}$	Fabric Filter	0.0024 gr/dscf
		Opacity	Fabric Filter	3% as a 6 minute average from baghouse 6% from melt shop
		SO_2	Scrap management plan	0.18 lb/ton of steel produced
		VOC	Scrap management plan and good operating practices	0.088 lb/ton steel produced
		CO		2 lb/ton of steel produced
		NO_X		0.3 lb/ton of steel produced
		Lead	Fabric Filter	0.00056 lb/ton of steel produced
01 and 02	LMFs	PM	Fabric Filter	0.0018 gr/dscf (filterable only)
		PM_{10}	Fabric Filter	0.0024 gr/dscf

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		$PM_{2.5}$	Fabric Filter	0.0024 gr/dscf
		Opacity	Fabric Filter	3% as a 6 minute average from baghouse 6% from melt shop
		SO_2	Scrap management plan	0.02 lb/ton of steel produced
		VOC	Scrap management plan and good operating practices	0.005 lb/ton of steel produced
		CO		0.02 lb/ton of steel produced
		NO_X		0.05 lb/ton of steel produced
SN-01, 02, and 03	Meltshop	CO_2e	Energy Efficiency improvements.	0.155 tons of CO_2e/Ton of Liquid steel produced.

3. The permittee shall not exceed the emission rates set forth in the following table. Compliance with these emission limits shall be demonstrated by compliance with Conditions 6 and 13-25 and 31 through 37. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
SN-01	Arsenic	0.002	0.006
	Cadmium	0.002	0.005
	Manganese	0.08	0.3
	Mercury	0.03	0.1
SN-02	Arsenic	0.002	0.006
	Cadmium	0.002	0.005
	Manganese	0.08	0.3
	Mercury	0.03	0.1

4. The permittee shall not process more steel through the EAFs on a 12 month rolling total than specified in the table below. [Regulation 19 §19.901 and 40 CFR Part 52, Subpart E]

Source	Limit
SN-01	1,700,000 tons of steel
SN-02	1,700,000 tons of steel

5. The permittee shall maintain monthly records of the amount of steel processed through the EAFs SN-01 and SN-02. These records shall be updated by the fifteenth day of the month following the month to which the records pertain, kept on site, made available to Department personnel upon request and in accordance with General Provision 7. [Regulation 19 §19.901 and 40 CFR Part 52, Subpart E]

6. The permittee shall perform stack testing of SN-01 and SN-02. Testing shall be performed initially and annually thereafter in accordance Plantwide Condition 3 and 4, and EPA Reference Method 5D as found in 40 CFR, Part 60, Appendix A. The sampling time and sampling volume for each run shall be at least 4 hours and 4.50 dscm (160 dscf). The permittee shall report all emissions measured using Method 5D as filterable PM, PM_{10}, or $PM_{2.5}$ or may conduct separate filterable PM_{10} testing using EPA Reference Method 201 or 201A. The permittee shall also conduct test for condensable particulate emissions concurrently using EPA reference Method 202 and include these results in PM_{10} and $PM_{2.5}$ values for compliance with emission rates. The report shall include information specified in §60.276a(f) of 40 CFR, Part 60, Subpart AAa. [§19.304 and §19.704 of Regulation 19, §60.275a(e)(1) of 40 CFR, Part 60, Subpart AAa, and 40 CFR Part 52, Subpart E]

7. Unless the presence of inclement weather makes concurrent testing infeasible, the permittee shall conduct the performance tests required by Specific Conditions 6, 10, and 16, concurrently. [§19.304 of Regulation 19 and 60.275a(e)(4) and 60.275a(j) of 40 CFR, Part 60, Subpart AAa]

8. The permittee shall submit to the Department a written report of the results of the performance test required by Specific Condition 6. The report shall include information specified in §60.276a(f) of 40 CFR, Part 60, Subpart AAa, and the information required under Plantwide Condition 4. [§19.304 and §19.705 of Regulation 19, §60. 276a(f) of 40 CFR, Part 60, Subpart AAa, and 40 CFR Part 52, Subpart E]

9. The permittee shall not discharge into the atmosphere any gases from the EAF Baghouses, SN-01 and SN-02, exhibiting 3 percent opacity or greater. [§19.304 of Regulation 19 and §60.272a(a)(2) of 40 CFR, Part 60, Subpart AAa]

10. The permittee shall perform observations of the opacity of the visible emissions from EAF Baghouses, SN-01 and SN-02 by a certified visible emission observer as follows: Visible emission observations are conducted at least once per day when the furnace is operating in the melting and refining period. These observations shall be taken in accordance with Method 9, and, for at least three 6-minute periods, the opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one set of three 6-minute observations will be required. In this case, Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of 3% opacity. Reports of

exceedances shall be submitted in accordance with Specific Condition 11. Should the permittee install a single stack to its melt shop baghouse the permittee shall install and operate a bag leak detection system in accordance with §60.273a(c), (e), (f), and (g). The permittee shall maintain records for each bag leak detection system as outlined in §60.276a(h). [§19.304 of Regulation 19 and 40 CFR, Part 60, Subpart AAa]

11. The permittee shall submit a written report of exceedances of the EAF baghouse opacity and the EAF Melt Shop opacity to the Department semi-annually in accordance with General Provision 7. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater at the EAF baghouse, and all 6-minute periods during which the average opacity is 6 percent or greater at the EAF Melt Shop due solely to the operations of the EAF. Opacity observations shall be recorded on a visible emissions observation form. The information presented in Figures 9-1 and 9-2 to EPA Method 9 shall be recorded. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

12. The permittee shall not discharge into the atmosphere any gases which exit from EAF Melt Shop which exceed 6 percent opacity or greater due solely to the operations of the EAF. Exceedances shall be defined as all 6-minute periods during which the average opacity is 6 percent or greater. This opacity limit shall apply at all times that either of the EAFs is in operation and due solely to the operations of the electric arc furnace. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

13. The permittee shall either (a) install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside each EAF to be monitored, pursuant to 40 CFR §60.274a(f), or (b) perform daily observations of shop opacity, pursuant to 40 CFR §60.273a(d). The permittee shall notify the Department which method it elects within 180 days before startup of SN-01 or 02. If the permittee elects to conduct opacity observations, the permittee shall conduct daily opacity readings on the EAF Melt Shop as follows: Shop opacity observations shall be conducted at least once per day when the furnace(s) is operating in the meltdown and refining period. Shop opacity shall be determined as the arithmetic average of 24 or more consecutive 15-second opacity observations of emissions from the shop taken in accordance with Method 9. Shop opacity shall be recorded for any point(s) where visible emissions are observed in proximity to an affected EAF. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records of these opacity observations shall be kept on site and made available for inspection upon request. Reports of exceedances shall be submitted in accordance with Specific Condition 11. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

14. The permittee shall either:

a. Check and record the control system fan motor amperes and damper positions on a once per shift basis;
b. Install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood; or
c. Install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate at the control device inlet and check and record damper positions on a once per shift basis.
[40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

15. The permittee shall notify the Department which method it elects to use within 180 days of startup of SN-01 or 02 If the permittee elects a method which uses a volumetric flow measuring device, the permittee shall comply with the pertinent provisions of 40 CFR §60.274a(b). If the permittee elects a method based on periodic monitoring of fan motor amperes, damper positions, or both, the permittee shall comply with 40 CFR §60.274a(c), and shall conduct a compliance test to re-establish these parameters as specified in 40 CFR §60.274a(c) within 180 days after the effective date of this permit. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

16. The permittee shall determine baseline values of the fan motor amperes and damper positions, or volumetric flow rate during annual performance testing in accordance with Specific Condition 7, as may be required to demonstrate compliance according to the method chosen by the permittee pursuant to Specific Condition 14. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate level for each applicable period. Appropriate level shall be defined as flow rates equal to or greater than those flow rates established as the baseline during the last annual performance testing on the EAF baghouses. The term appropriate period shall be defined as the time period between each annual performance testing on the EAF baghouses. Flow rates less than the baseline flow rate may be considered unacceptable operation by the Department, if operation at such flow rates results in opacity readings from the EAF melt shop greater than 6%. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

17. The permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted and proper maintenance performed. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

18. The permittee shall visually inspect the upper chamber of the baghouses controlling SN-01 and SN-02 for visible emissions from individual bags on a monthly basis. Worn, frayed, or defective bags shall be replaced within two weeks following the inspection in which the defect is found. The permittee shall maintain a log of the inspection and

maintenance activities. The log shall be signed and dated by the person responsible for making the inspection and/or repair. This log shall be kept on site and can be used by the Department for enforcement purposes. [§19.303 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

19. The permittee shall maintain records of the following information: (1) all data obtained under Specific Condition 16; and (2) all monthly operational status inspections performed under Specific Condition 18. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

20. If the permittee elects to install a device to measure the pressure in the free space inside the EAFs pursuant to Specific Condition 13, the pressure shall be recorded as 15-minute integrated averages. The monitoring device may be installed in any appropriate location in the EAF duct prior to the introduction of ambient air such that reproducible results will be obtained. The pressure monitoring device shall have an accuracy of ±5 mm of water gauge over its normal operating range and shall be calibrated according the manufacturer's instructions. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

21. If the permittee elects to install a device to measure the pressure in the free space inside the EAFs pursuant to Specific Condition 13, during each performance testing conducted in accordance with Specific Condition 6, the permittee shall determine baseline values of the pressure in the free space inside the furnace during the meltdown and refining period(s). The pressure determined during the most recent demonstration of particulate emission compliance shall be maintained at all times when the EAF is operating in a meltdown and refining period. Operation at higher pressures may be considered by the Department to be unacceptable operation and maintenance of the affected facility. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

22. If the permittee elects to install a device to measure the pressure in the free space inside the EAFs pursuant to Specific Condition 13, the permittee shall maintain records which demonstrate compliance with Specific Condition 21 and may be used by the Department for enforcement purposes. The records shall be updated on a daily basis, shall be kept on site, and shall be provided to Department personnel upon request. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

23. During any performance test conducted in accordance with Specific Condition 6, the owner or operator shall monitor the following information for all heats covered by the test:

    (1) Charge weights and materials, and tap weights and materials;
    (2) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing and, if the permittee has elected

to measure the pressure inside the EAFs pursuant to Specific Condition 14, the pressure inside an EAF when direct-shell evacuation control systems are used;

(3) Control device operation log; and

(4) Continuous monitor or Reference Method 9 data.

[40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

24. The permittee shall retain all records of the measurements required by Specific Conditions 14 through 23 for at least two years following the date of the measurement. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

25. Operation of the EAFs at a furnace static pressure that exceeds the value established under Specific Condition 21 or at flow rates lower than those established under Specific Condition 14, may be considered by the Department to be unacceptable operation and maintenance of the affected facility, if operation at such rates results in opacity readings at the Melt Shop Building greater than 6%. Operation at such values shall be reported to the Department semiannually. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

26. The permittee shall perform stack testing of SN-01 and SN-02 for NO_x, SO_2, CO, CO_2 and VOC emissions. Testing shall be performed in accordance with Plantwide Conditions 3 and 4 and shall be repeated every six months thereafter. The permittee shall measure NO_x, SO_2, CO_2 and CO emissions in accordance with EPA Reference Methods 7E, 6C, 3A and 10, respectively. The permittee shall measure the total VOC emissions using EPA Reference Method 25A, from which it will subtract out methane (CH_4) and ethane (C_2H_6) emissions from the EAF baghouse using EPA Reference Method 18 to arrive at applicable VOC levels for purposes of this permit. Semiannual stack testing for a pollutant is not required if the permittee elects to operate a CEMS for that pollutant at SN-01 and SN-02. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]

27. The permittee shall report to the Department each month the total number of tons of steel tapped from the EAFs during each of the previous twelve months. For each month, the emission factor from the nearest preceding stack test shall be multiplied by the total tons of steel tapped during that month, to establish the amount of each pollutant emitted during that month. The emissions so calculated for each of the last twelve months shall be added together and expressed as tons of pollutant per year. The sum of the last twelve months shall not exceed the ton per year limits for SN-01 in Specific Condition 1. If more than one stack test is conducted during a month, the calculation for that month shall be modified so that the total number of tons of steel tapped during the period between two consecutive stack tests shall be multiplied by the emission factor established by the stack test at the beginning of any such period. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]

28. The permittee shall perform stack testing of SN-01 and SN-02 for lead (Pb) emissions. Testing shall be performed in accordance with Plantwide Conditions 3 and 4 and shall be

repeated annually thereafter. The permittee shall measure lead emissions in accordance with EPA Reference Method 12 or other alternate method, provided the Department approves the alternate method prior to use. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]

29. In lieu of, or in addition to calculating an emission factor for NO_x, SO_2, CO, CO_2 and VOC and reporting EAF production each month as provided in Specific Condition 27, the permittee may install and operate a monitoring device that continuously monitors and records NO_x, SO_2, CO, CO_2 and/or VOC concentration of gases in the duct leading to the EAF baghouses. The NO_x and SO_2 monitors shall be operated in accordance with performance specification #2 which is found in 40 CFR Part 60, Appendix B, and the CEMS conditions in Attachment A of this permit. The CO monitor shall be operated in accordance with performance specification #4, which is found in 40 CFR Part 60, Appendix B, and the CEMS conditions in Attachment A of this permit. The CO_2 monitor shall be operated in accordance with performance specification #3, which is found in 40 CFR Part 60, Appendix B, and the CEMS conditions in Attachment A of this permit. For purposes of measuring VOCs, the permittee may use an adjustment factor which will assume that the VOCs are 30% less than THC or, may take actual measurements of methane concentrations to subtract from the THC measurement to arrive at the VOC concentration. The VOC monitor shall be operated in accordance with the CEMS conditions in Attachment A of this permit. The permittee shall provide reporting from the CEMS in parts per million (ppm) and also in pounds per hour (lb/hr). The permittee must install monitors for the flow rate through the EAF Baghouses in order to calculate the lb/hr, lb/ton of steel, and tpy emission rates. The permittee shall indicate the methodology used to determine the lb/hr figure in the required reporting. Both ppm and lb/hr data shall be used for compliance purposes. The lb/hr value shall be determined using 3-hour block averages for compliance purposes. [§19.703 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

30. If the permittee elects to install CEMS, it shall give the Department 15 days advanced written notice. Thereafter, the permittee shall demonstrate compliance either by providing monthly production reports pursuant to Specific Condition 27, or quarterly CEMS excess emission reports. If the permittee elects to discontinue use of CEMS, it shall give the Department 15 days advance written notice and shall resume or continue compliance with Specific Condition 27. [§19.703 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

31. The permittee shall for metallic scrap utilized in the EAF meet the prepare and implement a pollution prevention plan as required in §63.10685(a)(1) or the scrap restrictions of §63.10685(a)(2). [Regulation 19, §19.304 and 40 CFR Part 63, Subpart YYYYY]

32. The permittee shall for scrap containing motor vehicle scrap participate in and purchase motor vehicle scrap from providers who participate in a program for the removal of mercury switches as required in §63.10685(b)(2) that is approved by the Administrator of

40 CFR Part 63, Subpart YYYYY, prepare and submit for approval a site specific plan for removal of mercury switches as required in 63.10685(b)(1), or certify the scrap does not contain motor vehicle scrap. For scrap that does not contain motor vehicle scrap the permittee must maintain records of documentation that the scrap does not contain motor vehicle scrap. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart YYYYY]

33. The permittee shall maintain the records required in §63.10 and records which demonstrate compliance with the requirements of the pollution prevention plan and scrap restrictions of Specific Condition 31, with the mercury requirements in Specific Condition 32, and the requirements of required in §63.10685(c). Additionally the permittee must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch program. If the motor vehicle scrap is purchased from a broker, the permittee must maintain records identifying each broker and documentation that all scrap provided by the broker was provided by other scrap providers who participate in an approved mercury switch removal program. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart YYYYY]

34. The permittee must submit semiannual compliance reports to the Administrator of 40 CFR Part 63, Subpart YYYYY for the control of contaminates from scrap according to the requirements of §63.10(a)(3). The report must clearly identify any deviation from the requirements of §63.10685(a) and (b) outlined in Specific Conditions 31 and 32. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart YYYYY]

35. The permittee must install, operate, and maintain a capture system that collects the emissions from each EAF and conveys the collected emissions to a pollutant control device for the removal of particulate matter. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart YYYYY]

36. The permittee must not discharge from SN-01or SN-02 any gasses from an EAF which exhibit a 6% opacity or greater or contain in excess of 0.0052 gr/dscf. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart YYYYY]

37. The permittee must monitor the baghouses, SN-01or SN-02 according to the compliance assurance monitoring requirements outlined in Specific Conditions 13 through 22. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart YYYYY]

RH Degasser and Boiler

SN-03 Vacuum Tank Degasser (RH Degasser)
SN-03A Vacuum Tank Degasser Pilot Flame
SN-04 RH Degasser Boiler
SN-04A RH Vessel Preheater Station
SN-04B RH Vessel Top Part Dryer
SN-04C RH Vessel Nozzle Dryer
SN-04D RH Degasser Burner/Lance
SN-91 Alloy Delivery System RH Degasser

Source Description

The RH Degasser, SN-03, removes dissolved hydrogen from the liquid steel in order to produce certain steel products. The degasser is equipped with a flare to control CO emissions. The degasser is capable processing 250 tons of steel per hour. The RH Degasser Flare is equipped with a 5 MMBTU/hr of natural gas assist and pilot flame.

The RH Degasser Boiler, SN-04 is used to provide steam and heat to the RH Degasser. It is a 51 MMBTU/hr natural gas fired boiler.

The RH Vessel Preheater Station, SN-04A, the RH Vessel Top Part Dryer, SN-04B, the RH Vessel Nozzle Dryer, SN-04C, and RH Degasser Burner/Lance, SN-04D are all natural gas fired burners to support the RH Degasser. The RH Vessel Preheater Station, SN-04A, is rated at 6 MMBTU/hr. The RH Vessel Top Part Dryer, SN-04B, is rated at 1.4 MMBTU.hr. The RH Vessel Nozzle Dryer, SN-04C, is rated at 1.8 MMBTU/hr. The RH Degasser Burner/Lance, SN-04D is rated at 9 MMBTU/hr.

The Alloy Delivery System RH Degasser, SN-91, is used to transport and feed alloy materials into the RH degasser. A stocking pocket conveyer will be used to transfer materials into feed hoppers that will be used in the RH degasser.

Specific Conditions

38. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions 41, 42, 45 and 51. [Regulation 19 §19.901 and 40 CFR Part 52, Subpart E]

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SN	Description	Pollutant	lb/hr	tpy
SN-03	Vacuum Degasser (RH Degasser)	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.2
		CO	9.8	29.8
		NO_X	0.4	1.8
		Lead	0.000003	0.00002
		CO_2e	--	4,760
SN-04	Vacuum Degasser Boiler	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
		SO_2	0.1	0.2
		VOC	0.3	1.2
		CO	4.2	18.4
		NO_X	1.8	7.9
		Lead	0.00003	0.0002
		CO_2e	--	26,136
04A	RH Degasser Preheater Station	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.2
		CO	0.5	2.2
		NO_X	0.5	2.1
		Lead	0.000003	0.00002
		CO_2e	--	3,075
04B	RH Degasser Top Part Dryer	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.1
		CO	0.2	0.5
		NO_X	0.2	0.5
		Lead	0.0000007	0.000004
		CO_2e	--	717

SN	Description	Pollutant	lb/hr	tpy
04C	RH Degasser Nozzle Dryer	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.1
		CO	0.2	0.7
		NO_X	0.2	0.7
		Lead	0.0000009	0.000004
		CO_2e	--	922
04D	RH Degasser Burner/Lance	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	0.8	3.3
		NO_X	0.8	3.2
		Lead	0.000005	0.00002
		CO_2e	--	4,612
SN-91	Alloy Delivery System RH Degasser	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1

39. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions 41, 42, 46, 50 and 51. [Regulation 18 §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-03	Vacuum Degasser (RH Degasser)	Arsenic	0.000001	0.000005
		Cadmium	0.000006	0.00003
		Formaldehyde	0.004	0.0002
		Manganese	0.000002	0.000009
		Mercury	0.000002	0.00006
SN-04	Vacuum Degasser Boiler	Arsenic	0.00001	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00002	0.00009
		Mercury	0.00002	0.00006

SN	Description	Pollutant	lb/hr	tpy
04A	RH Degasser Preheater Station	Arsenic Cadmium Formaldehyde Manganese Mercury	0.000002 0.000007 0.0005 0.000003 0.000002	0.000006 0.00003 0.002 0.00001 0.000007
04B	RH Degasser Top Part Dryer	Arsenic Cadmium Formaldehyde Manganese Mercury	0.0000003 0.000002 0.0002 0.0000006 0.0000004	0.000002 0.000007 0.0005 0.000003 0.000002
04C	RH Degasser Nozzle Dryer	Arsenic Cadmium Formaldehyde Manganese Mercury	0.0000004 0.000002 0.0002 0.0000007 0.0000005	0.000002 0.000009 0.0006 0.000003 0.000003
04D	RH Degasser Burner/Lance	Arsenic Cadmium Formaldehyde Manganese Mercury	0.000002 0.00001 0.0007 0.000004 0.000003	0.000008 0.00005 0.003 0.00002 0.00001

40. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the following table. Compliance with this condition will be show by compliance with Specific Conditions 41, 42, 45 and 51. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-03	RH Degasser	CO (from degasser)	Flare	0.04 lb/ton of steel produced
		PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO (from natural gas combustion)		0.0824 lb/MMBTU

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO_X		1.0 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-04	RH Degasser Boiler	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners Combustion of clean fuel Good Combustion Practices	0.035 lb/MMBTU
		GHG	Good operating practices Minimum Boiler Efficiency	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU 75%
SN-04A SN-04B SN-04C SN-04D	RH Vessel Preheater Station, Vessel Top Part Dryer, RH Vessel Nozzle Dryer RH Degasser Burner/Lance	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners Combustion of clean fuel Good Combustion Practices	0.08 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
91	Alloy Deliver System – RH Degasser	PM PM_{10} $PM_{2.5}$	Dust Control Plan, Enclosed Conveyors with Fabric Filters	0.003 gr/dscf
			Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
			Fabric Filters Silos with Bin Vent Filters	0.01 gr/dscf
		Opacity		5%

41. The permittee shall install and operate alarm system to notify the operator of the presence of a pilot flame or other possible flare malfunction. The permittee shall perform monthly visual confirmation of the pilot lights, semi-annually remove the strainer and check for debris, and annual test fire to ensure pilot light. The permittee shall maintain logs of all flare inspection and maintenance activities. These logs shall be kept on site, in accordance with General Provision 7, and made available to Department personnel upon request. [§19.702, §19.304, 40 CFR 52, Subpart E, and 40 CFR Part 64]

42. The permittee shall record and monthly maintain records of the amounts of natural gas combusted in the Vacuum Degasser Boiler, SN-04, during each month. These records shall be kept on site and available for inspection upon request. [§19.304 and 40 CFR Part 60 Subpart Dc]

43. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
SN-03 SN-04 SN-04A SN-04B SN-04C SN-04D	5%	Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E
91	5%	Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E

44. The permittee shall conduct weekly observations of the opacity from SN-03, and 91. If visible emissions are detected, then the permittee shall immediately conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The result of these observations or readings shall be recorded in a log which shall be kept on site and made available for inspection upon request. [§19.705 of Regulation 19 and 40 CFR 52, Subpart E]

45. The permittee shall test the Vacuum Degasser Boiler, SN-04 for $PM_{2.5}$, CO, and NO_x emissions. This test shall be conducted in accordance with Plantwide Condition 3 and EPA Reference Method 201 with 202, 10, and 7E for $PM_{2.5}$, CO, and NO_x respectively and repeated every 5 years after the initial test. The test for $PM_{2.5}$ shall include filterable and condensable emissions. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]

46. The permittee shall test the Vacuum Tank Degasser, SN-03, to show the flare is designed and operated in accordance with 40 CFR 60.18(b) through (f). This test includes a Method 22 for opacity, measurement of the actual gas flow rate and, calculations of the heating value of the gas (if complying with 60.18(c)(3)(ii) and (c)(4)). This test shall be conducted in accordance with Plantwide Condition 3. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]

47. When testing the EAF Baghouses SN-01 and 02 for CO_2 emissions as required in Specific Condition 26 the permittee shall test the exhaust for either CO or total carbon from the degasser before it arrives at the flare. The permittee shall test the same heats of steel which were processed by the EAFs and LMFs during the testing for SN-01 and SN-02. The measured CO or total carbon will be used to calculate a CO_2 emission from the degasser assuming the flare is at least 98% efficient. The test may be conducted using EPA Reference Method 10 or a method approved in advance by the Department. The results of this test combined with the testing required in Specific Condition 26 will be used to show compliance with the lb/ton of steel BACT limit for the melt shop. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

48. The permittee shall not process more than 680,000 tons of alloying materials through SN-91 in any consecutive rolling 12-month period. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

49. The permittee shall maintain monthly records of the amount of alloying materials processed through SN-91. The records shall include the amount processed for the previous 12 months and the 12 month rolling total processed. These records shall updated by the 15th day of the month following the month to which the records pertain, kept onsite and in accordance with General Provision 7 and made available to Department personnel upon request. [Regulation 19, §19.901 and 40 CFR Part 52, Subpart E]

50. The permittee shall not process more than 1,500,000 tons of liquid steel through the RH Degasser, SN-03 in any consecutive rolling 12 month period. [Regulation 19, §19.901 and 40 CFR Part 52, Subpart E]

51. The permittee shall maintain monthly records of the amount of steel processed in SN-03. These records shall include the monthly total of steel processed and the rolling 12 month total of steel processed. These records shall be updated by the 15th day of the month following the month to which the records pertain, kept on site, made available to Department personnel upon request, and submitted in accordance with General Provision 7. [Regulation 19, §19.901 and 40 CFR Part 52, Subpart E]

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Melt Shop Natural Gas Sources

SN-05 Ladle Preheater 1
SN-06 Ladle Preheater 2
SN-07 Ladle Preheater 3
SN-08 Ladle Preheater 4
SN-09 Ladle Preheater 5
SN-10 Ladle Dryout Heater 1
SN-11 Ladle Dryout Heater 2
SN-12 Vertical Ladle Holding Station 1
SN-13 Vertical Ladle Holding Station 2
SN-16 Tundish Preheater 1
SN-17 Tundish Preheater 2
SN-18 Tundish Preheater 3
SN-19 Tundish Preheater 4

Source Description

The Ladle Preheaters, SN-05 through 09 are natural gas fired burners used to raise the temperature of ladles prior to the transfer of molten steel from the EAFs. Each Ladle Preheater is rated at 15 MMBTU/hr.

The Ladle Dryout Heaters, SN10 and 11, are natural gas fired heaters used to cure new refractory linings after they are replaced. Each of the dryout heaters is rated at 15 MMBTU/hr.

The Vertical Ladle Holding Station, SN-12 and SN-13, are natural gas fired heaters used to provide heat to the ladle metallurgy process in the melt shop. Each of the Vertical Ladle Holding Station is rated at 11 MMBTU/hr.

The Tundish Preheaters, SN-16 through 19 are natural gas fired heaters used to raise the temperature of tundishes prior to transfer of molten steel to the ladles. Each of the tundish preheaters is rated at 10 MMBTU/hr.

Specific Conditions

52. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition 56 and Plantwide Condition 5. [Regulation 19 §19.901 and 40 CFR Part 52, Subpart E]

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SN	Description	Pollutant	lb/hr	tpy
05	Ladle Preheater 1	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
06	Ladle Preheater 2	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
07	Ladle Preheater 3	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
08	Ladle Preheater 4	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687

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SN	Description	Pollutant	lb/hr	tpy
09	Ladle Preheater 5	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
10	Ladle Dryout Heater 1	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
11	Ladle Dryout Heater 2	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO_X	1.2	5.3
		Lead	0.000008	0.00004
		CO_2e	--	7,687
12	Vertical Ladle Holding Station 1	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	1.0	4.0
		NO_X	0.9	3.9
		Lead	0.000006	0.00003
		CO_2e	--	5,637

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SN	Description	Pollutant	lb/hr	tpy
13	Vertical Ladle Holding Station 2	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	1.0	4.0
		NO_X	0.9	3.9
		Lead	0.000006	0.00003
		CO_2e	--	5,637
16	Tundish Preheater 1	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	0.9	3.7
		NO_X	0.8	3.5
		Lead	0.000005	0.00003
		CO_2e	--	5,125
17	Tundish Preheater 2	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	0.9	3.7
		NO_X	0.8	3.5
		Lead	0.000005	0.00003
		CO_2e	--	5,125
18	Tundish Preheater 3	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	0.9	3.7
		NO_X	0.8	3.5
		Lead	0.000005	0.00003
		CO_2e	--	5,125

SN	Description	Pollutant	lb/hr	tpy
19	Tundish Preheater 4	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.1	0.3
		CO	0.9	3.7
		NO_X	0.8	3.5
		Lead	0.000005	0.00003
		CO_2e	--	5,125

53. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Condition 5. [Regulation 18 §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
05	Ladle Preheater 1	Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002
06	Ladle Preheater 2	Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002
07	Ladle Preheater 3	Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002
08	Ladle Preheater 4	Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002
09	Ladle Preheater 5	Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002

SN	Description	Pollutant	lb/hr	tpy
10	Ladle Dryout Heater 1	Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002
11	Ladle Dryout Heater 2	Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00008
		Formaldehyde	0.002	0.005
		Manganese	0.000006	0.00003
		Mercury	0.000004	0.00002
12	Vertical Ladle Holding Station 1	Arsenic	0.000003	0.00001
		Cadmium	0.00002	0.00006
		Formaldehyde	0.0009	0.004
		Manganese	0.000005	0.00002
		Mercury	0.000003	0.00002
13	Vertical Ladle Holding Station 2	Arsenic	0.000003	0.00001
		Cadmium	0.00002	0.00006
		Formaldehyde	0.0009	0.004
		Manganese	0.000005	0.00002
		Mercury	0.000003	0.00002
16	Tundish Preheater 1	Arsenic	0.000002	0.000009
		Cadmium	0.00002	0.00005
		Formaldehyde	0.0008	0.004
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00002
17	Tundish Preheater 2	Arsenic	0.000002	0.000009
		Cadmium	0.00002	0.00005
		Formaldehyde	0.0008	0.004
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00002
18	Tundish Preheater 3	Arsenic	0.000002	0.000009
		Cadmium	0.00002	0.00005
		Formaldehyde	0.0008	0.004
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00002
19	Tundish Preheater 4	Arsenic	0.000002	0.000009
		Cadmium	0.00002	0.00005
		Formaldehyde	0.0008	0.004
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00002

54. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the

following table. Compliance with this condition will be show by compliance with Specific Condition 56 and Plantwide Condition 5. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-05 – SN-09	Ladle Preheaters	PM	Combustion of Natural gas and Good Combustion Practices	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners Combustion of clean fuel Good Combustion Practices	0.08 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-10 and SN-11	Ladle Dryout Station	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners Combustion of clean fuel Good Combustion Practices	0.08 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-12 and 13	Vertical Ladle Holding Station	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners Combustion of clean fuel Good Combustion Practices	0.08 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-16 through 19	Tundish Preheaters #1 through #4	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners Combustion of clean fuel Good Combustion Practices	0.08 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU

55. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
SN-05, 06, 07, 08, 09, 10, 11, 12, 13, 16, 17, 18, 19	5%	Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E

56. The permittee shall test the sources in the table below for $PM_{2.5}$, and PM_{10}. This test shall be conducted in accordance with Plantwide Condition 3 and EPA Reference Method 202, 10, and 7E for $PM_{2.5}$ and PM_{10}. The test for $PM_{2.5}$ shall include filterable and condensable emissions. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]

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Source
One of SN-05 through 09
One of SN-10 or SN-11
One of SN-12 or 13
One of SN-16 through 19

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Tunnel Furnaces

SN-20 Tunnel Furnace 1
SN-21 Tunnel Furnace 2

Source Description

After being cast into thin slabs, the steel enters the casting tunnel lines. The tunnel furnaces are used to raise the slab temperatures from casting temperatures to rolling temperatures and to equalize the temperatures over the entire slab cross section. The tunnel furnaces have a combined total heat input of 234 and 192 MMBTU/hr from a series of individual natural gas-fired burners rated at 3 MMBTU/hr.

Specific Conditions

57. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition 61 and Plantwide Condition 5. [Regulation 19 §19.901 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
20	Tunnel Furnace 1	PM	0.2	0.6
		PM_{10}	0.2	0.6
		$PM_{2.5}$	0.2	0.6
		SO_2	0.2	0.6
		VOC	1.3	5.6
		CO	19.3	84.5
		NO_X	23.4	102.5
		Lead	0.0002	0.0006
		CO_2e	--	119,919
21	Tunnel Furnace 2	PM	0.2	0.5
		PM_{10}	0.2	0.5
		$PM_{2.5}$	0.2	0.5
		SO_2	0.2	0.5
		VOC	1.1	4.6
		CO	15.9	69.3
		NO_X	19.2	84.1
		Lead	0.0001	0.0005
		CO_2e	--	98,395

58. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be show by compliance with Specific Condition 61 and Plantwide Condition 5. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-20 and SN-21	Tunnel Furnaces	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU

59. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Condition 5. [Regulation 18 §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
20	Tunnel Furnace 1	Arsenic	0.00004	0.0002
		Cadmium	0.0003	0.001
		Formaldehyde	0.02	0.07
		Manganese	0.00008	0.0004
		Mercury	0.00005	0.0003
21	Tunnel Furnace 2	Arsenic	0.00005	0.0003
		Cadmium	0.0003	0.002
		Formaldehyde	0.02	0.08
		Manganese	0.00009	0.0004
		Mercury	0.00006	0.0003

60. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this condition will be shown by combustion of natural gas only and Plantwide Condition 5.

Source	Limit	Regulatory Citation
20 and 21	5%	Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E

61. The permittee shall perform an initial stack test of both SN-20, and SN-21, for $PM_{2.5}$, CO, and NO_x emissions. This test shall be conducted in accordance with Plantwide Condition 3 and EPA Reference Method 202, 10, and 7E for $PM_{2.5}$, CO, and NO_x respectively and repeated every 5 years after the initial testing is performed. The test for $PM_{2.5}$ shall include filterable and condensable emissions. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]

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Cold Mill Operations

SN-22 Pickle Line Boiler
SN-23 Pickle Line Scale Dust
SN-23A Push Pull Pickle Line Tension Leveler
SN-24 Pickling Section
SN-24A Push Pull Pickle Line Pickling Section
SN-25 Pickling Line Tandem Cold Mill
SN-26 Galvanizing Line Boiler 1
SN-27 Galvanizing Line Boiler 2
SN-28 Galvanizing Line Preheater 1
SN-29 Galvanizing Line Preheater 2
SN-34 Galvanizing Line Caustic Cleaning 1
SN-35 Galvanizing Line Caustic Cleaning 2
SN-36 Galvanizing Line Post Treatment 1
SN-37 Galvanizing Line Post Treatment 2
SN-38 Skin Pass Mill
SN-39 Annealing Furnaces
SN-40 Decarburizing Line 1 Furnace Section
SN-41 Decarburizing Line 1 Cleaning Section
SN-42 Decarburizing Line 2 Furnace Section
SN-43 Decarburizing Line 2 Cleaning Section
SN-44 Reversing Cold Mill 3
SN-45 Reversing Cold Mill 1
SN-46 Reversing Cold Mill 2
SN-47 Annealing Pickling Line – Annealing Furnace
SN-48 Annealing Pickling Line – Scale Dust Exhaust
SN-49 Annealing Pickling Line – Shot Blast
SN-51 Annealing Coating Line - Annealing Furnace
SN-52 Annealing Coating Line – Cleaning Section
SN-53 Annealing Coating Line – Drying Furnace
SN-54 MgO Coating Line 1 – Drying Furnace
SN-55 MgO Coating Line 1 – Cleaning Section
SN-56 MgO Coating Line 2 – Drying Furnace
SN-57 MgO Coating Line 2 – Cleaning Section
SN-58 Final Annealing and Coating Line 1 – Furnace
SN-59 Final Annealing and Coating Line 1 – Cleaning Section
SN-60 Final Annealing and Coating Line 2 – Furnace
SN-61 Final Annealing and Coating Line 2 – Cleaning Section

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Source Description

Pickling Line

Pickling Section, SN-24, pickling is the process that cleans a steel coil of its rust, dirt and oil so the metal can be further processed. The steel is uncoiled and sent through a series of hydrochloric acid baths that remove the oxides. The steel sheet is then rinsed and dried. A wet scrubber is used to control the HCl emissions.

The Pickling Line Tandem Cold Mill, SN-25, is a cold rolling process directly coupled with the pickling line. The process consists of removal of hot strip scale and a rolling operation to final material thickness. The steel coil is unwound and passed between a set of work rolls which will be pressed together by hydraulically-forced backup rolls. The oil emissions from the pickling line tandem cold mill will be reduced by a mist eliminator.

The Pickle Line Boiler, SN-22 is a 67 MMBTU/hr natural gas fired boiler which provides steam to the pickling line.

Pickle Line Scale Dust, SN-23, scale dust will be generated from the uncoiling, flattening and scale breaking of the steel. The scale dust emissions will be controlled by a fabric filter.

Galvanizing Line

The cold mill will incorporate two continuous galvanizing lines to produce galvanized strips. BRS has designed the galvanizing line to double as a continuous annealing line.

The Galvanizing Line Boilers 1 and 2, SN-26 and 27, are 24.5 MMBTU/hr each natural gas fired boilers which provide steam to the galvanizing line.

Galvanizing Line Preheaters 1 and 2, SN-28 and 29, are an 87.4 MMBTU/hr each natural gas fired heaters which provide heat for the galvanizing line.

Galvanizing Line Caustic Cleaning 1 and 2, SN- 34 and 35 are the post treatment sections of the galvanizing line. These sources are equipped with mist eliminators to reduce the emissions of particulate matter from caustic cleaning.

Galvanizing Line Post Treatment 1and 2, SN- 36 and 37 are the post treatment sections of the galvanizing line. These sources are equipped with mist eliminators to reduce the emissions of particulate matter from caustic cleaning.

The Off-line Skin Pass Mill, SN-38, adjusts the final mechanical properties, flatness, and surface finish of the cold rolled strip. A mist eliminator is used to reduce the particulate matter from the emulsion applied to the rolling material. The Skin Pass Mill can process 160 tons per hour of steel.

The Annealing Furnaces, SN-39, will consist of 15 annealing furnace bases each with a heat input value of 6.6 MMBTU/hr for a total of 98.25 MMBTU/hr. The entire annealing cycle will take about 54 hours

Decarburizing Line

The decarburizing lines reduce the carbon content at intermediate strip thickness. The decarburizing line consists of two sections the cleaning section, SN-41 and 43, and the furnace secton.SN-40 and 42. Each of the two decarburization line is capable of processing 30 tons of steel per hour. The furnace sections are natural gas fired burners with a heat input of 22 MMBTU/hr each.

Reversing Cold Mill

The Reversing Cold Mill 1, 2, and 3, SN-45, 46, and 44 reduce the thickness of the steel to the desired specifications. Each rolling mill is capable of processing 45 tons per hour of steel. A set of rolls applies pressure to the steel while maintaining the shape and width. The steel runs back and forth between rollers which reduce the thickness further with each pass. As the steel passes through the rolls, it is re-coiled onto the delivery tension reel. From there it goes back through the rolls in reverse reducing the steel thickness further. An emulsion is added to the strip surface during the rolling. Mist eliminators are employed to reduce emissions of particulate matter.

Annealing Pickling Line

Annealing Pickling Line – Annealing Furnace, SN-47, is a 66 MMBTU/hr natural gas fired heater to provide heat to the annealing pickling line for hot strip annealing.

Annealing Pickling Line – Scale Dust Exhaust, SN-48, this process will involve removal of scale from the steel strip surface. A fabric filter will be used to reduce scale dust emissions.

Annealing Pickling Line – Shot Blast, SN-49, is the mechanical cleaning at the annealing pickling section with a shot blast machine. A fabric filter will be used to reduce emissions from the shot blast machine.

Annealing Pickling Line - Pickling Section, SN-50, pickling is the process that cleans a steel coil of its rust, dirt and oil so the metal can be further processed. A wet scrubber is used to control HCl emissions.

Annealing Coating Line

The annealing coating line will be used for annealing of the cold roll steel strip and application of an insulating coating.
Annealing Coating Line - Annealing Furnace, SN-51, is a 50 MMBTU/hr natural gas fired annealing furnace in the annealing coating line.

Annealing Coating Line – Cleaning Section, SN-52, uses a caustic solution to clean the steel. A mist eliminator is used to reduce emissions.

Annealing Coating Line – Drying Furnace, SN-53, is a 38 MMBTU/hr natural gas fired combustion device. An insulating coating is applied to the steel. An RTO will be used to reduce VOC emissions from the insulating coating.

MgO Coating Lines

The MgO coating apply magnesia to the strip steel surface. The application of this material is required to avoid the steel sticking during high temperature annealing. There are two MgO coating lines each with a furnace section and a cleaning section.

MgO Coating Line 1 – Drying Furnace, SN-54, is a 38 MMBTU/hr natural gas fired combustion device used to provide heat to the MgO coating line.

MgO Coating Line 1 – Cleaning Section, SN-55, uses sodium hydroxide to clean the strip steel. A mist eliminator is used to reduce emissions.

MgO Coating Line 2 – Drying Furnace, SN-56, is a 38 MMBTU/hr natural gas fired combustion device used to provide heat to the MgO coating line.

MgO Coating Line 2 – Cleaning Section, SN-57, uses sodium hydroxide to clean the strip steel. A mist eliminator is used to reduce emissions.

Final Annealing and Coating Lines

The Final Annealing and Coating Lines, which are also commonly called "flattening and coating lines" are used to coat the steel strip with an insulation layer and subsequent flatness improvements. The process line does involve an annealing process. This is the final step in producing a grain oriented product.

Final Annealing and Coating Line 1 – Furnace, SN-58, is natural gas fired and has a maximum heat input of 32 MMBTU/hr.

Final Annealing and Coating Line 1 – Cleaning Section, SN-59, is a cleaning and pickling section which uses hydrochloric acid to clean the steel strip. A wet scrubber will be used to help control emissions.

Final Annealing and Coating Line 2 – Furnace, SN-60, is natural gas fired and has a maximum heat input of 32 MMBTU/hr.

Final Annealing and Coating Line 2 – Cleaning Section, SN-61, is a cleaning and pickling section which uses hydrochloric acid to clean the steel strip. A wet scrubber will be used to help control emissions.

Specific Conditions

62. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions 66 through 75. [Regulation 19 §19.901 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
22	Pickle Line Boiler	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
		SO_2	0.1	0.2
		VOC	0.4	1.6
		CO	5.6	24.2
		NO_X	2.4	10.3
		Lead	0.00004	0.0002
		CO_2e	--	34,336
23	Pickle Line Scale Dust	PM	1.0	4.4
		PM_{10}	1.0	4.4
		$PM_{2.5}$	1.0	4.4
23A	Push Pull Pickle Line Tension Leveler Scale Dust Exhaust	PM	0.4	1.7
		PM_{10}	0.4	1.7
		$PM_{2.5}$	0.4	1.7
25	Tandem Cold Mill	PM	4.8	14.4
		PM_{10}	12.5	37.9
		$PM_{2.5}$	12.5	37.9
26	Galvanizing Line Boiler 1	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.2	0.6
		CO	2.1	8.9
		NO_X	0.9	3.8
		Lead	0.00002	0.00006
		CO_2e	--	12,556

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SN	Description	Pollutant	lb/hr	tpy
27	Galvanizing Line Boiler 2	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.1	0.1
		VOC	0.2	0.6
		CO	2.1	8.9
		NO_X	0.9	3.8
		Lead	0.00002	0.00006
		CO_2e	--	12,556
28	Galvanizing Line Preheater 1	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
		SO_2	0.1	0.3
		VOC	0.5	2.1
		CO	7.2	31.6
		NO_X	3.1	13.4
		Lead	0.00005	0.0002
		CO_2e	--	44,790
29	Galvanizing Line Preheater 2	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
		SO_2	0.1	0.3
		VOC	0.5	2.1
		CO	7.2	31.6
		NO_X	3.1	13.4
		Lead	0.00005	0.0002
		CO_2e	--	44,790
34	Galvanizing Line Caustic Cleaning 1	PM	0.2	0.9
		PM_{10}	0.2	0.9
		$PM_{2.5}$	0.2	0.9
35	Galvanizing Line Caustic Cleaning 2	PM	0.2	0.9
		PM_{10}	0.2	0.9
		$PM_{2.5}$	0.2	0.9
36	Galvanizing Line Post Treatment 1	PM	0.1	0.3
		PM_{10}	0.1	0.3
		$PM_{2.5}$	0.1	0.3
37	Galvanizing Line Post Treatment 2	PM	0.1	0.3
		PM_{10}	0.1	0.3
		$PM_{2.5}$	0.1	0.3
38	Skin Pass Mill	PM	0.6	1.8
		PM_{10}	1.5	4.6
		$PM_{2.5}$	1.5	4.6

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SN	Description	Pollutant	lb/hr	tpy
39	Annealing Furnaces	PM	0.1	0.3
		PM_{10}	0.1	0.3
		$PM_{2.5}$	0.1	0.3
		SO_2	0.1	0.3
		VOC	0.6	2.4
		CO	8.1	35.5
		NO_X	9.9	43.1
		Lead	0.00005	0.0003
		CO_2e	--	50,351
40	Decarburizing Line 1 Furnace Section	PM	0.5	2.1
		PM_{10}	0.5	2.1
		$PM_{2.5}$	0.5	2.1
		SO_2	0.1	0.1
		VOC	0.2	0.9
		CO	3.0	13.0
		NO_X	3.6	15.8
		Lead	0.00002	0.00008
		CO_2e	--	18,449
41	Decarburizing Line 1 Cleaning Section	PM	0.3	1.2
		PM_{10}	0.3	1.2
		$PM_{2.5}$	0.3	1.2
42	Decarburizing Line 2 Furnace Section	PM	0.3	1.3
		PM_{10}	0.3	1.3
		$PM_{2.5}$	0.3	1.3
		SO_2	0.1	0.1
		VOC	0.2	0.6
		CO	1.9	8.0
		NO_X	2.2	9.7
		Lead	0.00002	0.00005
		CO_2e	--	11,274
43	Decarburizing Line 2 Cleaning Section	PM	0.3	1.1
		PM_{10}	0.3	1.1
		$PM_{2.5}$	0.3	1.1
44	Reversing Cold Mill 3	PM	1.5	4.6
		PM_{10}	4.0	12.1
		$PM_{2.5}$	4.0	12.1
45	Reversing Cold Mill 1	PM	1.5	4.6
		PM_{10}	4.0	12.1
		$PM_{2.5}$	4.0	12.1
46	Reversing Cold Mill 2	PM	1.5	4.6
		PM_{10}	4.0	12.1
		$PM_{2.5}$	4.0	12.1

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SN	Description	Pollutant	lb/hr	tpy
47	Annealing Pickling Line – Annealing Furnace	PM	0.9	3.8
		PM_{10}	0.9	3.8
		$PM_{2.5}$	0.9	3.8
		SO_2	0.1	0.2
		VOC	0.4	1.6
		CO	5.5	23.9
		NO_X	6.6	29.0
		Lead	0.00004	0.0002
		CO_2e	--	33,823
48	Annealing Pickling Line – Scale Dust Exhaust	PM	0.7	3.0
		PM_{10}	0.7	3.0
		$PM_{2.5}$	0.7	3.0
49	Annealing Pickling Line – Shot Blast	PM	0.7	3.0
		PM_{10}	0.7	3.0
		$PM_{2.5}$	0.7	3.0
51	Annealing Coating Line - Annealing Furnace	PM	0.6	2.7
		PM_{10}	0.6	2.7
		$PM_{2.5}$	0.6	2.7
		SO_2	0.1	0.2
		VOC	0.3	1.1
		CO	3.8	17.6
		NO_X	4.6	20.2
		Lead	0.00003	0.0002
		CO_2e	--	23,574
52	Annealing Coating Line – Cleaning Section	PM	0.3	1.1
		PM_{10}	0.3	1.1
		$PM_{2.5}$	0.3	1.1
53	Annealing Coating Line – Drying Furnace	PM	0.3	1.1
		PM_{10}	0.3	1.1
		$PM_{2.5}$	0.3	1.1
		SO_2	0.1	0.1
		VOC	0.5	2.4
		CO	1.5	6.5
		NO_X	1.8	7.9
		Lead	0.000009	0.00004
		CO_2e	--	9,225

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SN	Description	Pollutant	lb/hr	tpy
54	MgO Coating Line 1 – Drying Furnace	PM	0.2	0.8
		PM_{10}	0.2	0.8
		$PM_{2.5}$	0.2	0.8
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.2	4.8
		NO_X	1.4	5.9
		Lead	0.000007	0.00003
		CO_2e	--	6,816
55	MgO Coating Line 1 – Cleaning Section	PM	0.3	1.1
		PM_{10}	0.3	1.1
		$PM_{2.5}$	0.3	1.1
56	MgO Coating Line 2 – Drying Furnace	PM	0.2	0.8
		PM_{10}	0.2	0.8
		$PM_{2.5}$	0.2	0.8
		SO_2	0.1	0.1
		VOC	0.1	0.4
		CO	1.2	4.8
		NO_X	1.4	5.9
		Lead	0.000007	0.00003
		CO_2e	--	6,816
57	MgO Coating Line 2 – Cleaning Section	PM	0.3	1.1
		PM_{10}	0.3	1.1
		$PM_{2.5}$	0.3	1.1
58	Final Annealing and Coating Line 1 – Furnace	PM	0.5	1.9
		PM_{10}	0.5	1.9
		$PM_{2.5}$	0.5	1.9
		SO_2	0.1	0.1
		VOC	0.2	0.8
		CO	2.7	11.6
		NO_X	3.2	14.1
		Lead	0.00002	0.00007
		CO_2e	--	16,399
60	Final Annealing and Coating Line 2 – Furnace	PM	0.5	1.9
		PM_{10}	0.5	1.9
		$PM_{2.5}$	0.5	1.9
		SO_2	0.1	0.1
		VOC	0.2	0.8
		CO	2.7	11.6
		NO_X	3.2	14.1
		Lead	0.00002	0.00007
		CO_2e	--	16,399

63. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the following table. Compliance with this condition will be show by compliance with Specific Conditions 66 through 75. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-22	Pickle Line Boiler	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners Combustion of clean fuel Good Combustion Practices	0.035 lb/MMBTU
		GHG	Good operating practices Minimum Boiler Efficiency	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU 75%
SN-23	Pickle Line Scale Exhaust	PM	Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-23A	Tension Leveler Dust Exhaust	PM	Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-25	Tandem Cold Mill	PM	Mist Eliminator	0.0025 gr/dscf (filterable only)
		PM_{10}		0.0066 gr/dscf
		$PM_{2.5}$		0.0066 gr/dscf
		Opacity		5%
SN-26, SN-27	Galvanizing Line Boilers	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners Combustion of clean fuel Good Combustion Practices	0.035 lb/MMBTU
		GHG	Good operating practices Minimum Boiler Efficiency	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU 75%
SN-28, SN-29	Galvanizing Line Preheater	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	SCR, Low NOx burners Combustion of clean fuel Good Combustion Practices	0.035 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-34, SN-35, SN-36, SN-37	Galvanizing Line Caustic Cleaning and Post Treatment	PM	Mist Eliminator	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-38	Skin Pass Mill	PM	Mist Eliminator	0.0025 gr/dscf
		PM_{10}		0.0066 gr/dscf
		$PM_{2.5}$		

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		Opacity		5%
SN-39	Annealing Furnaces	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-40, SN-42	Decarburizing Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners SCR Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-41, SN-43	Decarburizing Line Cleaning Sections	PM	Mist Eliminator	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-44, SN-45, SN-46	Reversing Cold Mills	PM	Mist Eliminator	0.0025gr/dscf
		PM_{10}		0.0066 gr/dscf
		$PM_{2.5}$		
		Opacity		5%
SN-47	Annealing Pickling Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners SCR Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-48, SN-49	Annealing Pickling Line Scale Dust Exhaust and Shotblast	PM	Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-51	Annealing Coating Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO_X	Low NOx burners SCR Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-52	Annealing Coating Line Cleaning Section	PM	Mist Eliminator	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-53	Annealing Coating Line Drying Furnace	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		CO		0.0824 lb/MMBTU
		VOC Natural gas Combustion	RTO	0.0054 lb/MMBTU
		NO_X	Low NOx burners Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-54, SN-56	MgO Coating Lines Drying Sections	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU
SN-55, SN-57	MgO Coating Lines Cleaning Sections	PM	Mist Eliminator	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-58, SN-60	Final Annealing and Coating Lines Furnace Sections	PM	Combustion of Natural gas and Good Combustion Practice	0.00052 lb/MMBTU
		PM_{10}		0.00052 lb/MMBTU
		$PM_{2.5}$		0.00052 lb/MMBTU
		Opacity		5%
		SO_2		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO_X	Low NOx burners SCR Combustion of clean fuel Good Combustion Practices	0.1 lb/MMBTU
		GHG	Good operating practices	CO_2 117 lb/MMBTU CH_4 0.0022 lb/MMBTU N_2O 0.0002 lb/MMBTU

64. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Condition 5. [Regulation 18 §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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SN	Description	Pollutant	lb/hr	tpy
22	Pickle Line Boiler	Arsenic Cadmium Formaldehyde Manganese Mercury	0.00002 0.00008 0.005 0.00003 0.00002	0.00006 0.0004 0.03 0.0002 0.00008
24	Pickling Section	HCl	0.2	0.6
24A	Push Pull Pickle Line Pickling Section	HCl	0.2	0.8
26	Galvanizing Line Boiler 1	Arsenic Cadmium Formaldehyde Manganese Mercury	0.000005 0.00003 0.002 0.00001 0.000007	0.00003 0.0002 0.008 0.00004 0.00003
27	Galvanizing Line Boiler 2	Arsenic Cadmium Formaldehyde Manganese Mercury	0.000005 0.00003 0.002 0.00001 0.000007	0.00003 0.0002 0.008 0.00004 0.00003
28	Galvanizing Line Preheater 1	Arsenic Cadmium Formaldehyde Manganese Mercury	0.00002 0.0001 0.007 0.00004 0.00003	0.00008 0.0004 0.03 0.0002 0.0001
29	Galvanizing Line Preheater 2	Arsenic Cadmium Formaldehyde Manganese Mercury	0.00002 0.0001 0.007 0.00004 0.00003	0.00008 0.0004 0.03 0.0002 0.0001
39	Annealing Furnaces	Arsenic Cadmium Formaldehyde Manganese Mercury	0.00002 0.0002 0.008 0.00004 0.00003	0.00009 0.0005 0.04 0.0002 0.0002
40	Decarburizing Line 1 Furnace Section	Arsenic Cadmium Formaldehyde Manganese Mercury	0.000008 0.00004 0.003 0.00002 0.00001	0.00004 0.0002 0.02 0.00006 0.00005

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SN	Description	Pollutant	lb/hr	tpy
42	Decarburizing Line 2 Furnace Section	Arsenic Cadmium Formaldehyde Manganese Mercury	0.000005 0.00003 0.002 0.000009 0.000006	0.00002 0.0002 0.008 0.00004 0.00003
47	Annealing Pickling Line – Annealing Furnace	Arsenic Cadmium Formaldehyde Manganese Mercury	0.00002 0.00008 0.005 0.00003 0.00002	0.00006 0.00004 0.003 0.0002 0.00008
50	Annealing Pickling Line Pickling Section	HCl	0.2	0.7
51	Annealing Coating Line - Annealing Furnace	Arsenic Cadmium Formaldehyde Manganese Mercury	0.00001 0.00005 0.004 0.00002 0.00002	0.00004 0.0003 0.02 0.00008 0.00006
53	Annealing Coating Line – Drying Furnace	Arsenic Cadmium Formaldehyde Manganese Mercury	0.000004 0.00002 0.002 0.000007 0.000005	0.00002 0.00009 0.006 0.00003 0.00003
54	MgO Coating Line 1 – Drying Furnace	Arsenic Cadmium Formaldehyde Manganese Mercury	0.000003 0.00002 0.001 0.000005 0.000004	0.00002 0.00007 0.005 0.00003 0.00002
56	MgO Coating Line 2 – Drying Furnace	Arsenic Cadmium Formaldehyde Manganese Mercury	0.000003 0.00002 0.001 0.000005 0.000004	0.00002 0.00007 0.005 0.00003 0.00002
58	Final Annealing and Coating Line 1 – Furnace	Arsenic Cadmium Formaldehyde Manganese Mercury	0.000007 0.00004 0.003 0.00002 0.000009	0.00003 0.0002 0.002 0.00006 0.00004
59	Final Annealing and Coating Line 1 – Cleaning Section	HCl	0.2	0.7

SN	Description	Pollutant	lb/hr	tpy
60	Final Annealing and Coating Line 2 – Furnace	Arsenic Cadmium Formaldehyde Manganese Mercury	0.000007 0.00004 0.003 0.00002 0.000009	0.00003 0.0002 0.002 0.00006 0.00004
61	Final Annealing and Coating Line 2 – Cleaning Section	HCl	0.2	0.7

65. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
SN-22, 23, 23A, 25, 26, 27, 28, 29, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 60	5%	Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E

66. The permittee shall conduct weekly observations of the opacity from the buildings containing the sources listed in Specific Condition 65. If visible emissions are detected, then the permittee shall immediately conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The result of these observations or readings shall be recorded in a log which shall be kept on site and made available for inspection upon request. [§19.705 of Regulation 19 and 40 CFR 52, Subpart E]The permittee shall record and monthly maintain records of the amounts of natural gas combusted in the boilers, SN-22, SN-26, and SN-27, during each month. These records shall be kept on site and available for inspection upon request. [§19.304 and 40 CFR Part 60 Subpart Dc]

67. The permittee for the annealing and coating line dryer, SN-52, on and after the compliance date on which 40 CFR 60.8 requires the performance test to be completed shall not cause to be discharged to the atmosphere more than: 0.14 kg VOC/l of coating solids applied or 10% of the VOC's applied (90% emissions reduction) for each calendar month operated at the most recently demonstrated overall efficiency. [§19.304 and 40 CFR Part 60 Subpart TT]

68. The permittee shall conduct an initial performance test as required under 40 CFR 60.8(a) and thereafter a performance test every calendar month for the annealing and coating line

according to the procedures of 40 CFR 60.463. The permittee shall use the procedures specified in 40 CFR 60.463(c) (1) for determining the monthly volume-weighted average emissions of VOC's in kg/l of coating solids applied. The permittee shall use the procedures specified in 40 CFR 60.463(c) (2) to show compliance with the emission limits specified under 40 CFR 60.462(a)(2) or (3) and Specific Condition 67. The permittee shall use the method and procedures outlined in 40 CFR 60.466 during these tests as appropriate. NSPS Subpart TT states section 40 CFR 60.8 (d) and (f) do not apply to this testing. The initial testing must be conducted in accordance with General Provision 3 of this permit. [§19.304 and 40 CFR Part 60 Subpart TT]

69. The permittee shall where the compliance with the numerical limit specified in 60.462(a)(2) shall compute and record the average VOC content of the coatings applied during each calendar month for the annealing and coating line according the equations in 40 CFR 60.463. [§19.304 and 40 CFR Part 60 Subpart TT]

70. The permittee shall install, calibrate, operate, and maintain a device that continuously records the combustion temperature of the effluent gasses of the RTO on SN-52. This device shall have an accuracy ±2.5°C or ±0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater. The permittee shall record all periods (during actual coating operations) in excess of 3 hours duration which the average temperature in the RTO remains more than 28°C below the temperature at which the compliance was measured in the most recent measurement of the RTOs efficiency required in Specific Condition 68. [§19.304 and 40 CFR Part 60 Subpart TT]

71. The permittee shall in the initial compliance report required by 40 CFR 60.8 include the weighted average of the VOC content of coatings used during a period of one calendar month for the annealing and coating line. The permittee shall also include the data outlined in 40 CFR 60.465(b). [§19.304 and 40 CFR Part 60 Subpart TT]

72. The permittee shall test the Boilers SN-22, 26, and 27 for $PM_{2.5}$, CO, and NO_x emissions. This test shall be conducted in accordance with Plantwide Condition 3 and EPA Reference Method 202, 10, and 7E for $PM_{2.5}$, CO, and NO_x respectively and repeated every 5 years after the initial test. The test for $PM_{2.5}$ shall include filterable and condensable emissions. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]

73. The permittee shall test the sources in the table below for $PM_{2.5}$, and PM_{10}. This test shall be conducted in accordance with Plantwide Condition 3 and EPA Reference Method 202, 10, and 7E for $PM_{2.5}$ and PM_{10}. The test for $PM_{2.5}$ shall include filterable and condensable emissions. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]

Source
Either 28 or 29
39

Source
Either 51, 58, or 60
53
Either 54 or 56

74. The permittee shall install operate and maintain a non-resettable hour meter on SN-25, the Tandem Cold Mill; SN-38, the Skin Pass Mill; SN-44, 45, and 46 the Rolling Mills. The hour meters shall record all time when steel is moving through its respective mill. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

75. The permittee shall not operate the following sources more than the hour limits specified in the table below. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

Source	Limit Hours per year
25	6080
38	6080
44	6080
45	6080
46	6080

76. The permittee shall maintain records of the hours of operation of SN-25, 38, 44, 45, and 46 each month. These records shall be updated by the 15th day of the month following the month that the records represent, kept on site, made available to Department personnel upon request and in accordance with General Provision 7. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

77. The permittee shall test SN-24, 24A, 50, 59, and 61 for HCl emissions. This test shall be conducted in accordance with Plantwide Condition 3 and EPA Reference Method 26. [Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

78. The permittee shall test SN-28 and 29 for NO_X emissions. This test shall be conducted in accordance with Plantwide Condition 3 and EPA Reference Method 7E and repeated annually thereafter. [§19.702 of Regulation 19 and 40 CFR Part 52, Subpart E]

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Emergency Engines

SN-62 Emergency Generator 1, Diesel Fired, 625 hp
SN-63 Emergency Generator 2, Diesel Fired, 1500 kW
SN-64 Emergency Generator 3, Diesel Fired, 1500 kW
SN-65 Emergency Generator 4, Diesel Fired, 1500 kW
SN-66 Emergency Generator 5, Diesel Fired, 1500 kW
SN-67 Emergency Generator 6, Diesel Fired, 1500 kW

Source Description

The emergency generators are diesel fired generators which provide electrical power in the event of power failure.

Specific Conditions

79. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance Specific Conditions 83 and 85 through 89. [Regulation 19 §19.901 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
62	Emergency Generator 1 Diesel Fired, 625 hp	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	5.1	0.3
		VOC	1.5	0.1
		CO	3.6	0.2
		NO_X	0.4	0.1
		CO_2e	--	32
63	Emergency Generator 2 Diesel Fired, 1500 kW	PM	0.3	0.1
		PM_{10}	0.3	0.1
		$PM_{2.5}$	0.3	0.1
		SO_2	16.3	0.9
		VOC	1.4	0.1
		CO	11.9	0.6
		NO_X	2.2	0.1
		CO_2e	--	119

SN	Description	Pollutant	lb/hr	tpy
64	Emergency Generator 3 Diesel Fired, 1500 kW	PM	0.3	0.1
		PM_{10}	0.3	0.1
		$PM_{2.5}$	0.3	0.1
		SO_2	16.3	0.9
		VOC	1.4	0.1
		CO	11.9	0.6
		NO_X	2.2	0.1
		CO_2e	--	119
65	Emergency Generator 4 Diesel Fired, 1500 kW	PM	0.3	0.1
		PM_{10}	0.3	0.1
		$PM_{2.5}$	0.3	0.1
		SO_2	16.3	0.9
		VOC	1.4	0.1
		CO	11.9	0.6
		NO_X	2.2	0.1
		CO_2e	--	119
66	Emergency Generator 5 Diesel Fired, 1500 kW	PM	0.3	0.1
		PM_{10}	0.3	0.1
		$PM_{2.5}$	0.3	0.1
		SO_2	16.3	0.9
		VOC	1.4	0.1
		CO	11.9	0.6
		NO_X	2.2	0.1
		CO_2e	--	119
67	Emergency Generator 6 Diesel Fired, 1500 kW	PM	0.3	0.1
		PM_{10}	0.3	0.1
		$PM_{2.5}$	0.3	0.1
		SO_2	16.3	0.9
		VOC	1.4	0.1
		CO	11.9	0.6
		NO_X	2.2	0.1
		CO_2e	--	119

80. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the following table. Compliance with this condition will be show by compliance with Specific Conditions 83 and 85 through 89. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-62	Emergency Generator #1	PM	Good Operating Practices, limited hours of operation, Compliance with NSPS Subpart IIII	0.02 g/kW-Hr
		PM_{10}		0.02 g/kW-Hr
		$PM_{2.5}$		0.02 g/kW-Hr
		Opacity		20%
		SO_2		<0.0015% sulfur in fuel
		VOC		0.19 g/kW-Hr
		CO		3.5 g/kW-Hr
		NO_X		0.4 g/kW-Hr
		GHG	Good Combustion Practices	CO_2 163 lbs/MMBTU CH_4 0.0061 lbs/MMBTU N_2O 0.0013 lbs/MMBTU
SN-63 through 67	Emergency Generators 2 through 6	PM	Good Operating Practices, limited hours of operation, Compliance with NSPS Subpart IIII	0.04 g/kW-Hr
		PM_{10}		0.04 g/kW-Hr
		$PM_{2.5}$		0.04 g/kW-Hr
		Opacity		20%
		SO_2		<0.0015% sulfur in fuel
		VOC		0.19 g/kW-Hr
		CO		3.5 g/kW-Hr
		NO_X		0.67 g/kW-Hr
		GHG	Good Combustion Practices	CO_2 163 lbs/MMBTU CH_4 0.0061 lbs/MMBTU N_2O 0.0013 lbs/MMBTU

81. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions 83 and 85 through 89. [Regulation 18 §18.801 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
62	Emergency Generator 1 Diesel Fired, 625 hp	H_2SO_4	0.4	0.1
63	Emergency Generator 2 Diesel Fired, 1500 kW	H_2SO_4	1.2	0.1
64	Emergency Generator 3 Diesel Fired, 1500 kW	H_2SO_4	1.2	0.1
65	Emergency Generator 4 Diesel Fired, 1500 kW	H_2SO_4	1.2	0.1
66	Emergency Generator 5 Diesel Fired, 1500 kW	H_2SO_4	1.2	0.1

SN	Description	Pollutant	lb/hr	tpy
67	Emergency Generator 6 Diesel Fired, 1500 kW	H_2SO_4	1.2	0.1

82. The permittee shall not exceed 20% opacity from the Sources SN-62, 63, 64, 65, 66, and 67. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

83. The permittee shall not operate any single emergency engine, SN-62, 63, 64, 65, 66, and 67 more than 100 hours in any consecutive 12 month period. The permittee shall maintain records of the hours of operation of each generator each month. These records shall be updated by the 15th day of the month following the month that the records represent, kept on site, made available to Department personnel upon request and in accordance with General Provision 7. [§19.705 of Regulation 19 and 40 CFR Part 52, Subpart E]

84. The permittee shall comply with the provisions of 40 CFR Part 63 Subpart ZZZZ for SN-62, 63, 64, 65, 66, and 67 by complying with the provisions of 40 CFR Part 60 Subpart IIII. [§19.304 of and 40 CFR Part 63, Subpart ZZZZ]

85. The permittee shall comply with the emissions standards specified in §60.4202 of 40 CFR Part 60 Subpart IIII for SN-62, 63, 64, 65, 66, and 67. The permittee shall operate and maintain the emergency generators, SN-62, 63, 64, 65, 66, and 67 according to the manufacturer's written instruction or procedures developed by the permittee and approved by the generator manufacturer, over the life of the entire engine. [§19.304 of and 40 CFR Part 60, Subpart IIII]

86. The permittee shall install a non-resettable hour meter on the Emergency Generators, SN-62, 63, 64, 65, 66, and 67. [§19.304 of and 40 CFR Part 60, Subpart IIII]

87. The permittee shall use a diesel fuel that meets the requirements of 40 CFR 80.510(b) in the Emergency Generators, SN-62, 63, 64, 65, 66, and 67. [§19.304 of and 40 CFR Part 60, Subpart IIII]

88. If the Emergency Generators, SN-62, 63, 64, 65, 66, and 67 are equipped with a diesel particulate filter to comply with emission standards, the diesel particulate filter must be installed with a back pressure monitor that notifies the permittee when the high backpressure limit of the engine is approached. [§19.304 of and 40 CFR Part 60, Subpart IIII]

89. The permittee may only operate the Emergency Generators, SN-62, 63, 64, 65, 66, and 67, 100 hours in any consecutive 12 month period for maintenance checks and readiness testing. The permittee shall maintain monthly records of the usage of the generator. [§19.304 of and 40 CFR Part 60, Subpart IIII]

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Cooling Towers

SN-68 Non-Contact Cooling Tower 1 – Melt Shop
SN-69 Non-Contact Cooling Tower 2 – Melt Shop
SN-70 Non-Contact Cooling Tower 3 – Caster and Hot Mill
SN-71 Non-Contact Cooling Tower 4 – Caster and Hot Mill
SN-72 Non-Contact Cooling Tower 5 – Cold Mill
SN-73 Non-Contact Cooling Tower 6 – Cold Mill
SN-74 Contact Cooling Tower 1 – Melt Shop
SN-75 Contact Cooling Tower 2 – Melt Shop
SN-76 Contact Cooling Tower 3 – Caster and Hot Mill
SN-77 Contact Cooling Tower 4 – Caster and Hot Mill
SN-78 Contact Cooling Tower 5 – Caster and Hot Mill
SN-79 Contact Cooling Tower 6 – Laminar

Source Description

The facility has a number of cooling towers which remove heat from process water.

SN-68 is a 3 million gallon per hour Non-Contact Cooling Tower at the Melt Shop

SN-69 is a 4.32 million gallon per hour Non-Contact Cooling Tower at the Melt Shop

SN-70 is a 1.2 million gallon per hour Non-Contact Cooling Tower at the Caster and Hot Mill

SN-71 is a 660.000 gallon per hour Non-Contact Cooling Tower at the Caster and Hot Mill

SN-72 is a 0.9 million gallon per hour Non-Contact Cooling Tower at the Cold Mill

SN-73 is a 2.1 million gallon per hour Non-Contact Cooling Tower at the Cold Mill

SN-74 is a 204,000 gallon per hour Contact Cooling Tower at the Melt Shop

SN-75 is a 204,000 gallon per hour Contact Cooling Tower at the Melt Shop

SN-76 is a 2.52 million gallon per hour Contact Cooling Tower at the Caster and Hot Mill

SN-77 is a 2.52 million gallon per hour Contact Cooling Tower at the Caster and Hot Mill

SN-78 is a 420,000 gallon per hour Contact Cooling Tower at the Caster and Hot Mill

SN-79 is a 1.62 million gallon per hour Contact Cooling Tower at the at the Laminar

Specific Conditions

90. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions 92 and 91. [Regulation 19 §19.901 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
68	Non-Contact Cooling Tower 1 – Melt Shop	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
69	Non-Contact Cooling Tower 2 – Melt Shop	PM	0.1	0.3
		PM_{10}	0.1	0.3
		$PM_{2.5}$	0.1	0.3
70	Non-Contact Cooling Tower 3 – Caster and Hot Mill	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
71	Non-Contact Cooling Tower 4 – Caster and Hot Mill	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
72	Non-Contact Cooling Tower 5 – Cold Mill	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
73	Non-Contact Cooling Tower 6 – Cold Mill	PM	0.1	0.4
		PM_{10}	0.1	0.4
		$PM_{2.5}$	0.1	0.4
74	Contact Cooling Tower 1 – Melt Shop	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
75	Contact Cooling Tower 2 – Melt Shop	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
76	Contact Cooling Tower 3 – Caster and Hot Mill	PM	0.2	0.7
		PM_{10}	0.2	0.7
		$PM_{2.5}$	0.2	0.7
77	Contact Cooling Tower 4 – Caster and Hot Mill	PM	0.2	0.7
		PM_{10}	0.2	0.7
		$PM_{2.5}$	0.2	0.7
78	Contact Cooling Tower 5 – Caster and Hot Mill	PM	0.1	0.2
		PM_{10}	0.1	0.2
		$PM_{2.5}$	0.1	0.2
79	Contact Cooling Tower 6 – Laminar	PM	0.2	0.5
		PM_{10}	0.2	0.5
		$PM_{2.5}$	0.2	0.5

91. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the

following table. Compliance with this condition will be show by compliance with Specific Condition 92 and 93. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-68 through 73	Non-Contact Cooling Towers	PM	Drift Eliminators Low TDS	0.0005 percent drift loss
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-73 through 79	Contact Cooling Towers	PM	Drift Eliminators Low TDS	0.0005 percent drift loss
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%

92. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition 93. [Regulation 19 §19.901 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	TDS Limit
68	Non-Contact Cooling Tower 1 – Melt Shop	300
69	Non-Contact Cooling Tower 2 – Melt Shop	300
70	Non-Contact Cooling Tower 3 – Caster and Hot Mill	900
71	Non-Contact Cooling Tower 4 – Caster and Hot Mill	900
72	Non-Contact Cooling Tower 5 – Cold Mill	900
73	Non-Contact Cooling Tower 6 – Cold Mill	900
74	Contact Cooling Tower 1 – Melt Shop	1000
75	Contact Cooling Tower 2 – Melt Shop	1000
76	Contact Cooling Tower 3 – Caster and Hot Mill	1000

SN	Description	TDS Limit
77	Contact Cooling Tower 4 – Caster and Hot Mill	1000
78	Contact Cooling Tower 5 – Caster and Hot Mill	1000
79	Contact Cooling Tower 6 – Laminar	1000

93. The permittee test the TDS of each of the cooling towers initially and every 6 months thereafter. This testing shall be conducted in accordance with Plantwide Condition 3 with a method approved by the Department before the first test is performed.

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Miscellaneous Operations

SN-80 Charging Crane
SN-81 Scrap Yard Stockpiling
SN-82 EAF Flux Receiving System
SN-83 EAF Flux Storage and Handling System
SN-84 Carbon Injection Receiving System
SN-85 Carbon Injection Storage and Handling System
SN-86 LMF Flux Receiving System
SN-87 LMF Flux Storage and Handling System
SN-88 Alloy Receiving System
SN-89 Alloy Storage and Handling System
SN-90 Alloy Delivery System – LMF
SN-92 Inside Drop Point - Spent Refractory and Other Waste
SN-93 Outside Drop Point - Spent Refractory and Other Waste
SN-94 Inside Drop Point – EAF Dust
SN-99 Wind Erosion

Source Description

Charging Crane, SN-80, loads scrap from the scrap yard for charging into the EAF. Scrap Yard Stockpiling, SN-81, is the emissions from loading of scrap steel from trucks or railcars to the scrapyard.

The EAF Flux Receiving System, SN-82, includes the truck and rail unloading of the flux materials for the EAF.

The EAF Flux Storage and Handling System, SN-83, includes the transport and storage of the flux materials for the EAF. A total of 10 silos will store HBI/DRI, dolomite, and lime. Each silo will have a capacity of 9,000 ft^3 and will be equipped with bin vent filters.

Carbon Injection Receiving System, SN-84, includes the truck and rail unloading of the carbon for the carbon injection into the EAF.

Carbon Injection Storage and Handling System, SN-85, includes the transport and storage of the carbon for the carbon into the EAF. There are four storage silos, each with a capacity of 8,000 ft^3.

LMF Flux Receiving System, SN-86, includes the truck and rail unloading of the flux materials for the LMF.

LMF Flux Storage and Handling System, SN-87, includes the transport and storage of the flux materials for the EAF. A total of 6 silos will store bauxite, CAL/A, dolomite, and lime. Each silo will have a capacity of 9,000 ft^3 and will be equipped with bin vent filters.

Alloy Receiving System, SN-88, includes the truck and rail unloading of the alloy materials for the LMF.

Alloy Storage and Handling System, SN-89, includes the transport and storage of the alloy materials for the EAF. A total of seven silos will store FeSn, SiMn, FeCr. Each silo will have a capacity of 9,000 ft^3 and will be equipped with bin vent filters.

Alloy Delivery System – LMF, SN-90, Alloy materials (FeSn, SiMn, FeCr) will be used to support the LMF operations. A stocking pocket belt conveyor will also be used to transfer the materials from the silos to weight hoppers that will be used to load alloy materials into the LMF stations.

Alloy Deliver System – RH Degasser, SN-91. The alloy system will also be used to transport and feed alloy materials into the RH degasser. A stocking pocket conveyor will be used to transfer materials to the feed hoppers that will then be used to feed the RH degasser.

Inside Drop Point - Spent Refractory and Other Waste, SN-92, accounts for the emissions from placing of refractory material into the appropriate storage area/ container.

Outside Drop Point - Spent Refractory and Other Waste, SN-93, accounts for the placement of refractory material into outdoor storage area / container.

Inside Drop Point – EAF Dust, SN-94, accounts for the emissions of transfer of EAF baghouse dust into appropriate storage containers.

Wind Erosion, SN-99, is the emission from outdoor slag and storage piles due to wind erosion.

Specific Conditions

94. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition compliance with Specific Conditions 96 and 97 and Plantwide Condition 5. [Regulation 19 §19.901 and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
80	Charging Crane	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1
81	Scrap Yard Stockpiling	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.5 0.2 0.1
82	EAF Flux Receiving System	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1

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SN	Description	Pollutant	lb/hr	tpy
83	EAF Flux Storage and Handling System	PM PM_{10} $PM_{2.5}$	0.2 0.1 0.1	0.6 0.3 0.1
84	Carbon Injection Receiving System	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1
85	Carbon Injection Storage and Handling System	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1
86	LMF Flux Receiving System	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1
87	LMF Flux Storage and Handling System	PM PM_{10} $PM_{2.5}$	0.2 0.1 0.1	0.6 0.3 0.1
88	Alloy Receiving System	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1
89	Alloy Storage and Handling System	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1
90	Alloy Delivery System – LMF	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1
92	Inside Drop Point - Spent Refractory and Other Waste	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1
93	Outside Drop Point - Spent Refractory and Other Waste	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1
94	Inside Drop Point – EAF Dust	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1
99A	Feed Stock Piles - Wind Erosion	PM PM_{10} $PM_{2.5}$	0.9 0.5 0.1	3.7 1.9 0.3

95. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the following table. Compliance with this condition will be show by compliance with Specific Conditions 96 and 97 and Plantwide Condition 5. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-82	EAF Flux Receiving System	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-83	EAF Flux Storage and Handling System	PM PM_{10} $PM_{2.5}$	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf 0.01 gr/dscf
		Opacity		5%
SN-84	Carbon Injection Receiving	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-85	Carbon Injection Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf 0.01 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
SN-86	LMF Flux Receiving	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
87	LMF Flux Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf 0.01 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
88	Alloy Receiving System	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
89	Alloy Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf 0.01 gr/dscf
		PM_{10}		
		$PM_{2.5}$		
		Opacity		5%
90	Alloy Delivery System – LMF	PM	Dust Control Plan, Enclosed Conveyors	0.003 gr/dscf
		PM_{10}		

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		$PM_{2.5}$	with Fabric Filters Enclosed Receiving System with Fabric Filter Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf 0.01 gr/dscf
		Opacity		5%
92	Inside Drop Point - Spent Refractory and Other Waste	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM_{10}		0.1 lb/hr, 0.1 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
93	Outside Drop Point - Spent Refractory and Other Waste	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM_{10}		0.1 lb/hr, 0.1 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
94	Inside Drop Point – EAF Dust	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM_{10}		0.1 lb/hr, 0.1 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
95	Drop Points Slag	PM	Dust Control Plan	0.2 lb/hr, 0.8 tpy
		PM_{10}		0.1 lb/hr, 0.4 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
93	Outside Drop Point - Spent Refractory and Other Waste	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM_{10}		0.1 lb/hr, 0.1 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
94	Inside Drop Point – EAF Dust	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM_{10}		0.1 lb/hr, 0.1 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%
99A	Feed Stock Piles - Wind Erosion	PM	Dust Control Plan	0.9 lb/hr, 3.7 tpy
		PM_{10}		0.5 lb/hr, 1.9 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.3 tpy
		Opacity		20%
99B	Slag Piles – Wind Erosion	PM	Dust Control Plan	0.2 lb/hr, 0.6 tpy
		PM_{10}		0.1 lb/hr, 0.3 tpy
		$PM_{2.5}$		0.1 lb/hr, 0.1 tpy
		Opacity		20%

96. The permittee shall not receive more than material than in the table below in any consecutive rolling 12 month period. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

Source	Consecutive rolling 12 month limit
82	175,830
84	49,210
86	175,830
88	680,000
90	680,000

97. The permittee shall maintain monthly records of the amount of materials received in the sources in Specific Condition 96. These records shall include the monthly total of material received and the rolling 12 month total of material received. These records shall be updated by the 15th day of the month following the month to which the records pertain, kept on site, made available to Department personnel upon request, and submitted in accordance with General Provision 7. [Regulation 19, §19.901 et seq. and 40 CFR Part 52, Subpart E]

98. The permittee shall not discharge into the atmosphere any gases which exit from SN-94 which exceed 10 percent opacity or greater. [40 CFR, Part 60, Subpart AAa, and §19.304 of Regulation 19]

99. The permittee may install sealed conveyors or sealed pneumatic conveyors that have no vents to the atmosphere. The permittee is not required to vent the conveyors to a baghouse if no vent is needed.

100. The permittee shall implement a fugitive emission dust control plan to control dust emissions from the sources specified to require a dust control plan in Specific Condition 95 . The permittee shall submit for Department approval a fugitive dust control plan for the roadways six months after issuance of permit 2305-AOP-R0.

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Slag Handling

SN-95 Drop Points Slag
SN- 96 Slag Handling and Conveying
SN-99B Slag Storage Piles

Specific Conditions

101. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions 102 and 98. [Regulation 19 §19.901 and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
95	Drop Points Slag	PM PM_{10} $PM_{2.5}$	0.2 0.1 0.1	0.8 0.4 0.1
96	Slag Handling and Conveying	PM PM_{10} $PM_{2.5}$	0.2 0.1 0.1	0.5 0.2 0.1
99B	Slag Storage Piles	PM PM_{10} $PM_{2.5}$	0.2 0.1 0.1	0.6 0.3 0.1

102. The permittee shall not process more than 476,980 tons of slag in any consecutive rolling 12 month period. [Regulation 19 §19.901 and 40 CFR Part 52, Subpart E]

103. The permittee shall maintain monthly records of the amount of slag processed. These records shall include the monthly total of slag processed and the rolling 12 month total of slag processed. These records shall be updated by the 15th day of the month following the month to which the records pertain, kept on site, made available to Department personnel upon request, and submitted in accordance with General Provision 7. [Regulation 19 §19.901 and 40 CFR Part 52, Subpart E]

104. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

Source	Limit	Regulatory Citation
SN-95 SN-96 SN-99A	20%	§19.901 of Regulation 19 and 40 CFR, Part 52, Subpart E

105. The permittee shall conduct weekly observations of the opacity from each slag processing transfer point and conveyor at the slag processing area. If visible emissions are detected, the permittee shall conduct a 6-minute opacity reading in accordance with Method 9 at the point where visible emissions were detected. The results of these observations shall be recorded in a log which shall be kept on site and made available for inspection upon request. [§19.901 of Regulation 19 and 40 CFR Part 52, Subpart E]

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Roadway Sources

SN-97 and SN-98

Paved and Unpaved Roadways

Source Description

SN-97 accounts for emissions from unpaved roadways and SN-98 accounts for emission from Paved Roadways

Specific Conditions

106. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be shown by application of dust suppressant as necessary to control dust emissions. [§19.901 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
97	Paved Roads	PM	0.7	2.9
		PM_{10}	0.2	0.6
		$PM_{2.5}$	0.1	0.2
98	Unpaved Roads	PM	2.2	9.6
		PM_{10}	0.6	2.6
		$PM_{2.5}$	0.1	0.3

107. Dust suppression activities should be conducted in a manner and at a rate of application that will not cause runoff from the area being applied. Best Management Practices (40 CFR §122.44(k)) should be used around streams and waterbodies to prevent the dust suppression agent from entering Waters of the State. Except for potable water, no agent shall be applied within 100 feet of wetlands, lakes, ponds, springs, streams, or sinkholes. Failure to meet this condition may require the permittee to obtain a National Pollutant Discharge Elimination System (NPDES) permit in accordance with 40 CFR §122.1(b). [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

108. The permittee shall implement a fugitive emission dust control plan to control dust emissions from the roadways. The permittee shall submit for Department approval a fugitive dust control plan for the roadways six months after issuance of permit 2305-AOP-R0.

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SECTION V: COMPLIANCE PLAN AND SCHEDULE

Big River Steel LLC will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

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SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation 19 §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Regulation 19 §19.410(B) and 40 CFR Part 52, Subpart E]

3. The permittee must test any equipment scheduled for testing, unless otherwise stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial startup of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) business days in advance of such test. The permittee shall submit the compliance test results to the Department within thirty (30) calendar days after completing the testing. [Regulation 19 §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

4. The permittee must provide:

   a. Sampling ports adequate for applicable test methods;
   b. Safe sampling platforms;
   c. Safe access to sampling platforms; and
   d. Utilities for sampling and testing equipment.

   [Regulation 19 §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Regulation 19 §19.303 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation 26 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

7. The permittee shall install, operate, and maintain ambient air monitors for PM_{10}, $PM_{2.5}$, and NO_2. The permittee shall submit a monitoring protocol to the Department within 180 days of the anticipated startup date of the facility. The Department must approve of the

monitoring protocol prior to installation of the monitors. The monitors shall be installed and operating within 180 days of the startup of the EAFs. [§19.901 et seq. and 40 CFR Part 52, Subpart E]

8. The permittee shall for all baghouses prior to installation at the facility calculate the emissions (lb/hr and tpy) based on the BACT grain loading limit and the final design air flow rate of the baghouse. The permittee shall compare the calculated emission rates based on the final design to the permitted lb/hr and tpy emission rates. If the new calculated rates are higher the permittee shall submit a permit modification to address the difference in the permitted rates and calculated rates. The permittee shall keep a record of the calculation on site, make them available to Department personnel upon request submit in accordance with General Provision 7. [§19.901 of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control (Regulation #19) effective February 15, 1999 and 40 CFR Part 52, Subpart E]

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SECTION VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of §26.304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated January 29, 2013.

Description	Category
None	

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SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 CFR 70.6(b)(2)]

2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 CFR 70.6(a)(2) and Regulation 26 §26.701(B)]

3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Regulation 26 §26.406]

4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 CFR 70.6(a)(1)(ii) and Regulation 26 §26.701(A)(2)]

5. The permittee must maintain the following records of monitoring information as required by this permit.

    a. The date, place as defined in this permit, and time of sampling or measurements;
    b. The date(s) analyses performed;
    c. The company or entity performing the analyses;
    d. The analytical techniques or methods used;
    e. The results of such analyses; and
    f. The operating conditions existing at the time of sampling or measurement.

    [40 CFR 70.6(a)(3)(ii)(A) and Regulation 26 §26.701(C)(2)]

6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation 26 §26.701(C)(2)(b)]

7. The permittee must submit reports of all required monitoring every six (6) months. If the permit establishes no other reporting period, the reporting period shall end on the last day of the month six months after the issuance of the initial Title V permit and every six months thereafter. The report is due on the first day of the second month after the end of the reporting period. The first report due after issuance of the initial Title V permit shall contain six months of data and each report thereafter shall contain 12 months of data. The report shall contain data for all monitoring requirements in effect during the reporting period. If a monitoring requirement is not in effect for the entire reporting period, only those months of data in which the monitoring requirement was in effect are required to be reported. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Regulation No. 26, §26.2 must certify all required reports. The permittee will send the reports to the address below:

Arkansas Department of Environmental Quality
Air Division
ATTN: Compliance Inspector Supervisor
5301 Northshore Drive
North Little Rock, AR 72118-5317

[40 CFR 70.6(a)(3)(iii)(A) and Regulation 26 §26.701(C)(3)(a)]

8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.

   a. For all upset conditions (as defined in Regulation19, § 19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:

      i. The facility name and location;
      ii. The process unit or emission source deviating from the permit limit;
      iii. The permit limit, including the identification of pollutants, from which deviation occurs;
      iv. The date and time the deviation started;
      v. The duration of the deviation;
      vi. The average emissions during the deviation;
      vii. The probable cause of such deviations;

viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future; and
ix. The name of the person submitting the report.

The permittee shall make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[Regulation 19 §19.601 and §19.602, Regulation 26 §26.701(C)(3)(b), and 40 CFR 70.6(a)(3)(iii)(B)]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5), Regulation 26 §26.701(E), and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. §7401, et seq. and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 CFR 70.6(a)(6)(i) and Regulation 26 §26.701(F)(1)]

11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 CFR 70.6(a)(6)(ii) and Regulation 26 §26.701(F)(2)]

12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 70.6(a)(6)(iii) and Regulation 26 §26.701(F)(3)]

13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 70.6(a)(6)(iv) and Regulation 26 §26.701(F)(4)]

14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v) and Regulation 26 §26.701(F)(5)]

15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 CFR 70.6(a)(7) and Regulation 26 §26.701(G)]

16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 CFR 70.6(a)(8) and Regulation 26 §26.701(H)]

17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 CFR 70.6(a)(9)(i) and Regulation 26 §26.701(I)(1)]

18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 CFR 70.6(b) and Regulation 26 §26.702(A) and (B)]

19. Any document (including reports) required by this permit must contain a certification by a responsible official as defined in Regulation 26, §26.2. [40 CFR 70.6(c)(1) and Regulation 26 §26.703(A)]

20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 CFR 70.6(c)(2) and Regulation 26 §26.703(B)]

    a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.

21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually. If the permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due on the first day of the second month after the end of the reporting period. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation 26 §26.703(E)(3)]

a. The identification of each term or condition of the permit that is the basis of the certification;
b. The compliance status;
c. Whether compliance was continuous or intermittent;
d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
e. Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and §504(b) of the Act.

22. Nothing in this permit will alter or affect the following: [Regulation 26 §26.704(C)]

a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act; or
d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.

23. This permit authorizes only those pollutant emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion in the following circumstances:

a. Such an extension does not violate a federal requirement;
b. The permittee demonstrates the need for the extension; and
c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

[Regulation 18 §18.314(A), Regulation 19 §19.416(A), Regulation 26 §26.1013(A), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

25. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written Department approval. Any such emissions shall be included in the facility's total emissions and reported as such. The Department may grant such a request, at its discretion under the following conditions:

a. Such a request does not violate a federal requirement;
b. Such a request is temporary in nature;
c. Such a request will not result in a condition of air pollution;
d. The request contains such information necessary for the Department to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
f. The permittee maintains records of the dates and results of such temporary emissions/testing.

[Regulation 18 §18.314(B), Regulation 19 §19.416(B), Regulation 26 §26.1013(B), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

26. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion under the following conditions:

a. The request does not violate a federal requirement;
b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

[Regulation 18 §18.314(C), Regulation 19 §19.416(C), Regulation 26 §26.1013(C), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

NUCOR PETITION TO OBJECT

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT NO. 2305-AOP-R0

BIG RIVER STEEL, LLC

ATTACHMENT NO. 9

JAN. 29 AND 30, 2013 EMAILS

ATTACHMENT 9

From: Rheaume, Thomas
Sent: Wednesday, January 30, 2013 9:17 AM
To: Bassett, Karen; Bates, Mike; Hutchings, Shawn; Murphy, Phil
Subject: Dave Stickler from Big River Steel called

He wanted an update.

I told him the application was not the "super application" we were supposed to get. We quickly went through it and had a lot of issue, some of which seemed to be a result of it being thrown together as fast as possible.

He admitted that they pressured Arcadis to get it in because the Gov would not make the announcement without some kind of application being sent in.

But there were some substantial areas where it just seemed wrong (i.e. a too high BACT limit). We are unsure if it was because of the rush or otherwise. We will send more details to the consultant and maybe get a better idea based on their response.

He was thinking of another conference call next week

Thomas Rheaume
Permit Branch Manager
Arkansas Department of Environmental Quality
Air Division
5301 Northshore Drive
North Little Rock, AR 72118-5317
501 682 0762 Phone
501 682 0880 Fax

ATTACHMENT 9

From: David Stickler [dstickler@globalprincipal.com]
Sent: Tuesday, January 29, 2013 8:19 AM
To: Rheaume, Thomas; 'Frey, Steve'; Basset@adeq.state.ar.us; Hutchings, Shawn; Murphy, Phil
Cc: Julie Payne; Thirman, Karen; Frey, Kristin; Carstensen, Darryl; Kalapati, Raga; Subra Sennerikuppam
Subject: Big River

All,

Thank you to all involved in the Big River Steel permit effort. John Correnti and Governor Beebe met last evening and I know that one of the topics of discussion was the permit process and the need to make sure that an open line of communication exists between ADEQ, Big River Steel and Big River's consultants and engineers. Early next week, I suggest a group call to make sure that all is on track and that no road blocks exist. My office will arrange a time for the call.

Dave Stickler

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, January 29, 2013 9:17 AM
To: 'Frey, Steve'; Basset@adeq.state.ar.us; Hutchings, Shawn; Murphy, Phil
Cc: David Stickler; Julie Payne; Thirman, Karen; Frey, Kristin; Carstensen, Darryl; Kalapati, Raga; Subra Sennerikuppam
Subject: RE: Status of Big River Steel LLC PSD Air Permit Application

Thank you. Some comments below (highlighted)

Thomas Rheaume
Permit Branch Manager
Arkansas Department of Environmental Quality
Air Division
5301 Northshore Drive
North Little Rock, AR 72118-5317
501 682 0762 Phone
501 682 0880 Fax

From: Frey, Steve [mailto:Steve.Frey@arcadis-us.com]
Sent: Tuesday, January 29, 2013 6:35 AM
To: Basset@adeq.state.ar.us; Hutchings, Shawn; Rheaume, Thomas
Cc: dstickler@globalprincipal.com; Julie Payne; Thirman, Karen; Frey, Kristin; Carstensen, Darryl; Kalapati, Raga; Subra Sennerikuppam
Subject: FW: Status of Big River Steel LLC PSD Air Permit Application
Importance: High

Folks,

The hard copy versions of the PSD air permit application for the proposed Big River Steel LLC steel plant in Mississippi County, Arkansas were dropped off with Federal Express last night. Five (5) hard copy versions of the application were sent in separate boxes (because of its size) and should arrive at the ADEQ this morning. The applications were sent to 5301 Northshore Drive in North Little Rock, AR 72118

We need your help and cooperation with the following:

1) Mr. John Correnti, Chairman and CEO of Big River Steel LLC will be hand delivering the signed application forms on Tuesday the 29th of January. We ask that you please make copies and insert into the five application on our behalf;
2) Mr. John Correnti, Chairman and CEO of Big River Steel LLC will also be hand delivering the signed Disclosure Statement on Tuesday the 29th of January.
3) We will also be preparing an electronic copy of the entire application and can provided that via email or place on a CD. Can the ADEQ please indicate there preference? If it is under 10MB, email would be best. Over that size our email will not handle it and a CD or other means will be necessary (ftp site?)
4) Because of the amount of time it took to assemble the applications yesterday we are going to review the hard copy version to make sure we did not omit and tables or figures by accident. We will provide an email to Shawn today with any missing tables and figures and ask that the ADEQ please insert those documents into the five copies of the applications. We have tables and figure sections in the application to make it easier for review and updating
5) I forgot to sign the application , thus will be sending via email today that signed page and ask that the ADEQ insert that into the five copies of the application We will need an original signature at some point. Please place the originals in the mail.
6) On the technical side we are in the process of evaluating emissions of fluorides from the proposed Meltshop. We may be required to provide a BACT evaluation for fluorides emissions which would be sent to the ADEQ via email this week as an addendum.
7) The air quality impact evaluation is currently ongoing and we will provide periodic updates to the ADEQ on the status of that evaluation.
8) We will also be providing Shawn electronic copies of the application to allow Shawn the ability to extract information to support the preparation of the ADEQ technical document and permit.

Please let me know if you see any issues or concerns with the above requests. We appreciate the ADEQ support the review of this application and will be available to answer any questions, data needs or concerns the ADEQ may have regarding this application.

From: IL03P02@arcadis-us.com [mailto:IL03P02@arcadis-us.com]
Sent: Tuesday, January 29, 2013 6:14 AM
To: Frey, Steve
Subject: Message from IL03P02

NUCOR PETITION TO OBJECT

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT NO. 2305-AOP-R0

BIG RIVER STEEL, LLC

ATTACHMENT NO. 10

JUNE 20, 2013 EMAIL

ATTACHMENT 10

From: Marks, Teresa
Sent: Thursday, June 20, 2013 5:02 PM
To: Bates, Mike; Rheaume, Thomas
Subject: Fwd: BRS Meeting

Are things still on track? We will discuss the site visit tomorrow.

Begin forwarded message:

> **From:** Julie Payne <jpayne@globalprincipal.com>
> **Date:** June 20, 2013, 4:53:04 PM CDT
> **To:** "Marks, Teresa" <MARKS@adeq.state.ar.us>, "Bassett, Karen" <BASSETT@adeq.state.ar.us>
> **Cc:** David Stickler <dstickler@globalprincipal.com>, "Tennille, Grant" <GTennille@ArkansasEDC.com>
> **Subject: BRS Meeting**
>
> Theresa & Karen,
>
> As Dave mentioned, Big River Steel has a full team of lenders, investors and project participants traveling to Osceola on Tuesday, June 25th. Dave would very much appreciate it if a representative from ADEQ could attend the meeting and speak to the permit process and status. It is not an understatement to say that the majority of the project focus is on issues and timing surrounding the permit.
>
> The meeting begins at 10 am and will end by 2 pm. There will also be a site tour beginning at 10:30 am. I have attached the agenda for your information.
>
> Finally, Dave wanted me to check and make sure that all was still on track with plans to provide the newspaper with a notice on June 25th for publication on June 27th.
>
> Thank you, and please let me know if a representative from ADEQ would be able to attend the meeting.
>
> Regards,
>
> Julie
>
> Julie Payne
> Global Principal Partners LLC
> 1111 Brickell Avenue, 11th Floor
> Miami, FL 33131
> Direct Dial: 330/908-0813
> Direct Fax: 330/908-0814
> Cell: 216/288-7662
> Email: jpayne@globalprincipal.com

NUCOR PETITION TO OBJECT

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT NO. 2305-AOP-R0

BIG RIVER STEEL, LLC

ATTACHMENT NO. 11

FEB. 6 AND 7, 2013 EMAILS

ATTACHMENT 11

From: Bates, Mike
Sent: Wednesday, February 06, 2013 4:12 PM
To: Rheaume, Thomas
Subject: FW: Big River and PM2.5

I think the answer is "NO" – but wanted to check.

From: Bassett, Karen
Sent: Wednesday, February 06, 2013 3:47 PM
To: Bates, Mike
Subject: RE: Big River and PM2.5

Is this impacted by the recent court decision on SILs?

From: Bates, Mike
Sent: Wednesday, February 06, 2013 3:17 PM
To: Bassett, Karen
Subject: FW: Big River and PM2.5

FYI

From: Rheaume, Thomas
Sent: Wednesday, February 06, 2013 1:38 PM
To: Bates, Mike
Cc: Hutchings, Shawn; Murphy, Phil
Subject: RE: Big River and PM2.5

The background seems to be a true background. It does not change across the state so there does not seem to be a particular source impacting the monitor.

I do not know what they are going to be able to do. Maybe get their own impacts so low they can say they are not contributing to any existing problem. Or maybe they can use monitor values by each day and add their impact that day and they will be okay (maybe).

I do not think some other facility reducing emissions will get them anywhere.

But not having seen any modeling, I do not know

Thomas Rheaume
Permit Branch Manager
Arkansas Department of Environmental Quality
Air Division
5301 Northshore Drive
North Little Rock, AR 72118-5317
501 682 0762 Phone
501 682 0880 Fax

From: Bates, Mike
Sent: Wednesday, February 06, 2013 1:30 PM

To: Rheaume, Thomas
Subject: RE: Big River and PM2.5

Would there be an option for "offsets" from existing sources for modeling purposes?

From: Rheaume, Thomas
Sent: Wednesday, February 06, 2013 1:28 PM
To: Bates, Mike
Subject: Big River and PM2.5

The new PM2.5 is 12 ug/m3 annual

It used to be 15

Looking at our monitors they seem to be consistently reading 10 or 11 outside of LR

That does not leave much for a steel mill

Thomas Rheaume
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ATTACHMENT 11

From: Bates, Mike
Sent: Thursday, February 07, 2013 8:13 AM
To: Rheaume, Thomas
Cc: Murphy, Phil; Hutchings, Shawn; Bassett, Karen
Subject: RE: Big River and PM2.5

If PM is subject to PSD review – I think they will have to evaluate against the new NAAQS whether we have adopted it or not. Don't think we could "require" it – but if they do not – EPA would have cause to object to any permit decision that does not include it.

From: Rheaume, Thomas
Sent: Thursday, February 07, 2013 7:34 AM
To: Bates, Mike
Cc: Murphy, Phil; Hutchings, Shawn
Subject: RE: Big River and PM2.5

Since there are no longer any SILs, they will have to justify use of a SIL or just model anything. It does impact them, just not sure how.

Looking it over, the PM2.5 was lowered in December. Does that mean we go with the old limit until we update or regs or 3 years from December, whichever is sooner? That has been our standard answer in similar situations.

Not sure it matters, but when they put together their modeling info, the limit was 15. But we still do not have a complete application that might have grandfathered them before the limit changed.

Thomas Rheaume
Permit Branch Manager
Arkansas Department of Environmental Quality
Air Division
5301 Northshore Drive
North Little Rock, AR 72118-5317
501 682 0762 Phone
501 682 0880 Fax

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Sent: Wednesday, February 06, 2013 4:12 PM
To: Rheaume, Thomas
Subject: FW: Big River and PM2.5

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Sent: Wednesday, February 06, 2013 3:47 PM
To: Bates, Mike
Subject: RE: Big River and PM2.5

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Sent: Wednesday, February 06, 2013 3:17 PM
To: Bassett, Karen
Subject: FW: Big River and PM2.5

FYI

From: Rheaume, Thomas
Sent: Wednesday, February 06, 2013 1:38 PM
To: Bates, Mike
Cc: Hutchings, Shawn; Murphy, Phil
Subject: RE: Big River and PM2.5

The background seems to be a true background. It does not change across the state so there does not seem to be a particular source impacting the monitor.

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But not having seen any modeling, I do not know

Thomas Rheaume
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5301 Northshore Drive
North Little Rock, AR 72118-5317
501 682 0762 Phone
501 682 0880 Fax

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Sent: Wednesday, February 06, 2013 1:30 PM
To: Rheaume, Thomas
Subject: RE: Big River and PM2.5

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To: Bates, Mike
Subject: Big River and PM2.5

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Thomas Rheaume
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NUCOR PETITION TO OBJECT

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT NO. 2305-AOP-R0

BIG RIVER STEEL, LLC

ATTACHMENT NO. 12

JUNE 25, 2013 EMAILS

Hutchings, Shawn

From: Steve Frey <SteveFrey@KennedyJenks.com>
Sent: Tuesday, June 25, 2013 2:44 PM
To: Hutchings, Shawn; Rheaume, Thomas; Kallin, Robert
Subject: RE: pm10 increment

As stated in Arkansas Regulation 19.904, subsection (c) (1), where air quality impact analysis required under this subpart indicated that the issuance of a permit for any major stationary source or for any major modification would result in the consumption of more than fifty (50%) of any available annual increment or eighty percent (80%) of any short term increment, the person applying for such a permit shall submit to the Department an assessment of the following factors:

(a) Effect that the proposed consumption would have upon the industrial and economic development within the area of the proposed sources; and
(b) Alternatives to such consumption, including alternative siting of the proposed source or portion thereof.

The proposed BRS plant project will have potential emission in an by itself that will be well below 80% of the Class II increment. Combined impacts from BRS and other increment consuming sources have shown predicted concentrations to exceed 30 ug/m3, however BRS impacts on those predicted concentration have been shown to be at or below significant impact levels. The specific point of predicted concentrations typically reside within close proximity of a facility or in the case of the proposed project along the facility property boundary or with a relative short distance of that boundary. Since the predicted concentration is representative of time and space, future growth in the area should not be limited. It is highly unlikely that future growth will take place near or in close proximity to the BRS property or an existing facilities property. For any future project going through PSD review a separate analysis will be required as part of that application process and primary point of increment consumption will also be based on time and space and will most likely occur in the immediate vicinity of that source as well.

BRS has selected the proposed plant based on the availability of land, close proximity to major road ways, as well as access to a river. The proposed plant site has been zoned Industrial and has access to infrastructure to support the plant being proposed. BRS as part of the property selection process as evaluated this site and other sites as well. This site meets the criteria for this plant and ranked the highest in terms of plant site selection. BRS does not have the ability to select an alternative site, since an alternative site would not meet the site qualifications for a project of this nature.

From: Hutchings, Shawn [mailto:HUTCHINGS@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 2:26 PM
To: Rheaume, Thomas; Kallin, Robert; Steve Frey
Subject: RE: pm10 increment

I am still waiting on 2 issues.

The spreadsheet you submitted shows you are above the SIL on two days that exceed the PM10 24 hour increment. We need this resolved.

I need the explanation of for the Arkansas 50/80% increment consumption requirement Tom outlined below.

I just got the modeling files. I will look at those now.

Shawn

From: Rheaume, Thomas
Sent: Tuesday, June 25, 2013 2:17 PM
To: Kallin, Robert; Steve Frey
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

Okay, you are mixing two separate issues here.

One is that your impact is below the SIL for anytime the increment is expected to be exceeded. That is what the spreadsheet would be used for (can you resolve the Bunge issue?).

The other is that AR says that if you consume more than 50/80 percent you need to discuss the effects of the proposed construction on the economic development, and alternative to consumption.

From: Kallin, Robert [mailto:Robert.Kallin@arcadis-us.com]
Sent: Tuesday, June 25, 2013 2:01 PM
To: Steve Frey; Rheaume, Thomas
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

The "BRS PM10 PSD Increment Plot-Max File Analysis" spreadsheet evaluates the following:

The spreadsheet evaluates the following data:

- Highest 2nd high (H2H) plot files for each modeling year
- MaxFile impacts from All sources for each modeling year with impacts above increment
- MaxFile impacts from BRS sources for each modeling year with impacts above increment

The evaluation for each model year identifies the receptor days which show exceedances of the PM10 increment, and documents that BRS impacts are below SIL at all except two receptor points on the border with Bunge in 2010.

Accordingly, the areas with increases above PM10 increments are overwhelmingly not attributable to BRS and BRS would not prohibit construction of other projects.

-Rob

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 2:49 PM
To: Rheaume, Thomas; Kallin, Robert
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

Will do right now

Steve

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 1:48 PM
To: Steve Frey
Cc: Hutchings, Shawn
Subject: RE: pm10 increment

Need the explanation too, not just the spreadsheet

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Tuesday, June 25, 2013 1:37 PM
To: Rheaume, Thomas
Subject: RE: pm10 increment

We will be sending an excel spreadsheet that show that predicted exceedances of the Class II increment resulted in BRS having an insignificant impact. This would support the conclusion that BRS is not limiting other companies for growth in the area.

From: Rheaume, Thomas [mailto:RHEAUME@adeq.state.ar.us]
Sent: Tuesday, June 25, 2013 12:32 PM
To: Steve Frey
Subject: pm10 increment

Page C-18 says that it is below 30 wherever BRS has a significant impact. Where does that come from, i.e. which model do we look at to get that? Also I think the latest application leaves out the Arkansas increment discussion. The 50/80% consumption

Thomas Rheaume
Permit Branch Manager
Arkansas Department of Environmental Quality
Air Division
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NUCOR PETITION TO OBJECT

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT NO. 2305-AOP-R0

BIG RIVER STEEL, LLC

ATTACHMENT NO. 13

JUNE 17 AND 21, 2013 EMAILS

From: Rheaume, Thomas
Sent: Monday, June 17, 2013 10:59 AM
To: 'Steve Frey'; Hutchings, Shawn; Kristin Frey
Cc: Karen Thirman
Subject: RE: BRS

Just to let you know, we are on a "complete this permit this week deadline"

We need the information sooner rather than later or we will have to write the permit with the information in front of us. That may result in some decisions you will not agree with and have to work out in the draft period.

From: Steve Frey [mailto:SteveFrey@KennedyJenks.com]
Sent: Monday, June 17, 2013 10:21 AM
To: Hutchings, Shawn; Kristin Frey; Rheaume, Thomas
Cc: Karen Thirman
Subject: RE: BRS

We will review and update as necessary

I need to check with the modeling folks regarding your last question

Steve

-----Original Message-----
From: Hutchings, Shawn [mailto:HUTCHINGS@adeq.state.ar.us]
Sent: Mon 6/17/2013 10:17 AM
To: Kristin Frey; Rheaume, Thomas
Cc: Steve Frey; Karen Thirman
Subject: RE: BRS

Steve,
Here are some issues I found over the weekend.
There is no CO BACT discussion or proposed limit for the degasser SN-03.
The BACT discussion for VOC from the Final Annealing and Coating line does not provide enough information to support the proposed BACT limit. There is no discussion of what similar sources are achieving and therefore it is unknown whether the proposed limit would represent BACT. Also the source is subject to a MACT limit. Federal Standards such as MACT and NSPS represent at least a minimum level for BACT. BACT may go lower.
SN-03 through 19 the calculations use a CO emission factor not equal to the proposed BACT limit. The emission limits need to agree throughout the permit (modeling, BACT, calculations, and emission rate tables). Please correct everything to make the application agree.
SN-22, 26, 33, 39 the calculations for SO2 and proposed emission limits do not seem to match the proposed BACT limit. These need to be corrected as above.
A quick glance at the modeling input files submitted Friday show that receptors were excluded from nearby facilities. I am assuming follow up models for the receptors for inside those facilities are to follow as was done previously. Is this correct?
Shawn

From: Rheaume, Thomas
Sent: Friday, June 21, 2013 7:16 AM
To: Marks, Teresa; Bates, Mike
Subject: RE: BRS Meeting

We should have the permit ready minus some final model numbers. There are thing in it they may not agree with but we had to put something in the permit when we were faced with contradictions in the application. They can address it in the draft if they want.

They have not finished their modeling. We suspected this would happen so have been running our own and finding mistakes and omissions in their files. they are fixing these as we find it for them. We will have to work through the weekend to finish our modeling. Hopefully it will all turn out okay.

I don't know when they are going to get us their final model results. Sometimes they say today, sometimes they say Tuesday.

So we are on track with no room to spare for mistakes or problems.

From: Marks, Teresa
Sent: Thursday, June 20, 2013 5:02 PM
To: Bates, Mike; Rheaume, Thomas
Subject: Fwd: BRS Meeting

Are things still on track? We will discuss the site visit tomorrow.

Begin forwarded message:

> **From:** Julie Payne <jpayne@globalprincipal.com>
> **Date:** June 20, 2013, 4:53:04 PM CDT
> **To:** "Marks, Teresa" <MARKS@adeq.state.ar.us>, "Bassett, Karen" <BASSETT@adeq.state.ar.us>
> **Cc:** David Stickler <dstickler@globalprincipal.com>, "Tennille, Grant" <GTennille@ArkansasEDC.com>
> **Subject: BRS Meeting**
>
> Theresa & Karen,
>
> As Dave mentioned, Big River Steel has a full team of lenders, investors and project participants traveling to Osceola on Tuesday, June 25th. Dave would very much appreciate it if a representative from ADEQ could attend the meeting and speak to the permit process and status. It is not an understatement to say that the majority of the project focus is on issues and timing surrounding the permit.
>
> The meeting begins at 10 am and will end by 2 pm. There will also be a site tour beginning at 10:30 am. I have attached the agenda for your information.

Finally, Dave wanted me to check and make sure that all was still on track with plans to provide the newspaper with a notice on June 25th for publication on June 27th.

Thank you, and please let me know if a representative from ADEQ would be able to attend the meeting.

Regards,

Julie

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