ADEQ

A R K A N S A S
Department of Environmental Quality

SEP 1 8 2013

David Stickler, Senior Managing Director
Big River Steel LLC
1425 Ohlendorf Road
Osceola, Arkansas 72370

Dear Mr. Stickler:

The enclosed Permit No. 2305-AOP-R0 is your authority to construct, operate, and maintain the equipment and/or control apparatus as set forth in your application initially received on 1/29/2013.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 2305-AOP-R0 for the construction, operation and maintenance of an air pollution control system for Big River Steel LLC to be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, Regulation 8, within thirty (30) days after service of this decision.

The applicant or permittee and any other person submitting public comments on the record may request an adjudicatory hearing and Commission review of the final permitting decisions as provided under Chapter Six of Regulation No. 8, Administrative Procedures, Arkansas Pollution Control and Ecology Commission. Such a request shall be in the form and manner required by Regulation 8.603, including filing a written Request for Hearing with the APC&E Commission Secretary at 101 E. Capitol Ave., Suite 205, Little Rock, Arkansas 72201. If you have any questions about filing the request, please call the Commission at 501-682-7890.

Sincerely,

Mike Bates
Chief, Air Division

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 $\mu g/m_3$ $PM_{2.5}$. 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 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 $\mu g/m^3$. 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 PM2.5 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 $\mu g/m^3$ a cumulative annual PM2.5 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.

[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 18 2013 AND SEP 17 2018

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

Signed:

Mike Bates
Chief, Air Division

SEP 18 2013
Date

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

Table of Contents

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

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

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.

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

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.

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

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

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-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

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

BACT Analysis Summary				
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

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%

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%

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}		
		$PM_{2.5}$		

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

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

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%

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 PM_{10} $PM_{2.5}$ Opacity	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf 5%
SN-85	Carbon Injection 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-86	LMF Flux Receiving	PM PM_{10} $PM_{2.5}$ Opacity	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf 5%
87	LMF 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%
88	Alloy Receiving System	PM PM_{10} $PM_{2.5}$ Opacity	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf 5%
89	Alloy 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%
90	Alloy Delivery	PM PM_{10}	Dust Control Plan, Enclosed	0.003 gr/dscf

BACT Analysis Summary				
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
		PM_{10}		
		$PM_{2.5}$		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

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

EMISSION SUMMARY				
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

EMISSION SUMMARY				
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

EMISSION SUMMARY				
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

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

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

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

EMISSION SUMMARY				
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

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

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

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

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

EMISSION SUMMARY				
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

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

EMISSION SUMMARY				
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

EMISSION SUMMARY				
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

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

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

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

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

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

EMISSION SUMMARY				
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

EMISSION SUMMARY				
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

*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.

SECTION III: PERMIT HISTORY

This is the initial permit for the facility.

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

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

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]

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

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]

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]

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

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

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]

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

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]

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

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

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

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

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

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]

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

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
		$PM_{2.5}$		

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%

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

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

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]

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

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]

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]

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]

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 PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.2 0.2 0.2
69	Non-Contact Cooling Tower 2 – Melt Shop	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.3 0.3 0.3
70	Non-Contact Cooling Tower 3 – Caster and Hot Mill	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.2 0.2 0.2
71	Non-Contact Cooling Tower 4 – Caster and Hot Mill	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.2 0.2 0.2
72	Non-Contact Cooling Tower 5 – Cold Mill	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.2 0.2 0.2
73	Non-Contact Cooling Tower 6 – Cold Mill	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.4 0.4 0.4
74	Contact Cooling Tower 1 – Melt Shop	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1
75	Contact Cooling Tower 2 – Melt Shop	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.1 0.1 0.1
76	Contact Cooling Tower 3 – Caster and Hot Mill	PM PM_{10} $PM_{2.5}$	0.2 0.2 0.2	0.7 0.7 0.7
77	Contact Cooling Tower 4 – Caster and Hot Mill	PM PM_{10} $PM_{2.5}$	0.2 0.2 0.2	0.7 0.7 0.7
78	Contact Cooling Tower 5 – Caster and Hot Mill	PM PM_{10} $PM_{2.5}$	0.1 0.1 0.1	0.2 0.2 0.2
79	Contact Cooling Tower 6 – Laminar	PM PM_{10} $PM_{2.5}$	0.2 0.2 0.2	0.5 0.5 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.

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

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]

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 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-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 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%
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 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%
90	Alloy Delivery System – LMF	PM	Dust Control Plan, Enclosed Conveyors	0.003 gr/dscf
		PM_{10}		

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.

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]

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.

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.

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]

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	

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]

Appendix A

Arkansas Department of Environmental Quality

CONTINUOUS EMISSION MONITORING SYSTEMS CONDITIONS

Revised August 2004

PREAMBLE

These conditions are intended to outline the requirements for facilities required to operate Continuous Emission Monitoring Systems/Continuous Opacity Monitoring Systems (CEMS/COMS). Generally there are three types of sources required to operate CEMS/COMS:

1. CEMS/COMS required by 40 CFR Part 60 or 63,
2. CEMS required by 40 CFR Part 75,
3. CEMS/COMS required by ADEQ permit for reasons other that Part 60, 63 or 75.

These CEMS/COMS conditions are not intended to supercede Part 60, 63 or 75 requirements.

- Only CEMS/COMS in the third category (those required by ADEQ permit for reasons other than Part 60, 63, or 75) shall comply with SECTION II, MONITORING REQUIREMENTS and SECTION IV, QUALITY ASSURANCE/QUALITY CONTROL.

- All CEMS/COMS shall comply with Section III, NOTIFICATION AND RECORDKEEPING.

SECTION I

DEFINITIONS

Continuous Emission Monitoring System (CEMS) - The total equipment required for the determination of a gas concentration and/or emission rate so as to include sampling, analysis and recording of emission data.

Continuous Opacity Monitoring System (COMS) - The total equipment required for the determination of opacity as to include sampling, analysis and recording of emission data.

Calibration Drift (CD) - The difference in the CEMS output reading from the established reference value after a stated period of operation during which no unscheduled maintenance, repair, or adjustments took place.

Back-up CEMS (Secondary CEMS) - A CEMS with the ability to sample, analyze and record stack pollutant to determine gas concentration and/or emission rate. This CEMS is to serve as a back-up to the primary CEMS to minimize monitor downtime.

Excess Emissions - Any period in which the emissions exceed the permit limits.

Monitor Downtime - Any period during which the CEMS/COMS is unable to sample, analyze and record a minimum of four evenly spaced data points over an hour, except during one daily zero-span check during which two data points per hour are sufficient.

Out-of-Control Period - Begins with the time corresponding to the completion of the fifth, consecutive, daily CD check with a CD in excess of two times the allowable limit, or the time corresponding to the completion of the daily CD check preceding the daily CD check that results in a CD in excess of four times the allowable limit and the time corresponding to the completion of the sampling for the RATA, RAA, or CGA which exceeds the limits outlined in Section IV. Out-of-Control Period ends with the time corresponding to the completion of the CD check following corrective action with the results being within the allowable CD limit or the completion of the sampling of the subsequent successful RATA, RAA, or CGA.

Primary CEMS - The main reporting CEMS with the ability to sample, analyze, and record stack pollutant to determine gas concentration and/or emission rate.

Relative Accuracy (RA) - The absolute mean difference between the gas concentration or emission rate determined by the CEMS and the value determined by the reference method plus the 2.5 percent error confidence coefficient of a series of tests divided by the mean of the reference method tests of the applicable emission limit.

Span Value – The upper limit of a gas concentration measurement range.

SECTION II

MONITORING REQUIREMENTS

A. For new sources, the installation date for the CEMS/COMS shall be no later than thirty (30) days from the date of start-up of the source.

B. For existing sources, the installation date for the CEMS/COMS shall be no later than sixty (60) days from the issuance of the permit unless the permit requires a specific date.

C. Within sixty (60) days of installation of a CEMS/COMS, a performance specification test (PST) must be completed. PST's are defined in 40 CFR, Part 60, Appendix B, PS 1-9. The Department may accept alternate PST's for pollutants not covered by Appendix B on a case-by-case basis. Alternate PST's shall be approved, in writing, by the ADEQ CEM Coordinator prior to testing.

D. Each CEMS/COMS shall have, as a minimum, a daily zero-span check. The zero-span shall be adjusted whenever the 24-hour zero or 24-hour span drift exceeds two times the limits in the applicable performance specification in 40 CFR, Part 60, Appendix B. Before any adjustments are made to either the zero or span drifts measured at the 24-hour interval the excess zero and span drifts measured must be quantified and recorded.

E. All CEMS/COMS shall be in continuous operation and shall meet minimum frequency of operation requirements of 95% up-time for each quarter for each pollutant measured. Percent of monitor down-time is calculated by dividing the total minutes the monitor is not in operation by the total time in the calendar quarter and multiplying by one hundred. Failure to maintain operation time shall constitute a violation of the CEMS conditions.

F. Percent of excess emissions are calculated by dividing the total minutes of excess emissions by the total time the source operated and multiplying by one hundred. Failure to maintain compliance may constitute a violation of the CEMS conditions.

G. All CEMS measuring emissions shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive fifteen minute period unless more cycles are required by the permit. For each CEMS, one-hour averages shall be computed from four or more data points equally spaced over each one hour period unless more data points are required by the permit.

H. All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

I. When the pollutant from a single affected facility is released through more than one point, a CEMS/COMS shall be installed on each point unless installation of fewer systems is approved, in writing, by the ADEQ CEM Coordinator. When more than one CEM/COM is used to monitor emissions from one affected facility the owner or operator shall report the results as required from each CEMS/COMS.

SECTION III

NOTIFICATION AND RECORD KEEPING

A. When requested to do so by an owner or operator, the ADEQ CEM Coordinator will review plans for installation or modification for the purpose of providing technical advice to the owner or operator.

B. Each facility which operates a CEMS/COMS shall notify the ADEQ CEM Coordinator of the date for which the demonstration of the CEMS/COMS performance will commence (i.e. PST, RATA, RAA, CGA). Notification shall be received in writing no less than 15 days prior to testing. Performance test results shall be submitted to the Department within thirty days after completion of testing.

C. Each facility which operates a CEMS/COMS shall maintain records of the occurrence and duration of start up/shut down, cleaning/soot blowing, process problems, fuel problems, or other malfunction in the operation of the affected facility which causes excess emissions. This includes any malfunction of the air pollution control equipment or any period during which a continuous monitoring device/system is inoperative.

D. Except for Part 75 CEMs, each facility required to install a CEMS/COMS shall submit an excess emission and monitoring system performance report to the Department (Attention: Air Division, CEM Coordinator) at least quarterly, unless more frequent submittals are warranted to assess the compliance status of the facility. Quarterly reports shall be postmarked no later than the 30th day of the month following the end of each calendar quarter. Part 75 CEMs shall submit this information semi-annually and as part of Title V six (6) month reporting requirement if the facility is a Title V facility.

E. All excess emissions shall be reported in terms of the applicable standard. Each report shall be submitted on ADEQ Quarterly Excess Emission Report Forms. Alternate forms may be used with prior written approval from the Department.

F. Each facility which operates a CEMS/COMS must maintain on site a file of CEMS/COMS data including all raw data, corrected and adjusted, repair logs, calibration checks, adjustments, and test audits. This file must be retained for a period of at least five years, and is required to be maintained in such a condition that it can easily be audited by an inspector.

G. Except for Part 75 CEMs, quarterly reports shall be used by the Department to determine compliance with the permit. For Part 75 CEMs, the semi-annual report shall be used.

SECTION IV

QUALITY ASSURANCE/QUALITY CONTROL

A. For each CEMS/COMS a Quality Assurance/Quality Control (QA/QC) plan shall be submitted to the Department (Attn.: Air Division, CEM Coordinator). CEMS quality assurance procedures are defined in 40 CFR, Part 60, Appendix F. This plan shall be submitted within 180 days of the CEMS/COMS installation. A QA/QC plan shall consist of procedure and practices which assures acceptable level of monitor data accuracy, precision, representativeness, and availability.

B. The submitted QA/QC plan for each CEMS/COMS shall not be considered as accepted until the facility receives a written notification of acceptance from the Department.

C. Facilities responsible for one, or more, CEMS/COMS used for compliance monitoring shall meet these minimum requirements and are encouraged to develop and implement a more extensive QA/QC program, or to continue such programs where they already exist. Each QA/QC program must include written procedures which should describe in detail, complete, step-by-step procedures and operations for each of the following activities:

1. Calibration of CEMS/COMS
   a. Daily calibrations (including the approximate time(s) that the daily zero and span drifts will be checked and the time required to perform these checks and return to stable operation)
2. Calibration drift determination and adjustment of CEMS/COMS
   a. Out-of-control period determination
   b. Steps of corrective action
3. Preventive maintenance of CEMS/COMS
   a. CEMS/COMS information
      1) Manufacture
      2) Model number
      3) Serial number
   b. Scheduled activities (check list)
   c. Spare part inventory
4. Data recording, calculations, and reporting
5. Accuracy audit procedures including sampling and analysis methods
6. Program of corrective action for malfunctioning CEMS/COMS

D. A Relative Accuracy Test Audit (RATA), shall be conducted at least once every four calendar quarters. A Relative Accuracy Audit (RAA), or a Cylinder Gas Audit (CGA), may be conducted in the other three quarters but in no more than three quarters in succession. The RATA should be conducted in accordance with the applicable test procedure in 40 CFR Part 60 Appendix A and calculated in accordance with the applicable performance specification in 40 CFR Part 60 Appendix B. CGA's and RAA's should be conducted and the data calculated in accordance with the procedures outlined on 40 CFR Part 60 Appendix F.

If alternative testing procedures or methods of calculation are to be used in the RATA, RAA or CGA audits prior authorization must be obtained from the ADEQ CEM Coordinator.

E. Criteria for excessive audit inaccuracy.

RATA

All Pollutants except Carbon Monoxide	> 20% Relative Accuracy
Carbon Monoxide	> 10% Relative Accuracy
All Pollutants except Carbon Monoxide	> 10% of the Applicable Standard
Carbon Monoxide	> 5% of the Applicable Standard
Diluent (O_2 & CO_2)	> 1.0 % O2 or CO2
Flow	> 20% Relative Accuracy

CGA

Pollutant	> 15% of average audit value or 5 ppm difference
Diluent (O_2 & CO_2)	> 15% of average audit value or 5 ppm difference

RAA

Pollutant	> 15% of the three run average or > 7.5 % of the applicable standard
Diluent (O_2 & CO_2)	> 15% of the three run average or > 7.5 % of the applicable standard

F. If either the zero or span drift results exceed two times the applicable drift specification in 40 CFR, Part 60, Appendix B for five consecutive, daily periods, the CEMS is out-of-control. If either the zero or span drift results exceed four times the applicable drift specification in Appendix B during a calibration drift check, the CEMS is out-of-control. If the CEMS exceeds the audit inaccuracies listed above, the CEMS is out-of-control. If a CEMS is out-of-control, the data from that out-of-control period is not counted towards meeting the minimum data availability as required and described in the applicable subpart. The end of the out-of-control period is the time corresponding to the completion of the successful daily zero or span drift or completion of the successful CGA, RAA or RATA.

G. A back-up monitor may be placed on an emission source to minimize monitor downtime. This back-up CEMS is subject to the same QA/QC procedure and practices as the primary CEMS. The back-up CEMS shall be certified by a PST. Daily zero-span checks must be performed and recorded in accordance with standard practices. When the primary CEMS goes down, the back-up CEMS may then be engaged to sample, analyze and record the emission source pollutant until repairs are made and the primary unit is placed back in service. Records must be maintained on site when the back-up CEMS is placed in service, these records shall include at a minimum the reason the primary CEMS is out of service, the date and time the primary CEMS was out of service and the date and time the primary CEMS was placed back in service.

Appendix B

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.

(e) Heat recovery steam generators that are associated with combined cycle gas turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/hr) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part).

(f) Any facility covered by subpart AAAA of this part is not subject by this subpart.

(g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not subject by this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

§ 60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (*i.e.* , the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17) or diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO_2control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an

alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO_2control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO_2emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Wet flue gas desulfurization technology means an SO_2control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO_2.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

§ 60.42c Standard for sulfur dioxide (SO_2).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO_2emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in excess of SO_2in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO_2emissions limit or the 90 percent SO_2reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO_2emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2in excess of 50 percent (0.50) of the potential SO_2emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO_2 reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/hr) or less.

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area.

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the following:

(1) The percent of potential SO_2 emission rate or numerical SO_2 emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;

(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/hr); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:

E_s= SO_2emission limit, expressed in ng/J or lb/MMBtu heat input;

K_a= 520 ng/J (1.2 lb/MMBtu);

K_b= 260 ng/J (0.60 lb/MMBtu);

K_c= 215 ng/J (0.50 lb/MMBtu);

H_a= Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

H_b= Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

H_c= Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO_2emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO_2emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO_2control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(i) The SO_2emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

§ 60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that can combust coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph.

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or

greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under §60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO_2emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and §60.8(b), performance tests required under §60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under §60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO_2emission limits under §60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and §60.8, compliance with the percent reduction requirements and SO_2emission limits under §60.42c is based on the average percent reduction and the average SO_2emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO_2emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO_2emission rate (E_{ho}) and the 30-day average SO_2emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate $E_{ao}$when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho}($E_{ho}o$) is used in Equation 19–19 of Method 19 of appendix A of this part to compute the adjusted E_{ao}($E_{ao}o$). The $E_{ho}o$ is computed using the following formula:

$$E_{ho}o = \frac{E_{ho} - E_w(1 - X_k)}{X_k}$$

Where:

$E_{ho}o$ = Adjusted E_{ho}, ng/J (lb/MMBtu);

E_{ho}= Hourly SO_2emission rate, ng/J (lb/MMBtu);

E_w= SO_2concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$if the owner or operator elects to assume E_w= 0.

X_k= Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters $E_w$or $X_k$if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the SO_2emission limits under §60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2emission rate is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

Where:

$\%P_s$= Potential SO_2emission rate, in percent;

$\%R_g$= SO_2removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$= SO_2removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g(\%R_go)$ is computed from $E_{ao}o$ from paragraph (e)(1) of this section and an adjusted average SO_2inlet rate ($E_{ai}o$) using the following formula:

$$\%R_{go} = 100\left(1 - \frac{E^{\circ}_{wo}}{E^{\circ}_{ai}}\right)$$

Where:

$\%R_go$ = Adjusted $\%R_g$, in percent;

$E_{ao}o$ = Adjusted E_{ao}, ng/J (lb/MMBtu); and

$E_{ai}o$ = Adjusted average SO_2inlet rate, ng/J (lb/MMBtu).

(ii) To compute $E_{ai}o$, an adjusted hourly SO_2inlet rate ($E_{hi}o$) is used. The $E_{hi}o$ is computed using the following formula:

$$E_{hio} = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

Where:

$E_{hi}o$ = Adjusted E_{hi}, ng/J (lb/MMBtu);

E_{hi}= Hourly SO_2inlet rate, ng/J (lb/MMBtu);

E_w= SO_2concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value $E_w$for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure $E_w$if the owner or operator elects to assume E_w= 0; and

X_k= Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of

the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 60.45c Compliance and performance test methods and procedures for particulate matter.

Link to an amendment published at 76 FR 3523, Jan. 20, 2011.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43c shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3A or 3B of appendix A–2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A–3 of this part or 17 of appendix A–6 of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O_2) or carbon dioxide (CO_2) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O_2or CO_2measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A–4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under §60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2(or CO_2) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall be used; and

(ii) After July 1, 2010 or after Method 202 of appendix M of part 51 has been revised to minimize artifact measurement and notice of that change has been published in theFederal Register,whichever is later, for condensable PM emissions, Method 202 of appendix M of part 51 shall be used; and

(iii) For O2 (or CO_2), Method 3A or 3B of appendix A–2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(14) After July 1, 2011, within 90 days after the date of completing each performance evaluation required by paragraph (c)(11) of this section, the owner or operator of the affected facility must either submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at *http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main* or mail a copy to: United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; Mail Code: D243–01; RTP, NC 27711.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under §60.43c(e)(4) shall follow the applicable procedures under §60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/hr).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 60.46c Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO_2emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2concentrations and either O_2or CO_2concentrations at the outlet of the SO_2control device (or the outlet of the steam generating unit if no SO_2control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under §60.42c shall measure SO_2concentrations and either O_2or CO_2concentrations at both the inlet and outlet of the SO_2control device.

(b) The 1-hour average SO_2emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.42c.

Each 1-hour average SO_2emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under §60.13(h)(2). Hourly SO_2emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under §60.42c, the span value of the SO_2CEMS at the inlet to the SO_2control device shall be 125 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted, and the span value of the SO_2CEMS at the outlet from the SO_2control device shall be 50 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of §60.42c, the span value of the SO_2CEMS at the outlet from the SO_2control device (or outlet of the steam generating unit if no SO_2control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO_2control device (or outlet of the steam generating unit if no SO_2control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO_2control device (or outlet of the steam generating unit if no SO_2control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results

of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO_2at the inlet or outlet of the SO_2control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable $SO_2$and CO_2measurement train operated at the candidate location and a second similar train operated according to the procedures in §3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO_2standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

Link to an amendment published at 76 FR 3523, Jan. 20, 2011.

(a) Except as provided in paragraphs (c), (d), (e), (f), and (g) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in §60.43c(c) and that is not required to install a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to install a COMS shall conduct a performance test using Method 9 of appendix A–4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43c and shall comply with either

paragraphs (a)(1), (a)(2), or (a)(3) of this section. If during the initial 60 minutes of observation all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent, the observation period may be reduced from 3 hours to 60 minutes.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A–4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A–4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 30 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A–4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A–7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A–7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.* , 90 seconds per 30 minute period) the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.* , 90 seconds) or conduct a new Method 9 of appendix A–4 of this part performance test using the

procedures in paragraph (a) of this section within 30 calendar days according to the requirements in §60.45c(a)(8).

(ii) If no visible emissions are observed for 30 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A–4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A–4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243–02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO2 or PM emissions and that are subject to an opacity standard in §60.43c(c) are not required to operate a COMS if they follow the applicable procedures in §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in §60.45c(c). The CEMS specified in paragraph §60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a

COMS. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that uses a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most recent requirements in section §60.48Da of this part is not required to operate a COMS.

(g) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the permitting authority is not required to operate a COMS. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

§ 60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO_2emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO_2emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in §60.7, the owner or operator of an affected facility subject to the opacity limits in §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A–4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A–4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator

(d) The owner or operator of each affected facility subject to the SO_2emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO_2emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO_2emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO_2emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO_2or diluent (O_2or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO_2standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property

unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO_2standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

Appendix C

Subpart AAa—Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983

Source: 49 FR 43845, Oct. 31, 1984, unless otherwise noted.

§ 60.270a Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in steel plants that produce carbon, alloy, or specialty steels: electric arc furnaces, argon-oxygen decarburization vessels, and dust-handling systems.

(b) The provisions of this subpart apply to each affected facility identified in paragraph (a) of this section that commences construction, modification, or reconstruction after August 17, 1983.

§ 60.271a Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

Argon-oxygen decarburization vessel (AOD vessel) means any closed-bottom, refractory-lined converter vessel with submerged tuyeres through which gaseous mixtures containing argon and oxygen or nitrogen may be blown into molten steel for further refining.

Bag leak detection system means a system that is capable of continuously monitoring relative particulate matter (dust) loadings in the exhaust of a baghouse to detect bag leaks and other conditions that result in increases in particulate loadings. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, electrodynamic, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

Capture system means the equipment (including ducts, hoods, fans, dampers, etc.) used to capture or transport particulate matter generated by an electric arc furnace or AOD vessel to the air pollution control device.

Charge means the addition of iron and steel scrap or other materials into the top of an electric arc furnace or the addition of molten steel or other materials into the top of an AOD vessel.

Control device means the air pollution control equipment used to remove particulate matter from the effluent gas stream generated by an electric arc furnace or AOD vessel.

Direct-shell evacuation control system (DEC system) means a system that maintains a negative pressure within the electric arc furnace above the slag or metal and ducts emissions to the control device.

Dust-handling system means equipment used to handle particulate matter collected by the control device for an electric arc furnace or AOD vessel subject to this subpart. For the purposes of this subpart, the dust-handling system shall consist of the control device dust hoppers, the dust-conveying equipment, any central dust storage equipment, the dust-treating equipment (e.g., pug

mill, pelletizer), dust transfer equipment (from storage to truck), and any secondary control devices used with the dust transfer equipment.

Electric arc furnace (EAF) means a furnace that produces molten steel and heats the charge materials with electric arcs from carbon electrodes. For the purposes of this subpart, an EAF shall consist of the furnace shell and roof and the transformer. Furnaces that continuously feed direct-reduced iron ore pellets as the primary source of iron are not affected facilities within the scope of this definition.

Heat cycle means the period beginning when scrap is charged to an empty EAF and ending when the EAF tap is completed or beginning when molten steel is charged to an empty AOD vessel and ending when the AOD vessel tap is completed.

Meltdown and refining period means the time period commencing at the termination of the initial charging period and ending at the initiation of the tapping period, excluding any intermediate charging periods and times when power to the EAF is off.

Melting means that phase of steel production cycle during which the iron and steel scrap is heated to the molten state.

Negative-pressure fabric filter means a fabric filter with the fans on the downstream side of the filter bags.

Positive-pressure fabric filter means a fabric filter with the fans on the upstream side of the filter bags.

Refining means that phase of the steel production cycle during which undesirable elements are removed from the molten steel and alloys are added to reach the final metal chemistry.

Shop means the building which houses one or more EAF's or AOD vessels.

Shop opacity means the arithmetic average of 24 observations of the opacity of emissions from the shop taken in accordance with Method 9 of appendix A of this part.

Tap means the pouring of molten steel from an EAF or AOD vessel.

Tapping period means the time period commencing at the moment an EAF begins to pour molten steel and ending either three minutes after steel ceases to flow from an EAF, or six minutes after steel begins to flow, whichever is longer.

[49 FR 43845, Oct. 31, 1984, as amended at 64 FR 10110, Mar. 2, 1999; 70 FR 8532, Feb. 22, 2005]

§ 60.272a Standard for particulate matter.

(a) On and after the date of which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from an EAF or an AOD vessel any gases which:

(1) Exit from a control device and contain particulate matter in excess of 12 mg/dscm (0.0052 gr/dscf);

(2) Exit from a control device and exhibit 3 percent opacity or greater; and

(3) Exit from a shop and, due solely to the operations of any affected EAF(s) or AOD vessel(s), exhibit 6 percent opacity or greater.

(b) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from the dust-handling system any gases that exhibit 10 percent opacity or greater.

§ 60.273a Emission monitoring.

(a) Except as provided under paragraphs (b) and (c) of this section, a continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the control device(s) shall be installed, calibrated, maintained, and operated by the owner or operator subject to the provisions of this subpart.

(b) No continuous monitoring system shall be required on any control device serving the dust-handling system.

(c) A continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the control device(s) is not required on any modular, multi-stack, negative-pressure or positive-pressure fabric filter if observations of the opacity of the visible emissions from the control device are performed by a certified visible emission observer; or on any single-stack fabric filter if visible emissions from the control device are performed by a certified visible emission observer and the owner installs and continuously operates a bag leak detection system according to paragraph (e) of this section. Visible emission observations shall be conducted at least once per day for at least three 6-minute periods when the furnace is operating in the melting and refining period. All visible emissions observations shall be conducted in accordance with Method 9. If visible emissions occur from more than one point, the opacity shall be recorded for any points 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 emission, only one set of three 6-minute observations will be required. In that case, the 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 the emission limit specified in §60.272a(a).

(d) A furnace static pressure monitoring device is not required on any EAF equipped with a DEC system if observations of shop opacity are performed by a certified visible emission observer as follows: Shop opacity observations shall be conducted at least once per day when the furnace is operating in the meltdown and refining period. Shop opacity shall be determined as the arithmetic average of 24 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. 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.

(e) A bag leak detection system must be installed and continuously operated on all single-stack fabric filters if the owner or operator elects not to install and operate a continuous opacity monitoring system as provided for under paragraph (c) of this section. In addition, the owner or operator shall meet the visible emissions observation requirements in paragraph (c) of this section. The bag leak detection system must meet the specifications and requirements of paragraphs (e)(1) through (8) of this section.

(1) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 1 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.

(2) The bag leak detection system sensor must provide output of relative particulate matter loadings and the owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (*e.g.,* using a strip chart recorder or a data logger.)

(3) The bag leak detection system must be equipped with an alarm system that will sound when an increase in relative particulate loading is detected over the alarm set point established according to paragraph (e)(4) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(4) For each bag leak detection system required by paragraph (e) of this section, the owner or operator shall develop and submit to the Administrator or delegated authority, for approval, a site-specific monitoring plan that addresses the items identified in paragraphs (i) through (v) of this paragraph (e)(4). For each bag leak detection system that operates based on the triboelectric effect, the monitoring plan shall be consistent with the recommendations contained in the U.S. Environmental Protection Agency guidance document "Fabric Filter Bag Leak Detection Guidance" (EPA–454/R–98–015). The owner or operator shall operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan shall describe the following:

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system including how the alarm set-point will be established;

(iii) Operation of the bag leak detection system including quality assurance procedures;

(iv) How the bag leak detection system will be maintained including a routine maintenance schedule and spare parts inventory list; and

(v) How the bag leak detection system output shall be recorded and stored.

(5) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time (if applicable).

(6) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided for in paragraphs (e)(6)(i) and (ii) of this section.

(i) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects including temperature and humidity according to the procedures identified in the site-specific monitoring plan required under paragraphs (e)(4) of this section.

(ii) If opacities greater than zero percent are observed over four consecutive 15-second observations during the daily opacity observations required under paragraph (c) of this section and the alarm on the bag leak detection system does not sound, the owner or operator shall lower the alarm set point on the bag leak detection system to a point where the alarm would have sounded during the period when the opacity observations were made.

(7) For negative pressure, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detection sensor must be installed downstream of the baghouse and upstream of any wet scrubber.

(8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(f) For each bag leak detection system installed according to paragraph (e) of this section, the owner or operator shall initiate procedures to determine the cause of all alarms within 1 hour of an alarm. Except as provided for under paragraph (g) of this section, the cause of the alarm must be alleviated within 3 hours of the time the alarm occurred by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to, the following:

(1) Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in particulate emissions;

(2) Sealing off defective bags or filter media;

(3) Replacing defective bags or filter media or otherwise repairing the control device;

(4) Sealing off a defective baghouse compartment;

(5) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; and

(6) Shutting down the process producing the particulate emissions.

(g) In approving the site-specific monitoring plan required in paragraph (e)(4) of this section, the Administrator or delegated authority may allow owners or operators more than 3 hours to alleviate specific conditions that cause an alarm if the owner or operator identifies the condition that could lead to an alarm in the monitoring plan, adequately explains why it is not feasible to alleviate the condition within 3 hours of the time the alarm occurred, and demonstrates that the requested additional time will ensure alleviation of the condition as expeditiously as practicable.

[49 FR 43845, Oct. 31, 1984, as amended at 54 FR 6672, Feb. 14, 1989; 64 FR 10111, Mar. 2, 1999; 70 FR 8532, Feb. 22, 2005]

§ 60.274a Monitoring of operations.

(a) The owner or operator subject to the provisions of this subpart shall maintain records of the following information:

(1) All data obtained under paragraph (b) of this section; and

(2) All monthly operational status inspections performed under paragraph (c) of this section.

(b) Except as provided under paragraph (e) of this section, the owner or operator subject to the provisions of this subpart shall check and record on a once-per-shift basis the furnace static pressure (if DEC system is in use, and a furnace static pressure gauge is installed according to paragraph (f) of this section) and either: check and record the control system fan motor amperes and damper position on a once-per-shift basis; install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate through each separately ducted hood; or 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. The monitoring device(s) may be installed in any appropriate location in the exhaust duct such that reproducible flow rate monitoring will result. The flow rate monitoring device(s) shall have an accuracy of ±10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. The Administrator may require the owner or operator to demonstrate the accuracy of the monitoring device(s) relative to Methods 1 and 2 of appendix A of this part.

(c) When the owner or operator of an affected facility is required to demonstrate compliance with the standards under §60.272a(a)(3) and at any other time that the Administrator may require (under section 114 of the CAA, as amended) either: the control system fan motor amperes and all

damper positions, the volumetric flow rate through each separately ducted hood, or the volumetric flow rate at the control device inlet and all damper positions shall be determined during all periods in which a hood is operated for the purpose of capturing emissions from the affected facility subject to paragraph (b) of this section. The owner or operator may petition the Administrator for reestablishment of these parameters whenever the owner or operator can demonstrate to the Administrator's satisfaction that the affected facility operating conditions upon which the parameters were previously established are no longer applicable. 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. Operation at other than baseline values may be subject to the requirements of §60.276a(c).

(d) Except as provided under paragraph (e) of this section, the owner or operator 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.

(e) The owner or operator may petition the Administrator to approve any alternative to either the monitoring requirements specified in paragraph (b) of this section or the monthly operational status inspections specified in paragraph (d) of this section if the alternative will provide a continuous record of operation of each emission capture system.

(f) Except as provided for under §60.273a(d), if emissions during any phase of the heat time are controlled by the use of a DEC system, the owner or operator shall install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside the EAF to be monitored. The pressure shall be recorded as 15-minute integrated averages. The monitoring device may be installed in any appropriate location in the EAF or DEC 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 to the manufacturer's instructions.

(g) Except as provided for under §60.273a(d), when the owner or operator of an EAF controlled by a DEC is required to demonstrate compliance with the standard under §60.272a(a)(3), and at any other time the Administrator may require (under section 114 of the Clean Air Act, as amended), the pressure in the free space inside the furnace shall be determined during the meltdown and refining period(s) using the monitoring device required under paragraph (f) of this section. The owner or operator may petition the Administrator for reestablishment of the pressure whenever the owner or operator can demonstrate to the Administrator's satisfaction that the EAF operating conditions upon which the pressures were previously established are no longer applicable. The pressure determined during the most recent demonstration of 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 Administrator to be unacceptable operation and maintenance of the affected facility.

(h) During any performance test required under §60.8, and for any report thereof required by §60.276a(f) of this subpart, or to determine compliance with §60.272a(a)(3) of this subpart, 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 the pressure inside an EAF when direct-shell evacuation control systems are used;

(3) Control device operation log; and

(4) Continuous opacity monitor or Method 9 data.

[49 FR 43845, Oct. 31, 1984, as amended at 64 FR 10111, Mar. 2, 1999; 65 FR 61758, Oct. 17, 2000; 70 FR 8533, Feb. 22, 2005]

§ 60.275a Test methods and procedures.

(a) During performance tests required in §60.8, the owner or operator shall not add gaseous diluents to the effluent gas stream after the fabric in any pressurized fabric filter collector, unless the amount of dilution is separately determined and considered in the determination of emissions.

(b) When emissions from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart but controlled by a common capture system and control device, the owner or operator shall use either or both of the following procedures during a performance test (see also §60.276a(e)):

(1) Determine compliance using the combined emissions.

(2) Use a method that is acceptable to the Administrator and that compensates for the emissions from the facilities not subject to the provisions of this subpart.

(c) When emission from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart, the owner or operator shall demonstrate compliance with §60.272(a)(3) based on emissions from only the affected facility(ies).

(d) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(e) The owner or operator shall determine compliance with the particulate matter standards in §60.272a as follows:

(1) Method 5 shall be used for negative-pressure fabric filters and other types of control devices and Method 5D shall be used for positive-pressure fabric filters to determine the particulate

matter concentration and volumetric flow rate of the effluent gas. The sampling time and sample volume for each run shall be at least 4 hours and 4.50 dscm (160 dscf) and, when a single EAF or AOD vessel is sampled, the sampling time shall include an integral number of heats.

(2) When more than one control device serves the EAF(s) being tested, the concentration of particulate matter shall be determined using the following equation:

$$c_{st} = \left[\sum_{i=1}^{n} (c_{si} Q_{sdi})\right] \sum_{i=1}^{n} Q_{sdi}$$

where:

c_{st}=average concentration of particulate matter, mg/dscm (gr/dscf).

c_{si}=concentration of particulate matter from control device "i", mg/dscm (gr/dscf).

n=total number of control devices tested.

Q_{sdi}=volumetric flow rate of stack gas from control device "i", dscm/hr (dscf/hr).

(3) Method 9 and the procedures of §60.11 shall be used to determine opacity.

(4) To demonstrate compliance with §60.272a(a) (1), (2), and (3), the Method 9 test runs shall be conducted concurrently with the particulate matter test runs, unless inclement weather interferes.

(f) To comply with §60.274a (c), (f), (g), and (h), the owner or operator shall obtain the information required in these paragraphs during the particulate matter runs.

(g) Any control device subject to the provisions of the subpart shall be designed and constructed to allow measurement of emissions using applicable test methods and procedures.

(h) Where emissions from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart but controlled by a common capture system and control device, the owner or operator may use any of the following procedures during a performance test:

(1) Base compliance on control of the combined emissions;

(2) Utilize a method acceptable to the Administrator that compensates for the emissions from the facilities not subject to the provisions of this subpart, or;

(3) Any combination of the criteria of paragraphs (h)(1) and (h)(2) of this section.

(i) Where emissions from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart, determinations of compliance with §60.272a(a)(3) will only be based upon emissions originating from the affected facility(ies).

(j) Unless the presence of inclement weather makes concurrent testing infeasible, the owner or operator shall conduct concurrently the performance tests required under §60.8 to demonstrate compliance with §60.272a(a) (1), (2), and (3) of this subpart.

[49 FR 43845, Oct. 31, 1984, as amended at 54 FR 6673, Feb. 14, 1989; 54 FR 21344, May 17, 1989; 65 FR 61758, Oct. 17, 2000]

§ 60.276a Recordkeeping and reporting requirements.

(a) Records of the measurements required in §60.274a must be retained for at least 2 years following the date of the measurement.

(b) Each owner or operator shall submit a written report of exceedances of the control device opacity to the Administrator semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater.

(c) Operation at a furnace static pressure that exceeds the value established under §60.274a(g) and either operation of control system fan motor amperes at values exceeding ±15 percent of the value established under §60.274a(c) or operation at flow rates lower than those established under §60.274a(c) may be considered by the Administrator to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to the Administrator semiannually.

(d) The requirements of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State.

(e) When the owner or operator of an EAF or AOD is required to demonstrate compliance with the standard under §60.275 (b)(2) or a combination of (b)(1) and (b)(2) the owner or operator shall obtain approval from the Administrator of the procedure(s) that will be used to determine compliance. Notification of the procedure(s) to be used must be postmarked at least 30 days prior to the performance test.

(f) For the purpose of this subpart, the owner or operator shall conduct the demonstration of compliance with §60.272a(a) of this subpart and furnish the Administrator a written report of the results of the test. This report shall include the following information:

(1) Facility name and address;

(2) Plant representative;

(3) Make and model of process, control device, and continuous monitoring equipment;

(4) Flow diagram of process and emission capture equipment including other equipment or process(es) ducted to the same control device;

(5) Rated (design) capacity of process equipment;

(6) Those data required under §60.274a(h) of this subpart;

(i) List of charge and tap weights and materials;

(ii) Heat times and process log;

(iii) Control device operation log; and

(iv) Continuous opacity monitor or Method 9 data.

(7) Test dates and test times;

(8) Test company;

(9) Test company representative;

(10) Test observers from outside agency;

(11) Description of test methodology used, including any deviation from standard reference methods;

(12) Schematic of sampling location;

(13) Number of sampling points;

(14) Description of sampling equipment;

(15) Listing of sampling equipment calibrations and procedures;

(16) Field and laboratory data sheets;

(17) Description of sample recovery procedures;

(18) Sampling equipment leak check results;

(19) Description of quality assurance procedures;

(20) Description of analytical procedures;

(21) Notation of sample blank corrections; and

(22) Sample emission calculations.

(g) The owner or operator shall maintain records of all shop opacity observations made in accordance with §60.273a(d). All shop opacity observations in excess of the emission limit specified in §60.272a(a)(3) of this subpart shall indicate a period of excess emission, and shall be reported to the administrator semi-annually, according to §60.7(c).

(h) The owner or operator shall maintain the following records for each bag leak detection system required under §60.273a(e):

(1) Records of the bag leak detection system output;

(2) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(3) An identification of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, if procedures were initiated within 1 hour of the alarm, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and if the alarm was alleviated within 3 hours of the alarm.

[49 FR 43845, Oct. 31, 1984, as amended at 54 FR 6673, Feb. 14, 1989; 64 FR 10111, Mar. 2, 1999; 65 FR 61758, Oct. 17, 2000; 70 FR 8533, Feb. 22, 2005]

Appendix D

§ 75.66 of this chapter to the Administrator requesting approval to apply an alternative to any requirement of §§ 60.4170 through 60.4174 and § 60.4176. Application of an alternative to any requirement of §§ 60.4170 through 60.4174 and § 60.4176 is in accordance with this section and §§ 60.4170 through 60.4174 and § 60.4176 only to the extent that the petition is approved in writing by the Administrator, in consultation with the permitting authority.

§ 60.4176 Additional requirements to provide heat input data.

The owner or operator of a Hg Budget unit that monitors and reports Hg mass emissions using a Hg concentration monitoring system and a flow monitoring system shall also monitor and report heat input rate at the unit level using the procedures set forth in part 75 of this chapter.

Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

SOURCE: 71 FR 39172, July 11, 2006, unless otherwise noted.

WHAT THIS SUBPART COVERS

§ 60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines,

(ii) The model year listed in table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are:

(i) Manufactured after April 1, 2006 and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

EMISSION STANDARDS FOR MANUFACTURERS

§ 60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR

1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year nonemergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later nonemergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later nonemergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

§ 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

§ 60.4203 How long must my engines meet the emission standards if I am a stationary CI internal combustion engine manufacturer?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§ 60.4201 and 60.4202 during the useful life of the engines.

EMISSION STANDARDS FOR OWNERS AND OPERATORS

§ 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in § 60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (c)(1) and (2) of this section.

(1) Reduce nitrogen oxides (NO_X) emissions by 90 percent or more, or limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (g/KW-hr) (1.2 grams per HP-hour (g/HP-hr)).

(2) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in § 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (d)(1) and (2) of this section.

(1) Reduce NO_X emissions by 90 percent or more, or limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (1.2 grams per HP-hour).

(2) Reduce PM emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

§ 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§ 60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

FUEL REQUIREMENTS FOR OWNERS AND OPERATORS

§ 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

(c) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart may petition the Administrator for approval to use remaining non-compliant fuel that does not meet the fuel requirements of paragraphs (a) and (b) of this section beyond the dates required for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(d) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the Federal Aid Highway System may petition the Administrator for approval to use any fuels mixed with used lubricating oil that do not meet the fuel requirements of paragraphs (a) and (b) of this section. Owners and operators must demonstrate in their petition to the Administrator that there is no other place to use the lubricating oil. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(e) Stationary CI ICE that have a national security exemption under § 60.4200(d) are also exempt from the fuel requirements in this section.

OTHER REQUIREMENTS FOR OWNERS AND OPERATORS

§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in the previous model year?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than

or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) In addition to the requirements specified in §§ 60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (f) of this section after the dates specified in paragraphs (a) through (f) of this section.

(h) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in § 60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in § 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

Compliance Requirements

§ 60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in § 60.4201(a) through (c) and § 60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in § 60.4201(d) and § 60.4202(c) using the certification procedures required in 40 CFR part 94 subpart C, and must test their engines as specified in 40 CFR part 94.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 40 CFR 1039.125, 40 CFR 1039.130, 40 CFR 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89 or 40 CFR part 94 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the

nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate, but the words "stationary" must be included instead of "nonroad" or "marine" on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under parts 89, 94, or 1039 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words "and stationary" after the word "nonroad" or "marine," as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the

labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as "Fire Pump Applications Only".

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §§60.4201 or 60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

§60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in

§60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and NO_X and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_X and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.

Testing Requirements for Owners and Operators

§60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (d) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR

1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad \text{(Eq. 1)}$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in § 60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in § 60.4204(a), § 60.4205(a), or § 60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in § 60.4204(a), § 60.4205(a), or § 60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in § 60.4204(a), § 60.4205(a), or § 60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in § 60.4204(a), § 60.4205(a), or § 60.4205(c) may follow the testing procedures specified in § 60.4213, as appropriate.

§ 60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (d) of this section.

(a) Each performance test must be conducted according to the requirements in § 60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in § 60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 2)}$$

Where:

C_i = concentration of NO_x or PM at the control device inlet,

C_o = concentration of NO_x or PM at the control device outlet, and

R = percent reduction of NO_x or PM emissions.

(2) You must normalize the NO_x or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O_2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO_2) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \%\ O_2} \qquad \text{(Eq. 3)}$$

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.
C_d = Measured concentration of NO_X or PM, uncorrected.
5.9 = 20.9 percent O_2 – 15 percent O_2, the defined O_2 correction value, percent.
$\%O_2$ = Measured O_2 concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O_2 and CO_2 concentration is measured in lieu of O_2 concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209_{F_d}}{F_c} \qquad \text{(Eq. 4)}$$

Where:

F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.
0.209 = Fraction of air that is O_2, percent/100.
F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu).
F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 5)}$$

Where:

X_{CO2} = CO_2 correction factor, percent.
5.9 = 20.9 percent O_2 – 15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the NO_X and PM gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%\ CO_2} \qquad \text{(Eq. 6)}$$

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.
C_d = Measured concentration of NO_X or PM, uncorrected.
$\%CO_2$ = Measured CO_2 concentration, dry basis, percent.

(e) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{KW\text{-hour}} \qquad \text{(Eq. 7)}$$

Where:

ER = Emission rate in grams per KW-hour.
C_d = Measured NO_X concentration in ppm.
1.912×10^{-3} = Conversion constant for ppm NO_X to grams per standard cubic meter at 25 degrees Celsius.
Q = Stack gas volumetric flow rate, in standard cubic meter per hour.
T = Time of test run, in hours.
KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{KW\text{-hour}} \qquad \text{(Eq. 8)}$$

Where:

ER = Emission rate in grams per KW-hour.
C_{adj} = Calculated PM concentration in grams per standard cubic meter.
Q = Stack gas volumetric flow rate, in standard cubic meter per hour.
T = Time of test run, in hours.
KW-hour = Energy output of the engine, in KW.

NOTIFICATION, REPORTS, AND RECORDS FOR OWNERS AND OPERATORS

§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in § 60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

SPECIAL REQUIREMENTS

§ 60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in § 60.4205. Non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder, must meet the applicable emission standards in § 60.4204(c).

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in § 60.4207.

§ 60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI engines located in areas of Alaska not accessible by the Federal Aid Highway System should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) The Governor of Alaska may submit for EPA approval, by no later than January 11, 2008, an alternative plan for implementing the requirements of 40 CFR part 60, subpart IIII, for public-sector electrical utilities located in rural areas of Alaska not accessible by the Federal Aid Highway System. This alternative plan must be based on the requirements of section 111 of the

Clean Air Act including any increased risks to human health and the environment and must also be based on the unique circumstances related to remote power generation, climatic conditions, and serious economic impacts resulting from implementation of 40 CFR part 60, subpart IIII. If EPA approves by rulemaking process an alternative plan, the provisions as approved by EPA under that plan shall apply to the diesel engines used in new stationary internal combustion engines subject to this paragraph.

§ 60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

(a) Owners and operators of stationary CI ICE that do not use diesel fuel, or who have been given authority by the Administrator under § 60.4207(d) of this subpart to use fuels that do not meet the fuel requirements of paragraphs (a) and (b) of § 60.4207, may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in § 60.4202 or § 60.4203 using such fuels.

(b) [Reserved]

General Provisions

§ 60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§ 60.1 through 60.19 apply to you.

Definitions

§ 60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and subcomponents comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary CI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

Engine manufacturer means the manufacturer of the engine. See the definition of "manufacturer" in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means either:

(1) The calendar year in which the engine was originally produced, or

(2) The annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means 40 CFR part 60, subpart IIII.

Useful life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for useful life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for useful life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

TABLE 1 TO SUBPART IIII OF PART 60—EMISSION STANDARDS FOR STATIONARY PRE-2007 MODEL YEAR ENGINES WITH A DISPLACEMENT OF <10 LITERS PER CYLINDER AND 2007–2010 MODEL YEAR ENGINES >2,237 KW (3,000 HP) AND WITH A DISPLACEMENT OF <10 LITERS PER CYLINDER

[As stated in §§ 60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007–2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	$NMHC + NO_x$	HC	NO_x	CO	PM
KW<8 (HP<11)	10.5 (7.8)	.....	.....	8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)	.....	.....	6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)	.....	.....	5.5 (4.1)	0.80 (0.60)

[As stated in §§ 60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007–2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO_X	HC	NO_X	CO	PM
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

TABLE 2 TO SUBPART IIII OF PART 60—EMISSION STANDARDS FOR 2008 MODEL YEAR AND LATER EMERGENCY STATIONARY CI ICE <37 KW (50 HP) WITH A DISPLACEMENT OF <10 LITERS PER CYLINDER

[As stated in § 60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO_X + NMHC	CO	PM
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

TABLE 3 TO SUBPART IIII OF PART 60—CERTIFICATION REQUIREMENTS FOR STATIONARY FIRE PUMP ENGINES

[As stated in § 60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:]

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to § 60.4202(d)
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

TABLE 4 TO SUBPART IIII OF PART 60—EMISSION STANDARDS FOR STATIONARY FIRE PUMP ENGINES

[As stated in §§ 60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+[2]	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)

[As stated in §§ 60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

[1] For model years 2011–2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.
[2] For model years 2010–2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.
[3] In model years 2009–2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

TABLE 5 TO SUBPART IIII OF PART 60—LABELING AND RECORDKEEPING REQUIREMENTS FOR NEW STATIONARY EMERGENCY ENGINES

[You must comply with the labeling requirements in § 60.4210(f) and the recordkeeping requirements in § 60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

TABLE 6 TO SUBPART IIII OF PART 60—OPTIONAL 3-MODE TEST CYCLE FOR STATIONARY FIRE PUMP ENGINES

[As stated in § 60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed[1]	Torque (percent)[2]	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

[1] Engine speed: ±2 percent of point.
[2] Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

TABLE 7 TO SUBPART IIII OF PART 60—REQUIREMENTS FOR PERFORMANCE TESTS FOR STATIONARY CI ICE WITH A DISPLACEMENT OF ≥30 LITERS PER CYLINDER

[As stated in § 60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥30 liters per cylinder.	a. Reduce NO_X emissions by 90 percent or more.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A.	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see § 60.17).	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO_X concentration.

[As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:]

For each	Complying with the requirement to	You must	Using	According to the following requirements
		iv. Measure NO_X at the inlet and outlet of the control device.	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17).	(d) NO_X concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	b. Limit the concentration of NO_X in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location; and,	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A.	(b) Measurements to determine O_2 concentration must be made at the same time as the measurement for NO_X concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO_X concentration.
		iv. Measure NO_X at the exhaust of the stationary internal combustion engine.	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17).	(d) NO_X concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	c. Reduce PM emissions by 60 percent or more.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A.	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A.	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device.	(4) Method 5 of 40 CFR part 60, appendix A.	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device.

[As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:]

For each	Complying with the requirement to	You must	Using	According to the following requirements
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A.	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A.	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine.	(4) Method 5 of 40 CFR part 60, appendix A.	(d) PM concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

TABLE 8 TO SUBPART IIII OF PART 60—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART IIII

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions.	Yes.	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes.	
§60.4	Address	Yes.	
§60.5	Determination of construction or modification.	Yes.	
§60.6	Review of plans	Yes.	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes.	
§60.10	State Authority	Yes.	
§60.11	Compliance with standards and maintenance requirements.	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes.	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§60.14	Modification	Yes.	
§60.15	Reconstruction	Yes.	
§60.16	Priority list	Yes.	
§60.17	Incorporations by reference	Yes.	
§60.18	General control device requirements	No.	
§60.19	General notification and reporting requirements.	Yes.	

Appendix E

at least 2 years. records of all data and calculations used to determine VOC emissions from each affected facility. Where compliance is achieved through the use of thermal incineration. each owner or operator shall maintain at the source daily records of the incinerator combustion chamber temperature. If catalytic incineration is used. the owner or operator shall maintain at the source daily records of the gas temperature. both upstream and downstream of the incinerator catalyst bed. Where compliance is achieved through the use of a solvent recovery system. the owner or operator shall maintain at the source daily records of the amount of solvent recovered by the system for each affected facility.

[47 FR 47785. Oct. 27. 1982. as amended at 55 FR 51383. Dec. 13. 1990; 65 FR 61761. Oct. 17. 2000]

60.456 Test methods and procedures.

(a) The reference methods in appendix A to this part. except as provided under 60.8(b). shall be used to determine compliance with 60.452 as follows:

(1) Method 24 or formulation data supplied by the coating manufacturer to determine the VOC content of a coating. In the event of dispute. Method 24 shall be the reference method. For determining compliance only. results of Method 24 analyses of waterborne coatings shall be adjusted as described in Section 12.6 of Method 24. Procedures to determine VOC emissions are provided in 60.453.

(2) Method 25 for the measurement of the VOC concentration in the gas stream vent.

(3) Method 1 for sample and velocity traverses.

(4) Method 2 for velocity and volumetric flow rate.

(5) Method 3 for gas analysis.

(6) Method 4 for stack gas moisture.

(b) For Method 24. the coating sample must be a 1-liter sample taken into a 1-liter container at a point where the sample will be representative of the coating material.

(c) For Method 25. the sample time for each of three runs is to be at least 60 minutes and the minimum sample volume is to be at least 0.003 dscm (0.1 dscf) except that shorter sampling times or smaller volumes. when necessitated by process variables or other factors. may be approved by the Administrator.

(d) The Administrator will approve sampling of representative stacks on a case-by-case basis if the owner or operator can demonstrate to the satisfaction of the Administrator that the testing of representative stacks would yield results comparable to those that would be obtained by testing all stacks.

[47 FR 47785. Oct. 27. 1982. as amended at 65 FR 61761. Oct. 17. 2000]

Subpart TT Standards of Performance for Metal Coil Surface Coating

SOURCE: 47 FR 49612. Nov. 1. 1982. unless otherwise noted.

60.460 Applicability and designation of affected facility.

(a) The provisions of this subpart apply to the following affected facilities in a metal coil surface coating operation: each prime coat operation. each finish coat operation. and each prime and finish coat operation combined when the finish coat is applied wet on wet over the prime coat and both coatings are cured simultaneously.

(b) This subpart applies to any facility identified in paragraph (a) of this section that commences construction. modification. or reconstruction after January 5. 1981.

60.461 Definitions.

(a) All terms used in this subpart not defined below are given the same meaning as in the Act or in subpart A of this part.

Coating means any organic material that is applied to the surface of metal coil.

Coating application station means that portion of the metal coil surface coating operation where the coating is applied to the surface of the metal coil. Included as part of the coating application station is the flashoff area between the coating application station and the curing oven.

Curing oven means the device that uses heat or radiation to dry or cure the coating applied to the metal coil.

Finish coat operation means the coating application station, curing oven, and quench station used to apply and dry or cure the final coating(s) on the surface of the metal coil. Where only a single coating is applied to the metal coil, that coating is considered a finish coat.

Metal coil surface coating operation means the application system used to apply an organic coating to the surface of any continuous metal strip with thickness of 0.15 millimeter (mm) (0.006 in.) or more that is packaged in a roll or coil.

Prime coat operation means the coating application station, curing oven, and quench station used to apply and dry or cure the initial coating(s) on the surface of the metal coil.

Quench station means that portion of the metal coil surface coating operation where the coated metal coil is cooled, usually by a water spray, after baking or curing.

VOC content means the quantity, in kilograms per liter of coating solids, of volatile organic compounds (VOC's) in a coating.

(b) All symbols used in this subpart not defined below are given the same meaning as in the Act and in subpart A of this part.

C_a= the VOC concentration in each gas stream leaving the control device and entering the atmosphere (parts per million by volume, as carbon).

C_b= the VOC concentration in each gas stream entering the control device (parts per million by volume, as carbon).

C_f= the VOC concentration in each gas steam emitted directly to the atmosphere (parts per million by volume, as carbon).

D_c= density of each coating, as received (kilograms per liter).

D_d= density of each VOC-solvent added to coatings (kilograms per liter).

D_r= density of VOC-solvent recovered by an emission control device (kilograms per liter).

E= VOC destruction efficiency of the control device (fraction).

F= the proportion of total VOC's emitted by an affected facility that enters the control device (fraction).

G= volume-weighted average mass of VOC's in coatings consumed in a calendar month per unit volume of coating solids applied (kilograms per liter).

L_c= the volume of each coating consumed, as received (liters).

L_d= the volume of each VOC-solvent added to coatings (liters).

L_r= the volume of VOC-solvent recovered by an emission control device (liters).

L_s= the volume of coating solids consumed (liters).

M_d= the mass of VOC-solvent added to coatings (kilograms).

M_o= the mass of VOC's in coatings consumed, as received (kilograms).

M_r= the mass of VOC's recovered by an emission control device (kilograms).

N= the volume-weighted average mass of VOC emissions to the atmosphere per unit volume of coating solids applied (kilograms per liter).

Q_a= the volumetric flow rate of each gas stream leaving the control device and entering the atmosphere (dry standard cubic meters per hour).

Q_b= the volumetric flow rate of each gas stream entering the control device (dry standard cubic meters per hour).

Q_f= the volumetric flow rate of each gas steam emitted directly to the atmosphere (dry standard cubic meters per hour).

R= the overall VOC emission reduction achieved for an affected facility (fraction).

S= the calculated monthly allowable emission limit (kilograms of VOC per liter of coating solids applied).

V_s= the proportion of solids in each coating, as received (fraction by volume).

W_o= the proportion of VOC's in each coating, as received (fraction by weight).

60.462 Standards for volatile organic compounds.

(a) On and after the date on which 60.8 requires a performance test to be completed, each owner or operator subject to this subpart shall not cause to be discharged into the atmosphere more than:

(1) 0.28 kilogram VOC per liter (kg VOC/l) of coating solids applied for each calendar month for each affected facility that does not use an emission control device(s); or

(2) 0.14 kg VOC/l of coating solids applied for each calendar month for each affected facility that continuously uses an emission control device(s) operated at the most recently demonstrated overall efficiency; or

(3) 10 percent of the VOC's applied for each calendar month (90 percent emission reduction) for each affected facility that continuously uses an emission control device(s) operated at the most recently demonstrated overall efficiency; or

(4) A value between 0.14 (or a 90-percent emission reduction) and 0.28 kg VOC/l of coating solids applied for each calendar month for each affected facility that intermittently uses an emission control device operated at the most recently demonstrated overall efficiency.

60.463 Performance test and compliance provisions.

(a) Section 60.8(d) and (f) do not apply to the performance test.

(b) The owner or operator of an affected facility shall conduct an initial performance test as required under 60.8(a) and thereafter a performance test for each calendar month for each affected facility according to the procedures in this section.

(c) The owner or operator shall use the following procedures for determining monthly volume-weighted average emissions of VOC's in kg/l of coating solids applied.

(1) An owner or operator shall use the following procedures for each affected facility that does not use a capture system and control device to comply with the emission limit specified under 60.462(a)(1). The owner or operator shall determine the composition of the coatings by formulation data supplied by the manufacturer of the coating or by an analysisof each coating, as received, using Method 24. The Administrator may require the owner or operator who uses formulation data supplied by the manufacturer of the coatings to determine the VOC content of coatings using Method 24 or an equivalent or alternative method. The owner or operator shall determine the volume of coating and the mass of VOC-solvent added to coatings from company records on a monthly basis. If a common coating distribution system serves more than one affected facility or serves both affected and existing facilities, the owner or operator shall estimate the volume of coating used at each affected facility by using the average dry weight of coating and the surface area coated by each affected and existing facility or by other procedures acceptable to the Administrator.

(i) Calculate the volume-weighted average of the total mass of VOC's consumed per unit volume of coating solids applied during each calendar month for each affected facility, except as provided under paragraph (c)(1)(iv) of this section. The weighted average of the total mass of VOC's used per unit volume of coating solids applied each calendar month is determined by the following procedures.

(A) Calculate the mass of VOC's used (Mo+Md) during each calendar month for each affected facility by the following equation:

$$M_o + M_d = \sum_{i=1}^{n} L_{ci} D_{ci} W_{oi} + \sum_{j=1}^{m} L_{dj} D_{dj} \qquad \text{Equation 1}$$

($SL_{dj}D_{dj}$ will be 0 if no VOC solvent is added to the coatings, as received)

where

n is the number of different coatings used during the calendar month, and

m is the number of different VOC solvents added to coatings used during the calendar month.

(B) Calculate the total volume of coating solids used (L_s) in each calendar month for each affected facility by the following equation:

$$L_s = \sum_{i=1}^{n} V_{si} L_{ci} \qquad \text{Equation 2}$$

Where:

n is the number of different coatings used during the calendar month.

(C) Calculate the volume-weighted average mass of VOC's used per unit volume of coating solids applied (G) during the calendar month for each affected facility by the following equation:

$$G = \frac{M_o + M_d}{L_s} \qquad \text{Equation 3}$$

(ii) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during the calendar month for each affected facility by the following equation:

$$N = G \qquad \text{Equation 4}$$

(iii) Where the volume-weighted average mass of VOC's discharged to the atmosphere per unit volume of coating solids applied (N) is equal to or less than 0.28 kg/l, the affected facility is in compliance.

(iv) If each individual coating used by an affected facility has a VOC content, as received, that is equal to or less than 0.28 kg/l of coating solids, the affected facility is in compliance provided no VOC's are added to the coatings during distribution or application.

(2) An owner or operator shall use the following procedures for each affected facility that continuously uses a capture system and a control device that destroys VOC's (e.g., incinerator) to comply with the emission limit specified under 60.462(a) (2) or (3).

(i) Determine the overall reduction efficiency (R) for the capture system and control device.

For the initial performance test, the overall reduction efficiency (R) shall be determined as prescribed in paragraphs (c)(2)(i) (A), (B), and (C) of this section. In subsequent months, the owner or operator may use the most recently determined overall reduction efficiency (R) for the performance test, providing control device and capture system operating conditions have not changed. The procedure in paragraphs (c)(2)(i) (A), (B), and (C) of this section, shall be repeated when directed by the Administrator or when the owner or operator elects to operate the control device or capture system at conditions different from the initial performance test.

(A) Determine the fraction (F) of total VOC's emitted by an affected facility that enters the control device using the following equation:

$$F = \frac{\sum_{i=1}^{l} C_{bi} Q_{bi}}{\sum_{i=1}^{l} C_{bi} Q_{bi} + \sum_{j=1}^{p} C_{fj} Q_{fj}}$$

Equation 5

Where:

l is the number of gas streams entering the control device, and

p is the number of gas streams emitted directly to the atmosphere.

(B) Determine the destruction efficiency of the control device (E) using values of the volumetric flow rate of each of the gas streams and the VOC content (as carbon) of each of the gas streams in and out of the device by the following equation:

$$E = \frac{\sum_{i=1}^{n} Q_{bi} C_{bi} - \sum_{j=1}^{m} Q_{aj} C_{aj}}{\sum_{i=1}^{n} Q_{bi} C_{bi}}$$

Equation 6

Where:

n is the number of gas streams entering the control device, and

m is the number of gas streams leaving the control device and entering the atmosphere.

The owner or operator of the affected facility shall construct the VOC emission reduction system so that all volumetric flow rates and total VOC emissions can be accurately determined by the applicable test methods and procedures specified in 60.466. The owner or operator of the affected facility shall construct a temporary enclosure around the coating applicator and flashoff area during the performance test for the purpose of evaluating the capture efficiency of the system. The enclosure must be maintained at a negative pressure to ensure that all VOC emissions are measurable. If a permanent enclosure exists in the affected facility prior to the performance test and the Administrator is satisfied that the enclosure is adequately containing VOC emissions, no additional enclosure is required for the performance test.

(C) Determine overall reduction efficiency (R) using the following equation:

$$R = EF \qquad \text{Equation 7}$$

If the overall reduction efficiency (R) is equal to or greater than 0.90, the affected facility is in compliance and no further computations are necessary. If the overall reduction efficiency (R) is less than 0.90, the average total VOC emissions to the atmosphere per unit volume of coating solids applied (N) shall be computed as follows.

(ii) Calculate the volume-weighted average of the total mass of VOC's per unit volume of coating solids applied (G) during each calendar month for each affected facility using equations in paragraphs (c)(1)(i) (A), (B), and (C) of this section.

(iii) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during each calendar month by the following equation:

$$N = G(1 - R) \qquad \text{Equation 8}$$

(iv) If the volume-weighted average mass of VOC's emitted to the atmosphere for each calendar month (N) is less than or equal to 0.14 kg/l of coating solids applied, the affected facility is in compliance. Each monthly calculation is a performance test.

(3) An owner or operator shall use the following procedure for each affected facility that uses a control device that recovers the VOC's (e.g., carbon adsorber) to comply with the applicable emission limit specified under 60.462(a) (2) or (3).

(i) Calculate the total mass of VOC's consumed (M_o+M_d) during each calendar month for each affected facility using equation (1).

(ii) Calculate the total mass of VOC's recovered (M_r) during each calendar month using the following equation:

$$M_r = L_r D_r \qquad \text{Equation 9}$$

(iii) Calculate the overall reduction efficiency of the control device (R) for each calendar month for each affected facility using the following equation:

$$R = \frac{M_r}{M_o + M_d} \qquad \text{Equation 10}$$

If the overall reduction efficiency (R) is equal to or greater than 0.90, the affected facility is in compliance and no further computations are necessary. If the overall reduction efficiency (R) is less than 0.90, the average total VOC emissions to the atmosphere per unit volume of coating solids applied (N) must be computed as follows.

(iv) Calculate the total volume of coating solids consumed (L_s) and the volume-weighted average of the total mass of VOC's per unit volume of coating solids applied (G) during each calendar month for each affected facility using equations in paragraphs (c)(1)(i) (B) and (C) of this section.

(v) Calculate the volume-weighted average mass of VOC's emitted to the atmosphere (N) for each calendar month for each affected facility using equation (8).

(vi) If the weighted average mass of VOC's emitted to the atmosphere for each calendar month (N) is less than or equal to 0.14 kg/l of coating solids applied, the affected facility is in compliance. Each monthly calculation is a performance test.

(4) An owner or operator shall use the following procedures for each affected facility that intermittently uses a capture system and a control device to comply with the emission limit specified in 60.462(a)(4).

(i) Calculate the total volume of coating solids applied without the control device in operation (L_{sn}) during each calendar month for each affected facility using the following equation:

$$L_{sn} = \sum_{i-1}^{n} V_{si} L_{ci} \qquad \text{Equation 11}$$

Where:

n is the number of coatings used during the calendar month without the control device in operation.

(ii) Calculate the total volume of coating solids applied with the control device in operation (L_{sc}) during each calendar month for each affected facility using the following equation:

$$L_{sc} = \sum_{i-1}^{n} V_{si} L_{ci} \qquad \text{Equation 12}$$

Where:

n is the number of coatings used during the calendar month with the control device in operation.

(iii) Calculate the mass of VOC's used without the control device in operation

($M_{on}+M_{dn}$) during each calendar month for each affected facility using the following equation:

$$M_{on} + M_{dn} + \sum_{i=1}^{n} L_{ci} D_{ci} W_{oi} + \sum_{j=1}^{m} L_{dj} D_{dj} \quad \text{Equation 13}$$

Where:

n is the number of different coatings used without the control device in operation during the calendar month, and

m is the number of different VOC-solvents added to coatings used without the control device in operation during the calendar month.

(iv) Calculate the volume-weighted average of the total mass of VOC's consumed per unit volume of coating solids applied without the control device in operation (G_n) during each calendar month for each affected facility using the following equation:

$$G_n = \frac{M_{on} + M_{dn}}{L_{sn}} \quad \text{Equation 14}$$

(v) Calculate the mass of VOC's used with the control device in operation ($M_{oc}+M_{dc}$) during each calendar month for each affected facility using the following equation:

$$M_{oc} + M_{dc} = \sum_{i=1}^{n} L_{ci} D_{ci} W_{oi} + \sum_{i=1}^{m} L_{dj} D_{dj} \quad \text{Equation 15}$$

Where:

n is the number of different coatings used with the control device in operation during the calendar month, and

m is the number of different VOC-solvents added to coatings used with the control device in operation during the calendar month.

(vi) Calculate the volume-weighted average of the total mass of VOC's used per unit volume of coating solids applied with the control device in operation (G_c) during each calendar month for each affected facility using the following equation:

$$G = \frac{M_{oc} + M_{dc}}{L_{sn}} \quad \text{Equation 16}$$

(vii) Determine the overall reduction efficiency (R) for the capture system and control device using the procedures in paragraphs (c)(2)(i) (A), (B), and (C) or paragraphs (c)(3) (i), (ii), and (iii) of this section, whichever is applicable.

(viii) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during each calendar month for each affected facility using the following equation:

$$N = \frac{G_n L_{sn} + G_c L_{sc}(1 - R)}{L_{sn} + L_{sc}} \quad \text{Equation 17}$$

Equation 17

(ix) Calculate the emission limit(s) for each calendar month for each affected facility using the following equation:

$$S = \frac{0.28\, L_{sn} + 0.1\, G_c L_{sc}}{L_{ns} + L_{sc}}$$

or

$$\frac{0.28\,L_{sn} + 0.14\,L_{sc}}{L_{sn} + L_{sc}} \qquad \text{Equation 18}$$

whichever is greater.

(x) If the volume-weighted average mass of VOC's emitted to the atmosphere for each calendar month (N) is less than or equal to the calculated emission limit (S) for the calendar month, the affected facility is in compliance. Each monthly calculation is a performance test.

[47 FR 49612, Nov. 1, 1982; 48 FR 1056, Jan. 10, 1983, as amended at 65 FR 61761, Oct. 17, 2000]

60.464 Monitoring of emissions and operations.

(a) Where compliance with the numerical limit specified in 60.462(a) (1) or (2) is achieved through the use of low VOC-content coatings without the use of emission control devices or through the use of higher VOC-content coatings in conjunction with emission control devices, the owner or operator shall compute and record the average VOC content of coatings applied during each calendar month for each affected facility, according to the equations provided in 60.463.

(b) Where compliance with the limit specified in 60.462(a)(4) is achieved through the intermittent use of emission control devices, the owner or operator shall compute and record for each affected facility the average VOC content of coatings applied during each calendar month according to the equations provided in 60.463.

(c) If thermal incineration is used, each owner or operator subject to the provisions of this subpart shall install, calibrate, operate, and maintain a device that continuously records the combustion temperature of any effluent gases incinerated to achieve compliance with 60.462(a)(2), (3), or (4). This device shall have an accuracy of 2.5 C, or 0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater. Each owner or operator shall also record all periods (during actual coating operations) in excess of 3 hours during which the average temperature in any thermal incinerator used to control emissions from an affected facility remains more than 28 C (50 F) below the temperature at which compliance with 60.462(a)(2), (3), or (4) was demonstrated during the most recent measurement of incinerator efficiency required by 60.8. The records required by 60.7 shall identify each such occurrence and its duration. If catalytic incineration is used, the owner or operator shall install, calibrate, operate, and maintain a device to monitor and record continuously the gas temperature both upstream and downstream of the incinerator catalyst bed. This device shall have an accuracy of 2.5 C, or 0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater. During coating operations, the owner or operator shall record all periods in excess of 3 hours where the average difference between the temperature upstream and downstream of the incinerator catalyst bed remains below 80 percent of the temperature difference at which compliance was demonstrated during the most recent measurement of incinerator efficiency or when the inlet temperature falls more than 28 C (50 F) below the temperature at which compliance with 60.462(a)(2), (3), or (4) was demonstrated during the most recent measurement of incinerator efficiency required by 60.8. The records required by 60.7 shall identify each such occurrence and its duration.

[47 FR 49612, Nov. 1, 1982; 48 FR 1056, Jan. 10, 1983, as amended at 65 FR 61761, Oct. 17, 2000]

60.465 Reporting and recordkeeping requirements.

(a) Where compliance with the numerical limit specified in 60.462(a) (1), (2), or (4) is achieved through the use of low VOC-content coatings without emission control devices or through the use of higher VOC-content coatings in conjunction with emission control devices, each owner or operator subject to the provisions of this subpart shall include in the initial compliance report required by 60.8 the weighted average of the VOC content of coatings used during a period of one calendar month for each affected facility. Where compliance with 60.462(a)(4) is achieved through the intermittent use of a control device, reports shall include separate values of the weighted average VOC content of coatings used with and

without the control device in operation.

(b) Where compliance with 60.462(a)(2), (3), or (4) is achieved through the use of an emission control device that destroys VOC's, each owner or operator subject to the provisions of this subpart shall include the following data in the initial compliance report required by 60.8:

(1) The overall VOC destruction rate used to attain compliance with 60.462(a)(2), (3), or (4) and the calculated emission limit used to attain compliance with 60.462(a)(4); and

(2) The combustion temperature of the thermal incinerator or the gas temperature, both upstream and downstream of the incinerator catalyst bed, used to attain compliance with 60.462(a)(2), (3), or (4).

(c) Following the initial performance test, the owner or operator of an affected facility shall identify, record, and submit a written report to the Administrator every calendar quarter of each instance in which the volume-weighted average of the local mass of VOC's emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified under 60.462. If no such instances have occurred during a particular quarter, a report stating this shall be submitted to the Administrator semiannually.

(d) The owner or operator of each affected facility shall also submit reports at the frequency specified in 60.7(c) when the incinerator temperature drops as defined under 60.464(c). If no such periods occur, the owner or operator shall state this in the report.

(e) Each owner or operator subject to the provisions of this subpart shall maintain at the source, for a period of at least 2 years, records of all data and calculations used to determine monthly VOC emissions from each affected facility and to determine the monthly emission limit, where applicable. Where compliance is achieved through the use of thermal incineration, each owner or operator shall maintain, at the source, daily records of the incinerator combustion temperature. If catalytic incineration is used, the owner or operator shall maintain at the source daily records of the gas temperature, both upstream and downstream of the incinerator catalyst bed.

[47 FR 49612, Nov. 1, 1982, as amended at 55 FR 51383, Dec. 13, 1990; 56 FR 20997, May 3, 1991; 65 FR 61761, Oct. 17, 2000]

60.466 Test methods and procedures.

(a) The reference methods in appendix A to this part, except as provided under 60.8(b), shall be used to determine compliance with 60.462 as follows:

(1) Method 24, or data provided by the formulator of the coating, shall be used for determining the VOC content of each coating as applied to the surface of the metal coil. In the event of a dispute, Method 24 shall be the reference method. When VOC content of waterborne coatings, determined by Method 24, is used to determine compliance of affected facilities, the results of the Method 24 analysis shall be adjusted as described in Section 12.6 of Method 24;

(2) Method 25, both for measuring the VOC concentration in each gas stream entering and leaving the control device on each stack equipped with an emission control device and for measuring the VOC concentration in each gas stream emitted directly to the atmosphere;

(3) Method 1 for sample and velocity traverses;

(4) Method 2 for velocity and volumetric flow rate;

(5) Method 3 for gas analysis; and

(6) Method 4 for stack gas moisture.

(b) For Method 24, the coating sample must be at least a 1-liter sample taken at a point where the sample will be representative of the coating as applied to the surface of the metal coil.

(c) For Method 25, the sampling time for each of three runs is to be at least 60 minutes, and the minimum sampling volume is to be at least 0.003 dscm (0.11 dscf); however, shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Administrator.

(d) The Administrator will approve testing of representative stacks on a case-by-case basis if the owner or operator can demonstrate to the satisfaction of the Administrator that testing of representative stacks yields results

comparable to those that would be obtained by testing all stacks.

[47 FR 49612, Nov. 1, 1982, as amended at 51 FR 22938, June 24, 1986; 65 FR 61761, Oct. 17, 2000]

Subpart UU Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture

SOURCE: 47 FR 34143, Aug. 6, 1982, unless otherwise noted.

60.470 Applicability and designation of affected facilities.

(a) The affected facilities to which this subpart applies are each saturator and each mineral handling and storage facility at asphalt roofing plants; and each asphalt storage tank and each blowing still at asphalt processing plants, petroleum refineries, and asphalt roofing plants.

(b) Any saturator or mineral handling and storage facility under paragraph (a) of this section that commences construction or modification after November 18, 1980, is subject to the requirements of this subpart. Any asphalt storage tank or blowing still that processes and/or stores asphalt used for roofing only or for roofing and other purposes, and that commences construction or modification after November 18, 1980, is subject to the requirements of this subpart.

Any asphalt storage tank or blowing still that processes and/or stores only nonroofing asphalts and that commences construction or modification after May 26, 1981, is subject to the requirements of this subpart.

60.471 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

Afterburner (A/B) means an exhaust gas incinerator used to control emissions of particulate matter.

Asphalt processing means the storage and blowing of asphalt.

Asphalt processing plant means a plant which blows asphalt for use in the manufacture of asphalt products.

Asphalt roofing plant means a plant which produces asphalt roofing products (shingles, roll roofing, siding, or saturated felt).

Asphalt storage tank means any tank used to store asphalt at asphalt roofing plants, petroleum refineries, and asphalt processing plants. Storage tanks containing cutback asphalts (asphalts diluted with solvents to reduce viscosity for low temperature applications) and emulsified asphalts (asphalts dispersed in water with an emulsifying agent) are not subject to this regulation.

Blowing still means the equipment in which air is blown through asphalt flux to change the softening point and penetration rate.

Catalyst means a substance which, when added to asphalt flux in a blowing still, alters the penetrating-softening point relationship or increases the rate of oxidation of the flux.

Coating blow means the process in which air is blown through hot asphalt flux to produce coating asphalt. The coating blow starts when the air is turned on and stops when the air is turned off.

Electrostatic precipitator (ESP) means an air pollution control device in which solid or liquid particulates in a gas stream are charged as they pass through an electric field and precipitated on a collection suface.

High velocity air filter (HVAF) means an air pollution control filtration device for the removal of sticky, oily, or liquid aerosol particulate matter from exhaust gas streams.

Mineral handling and storage facility means the areas in asphalt roofing plants in which minerals are unloaded from a carrier, the conveyor transfer points between the carrier and the storage silos, and the storage silos.

Saturator means the equipment in which asphalt is applied to felt to make asphalt roofing products. The term saturator includes the saturator, wet looper, and coater.

[47 FR 34143, Aug. 6, 1982, as amended at 65 FR 61762, Oct. 17, 2000]

60.472 Standards for particulate matter.

(a) On and after the date on which 60.8(b) requires a performance test to

Appendix F

SUBCHAPTER C—AIR PROGRAMS (CONTINUED)

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES (CONTINUED)

Subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

WHAT THIS SUBPART COVERS

EMISSION LIMITATIONS

GENERAL COMPLIANCE REQUIREMENTS

TESTING AND INITIAL COMPLIANCE REQUIREMENTS

CONTINUOUS COMPLIANCE REQUIREMENTS

NOTIFICATION, REPORTS, AND RECORDS

OTHER REQUIREMENTS AND INFORMATION

Subpart AAAAA—National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants

Subpart BBBBB—National Emission Standards for Hazardous Air Pollutants for Semiconductor Manufacturing

Subpart GGGGG—National Emission Standards for Hazardous Air Pollutants: Site Remediation

Subpart JJJJJ—National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing

Subpart KKKKK—National Emission Standards for Hazardous Air Pollutants for Clay Ceramics Manufacturing

AUTHORITY: 42 U.S.C. 7401 *et seq.*

SOURCE: 57 FR 61992, Dec. 29, 1992, unless otherwise noted.

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

SOURCE: 69 FR 33506, June 15, 2004, unless otherwise noted.

WHAT THIS SUBPART COVERS

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in §63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of §63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of §63.6645(h) and the requirements of §§63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) A stationary RICE which is an existing spark ignition 4 stroke rich burn (4SRB) stationary RICE located at an area source of HAP emissions; an existing spark ignition 4SRB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions; an existing spark ignition 2 stroke lean burn (2SLB) stationary RICE; an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE; an existing

compression ignition emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; an existing spark ignition emergency or limited use stationary RICE; an existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions; an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; or an existing stationary residential, commercial, or institutional emergency stationary RICE located at an area source of HAP emissions, does not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary.

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that is a new or reconstructed stationary RICE located at an area source, or is a new or reconstructed stationary RICE located at a major source of HAP emissions and is a spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of less than 500 brake HP, a spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of less than 250 brake HP, or a 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP, must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you

must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in § 63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010]

EMISSION AND OPERATING LIMITATIONS

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§ 63.6601 What emission limitations must I meet if I own or operate a 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§ 63.6602 What emission limitations must I meet if I own or operate an existing stationary CI RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary CI RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

[75 FR 9675, Mar. 3, 2010]

§ 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary CI RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the Federal Aid Highway System (FAHS) you do not have to meet the numerical CO emission limitations specified in Table 2d to this subpart. Existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the FAHS must meet the management practices that are shown for stationary non-emergency CI RICE less than or equal to 300 HP in Table 2d to this subpart.

[75 FR 9675, Mar. 3, 2010]

§ 63.6604 What fuel requirements must I meet if I own or operate an existing stationary CI RICE?

If you own or operate an existing non-emergency CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. Existing non-emergency CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or at area sources in areas of Alaska not accessible by the FAHS are exempt from the requirements of this section.

[75 FR 9675, Mar. 3, 2010]

GENERAL COMPLIANCE REQUIREMENTS

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control

equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010]

TESTING AND INITIAL COMPLIANCE REQUIREMENTS

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in § 63.6595

and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008]

§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing CI stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary CI RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour.

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 1)}$$

Where:

C_i = concentration of CO or formaldehyde at the control device inlet,

C_o = concentration of CO or formaldehyde at the control device outlet, and

R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_o = \frac{0.209\ F_d}{F_c} \qquad \text{(Eq. 2)}$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 3)}$$

Where:

X_{co2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 − 15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the NO_X and SO_2 gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\%CO_2} \qquad \text{(Eq. 4)}$$

Where:

$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.*, operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.*, wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower

values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010]

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or CO_2 at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in §63.8.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate an existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions, an existing stationary emergency RICE, or an existing stationary RICE located at

an area source of HAP emissions not subject to any numerical emission standards shown in Table 2d to this subpart, you must operate and maintain the stationary RICE and aftertreatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (g)(2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska not accessible by the FAHS do not have to meet the requirements of paragraph (g) in this section.

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

(h) If you operate a new or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary engine that is subject to the work, operation or management practices in items 1, 2, or 4 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil before continuing to use the engine. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

(a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the

results of the initial compliance demonstration according to the requirements in § 63.6645.

CONTINUOUS COMPLIANCE REQUIREMENTS

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously at all times that the stationary RICE is operating.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in § 63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) [Reserved]

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new emergency stationary RICE with a site rating of more than

500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the engine according to the conditions described in paragraphs (f)(1) through (4) of this section.

(1) For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

(2) There is no time limit on the use of emergency stationary RICE in emergency situations.

(3) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

(4) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(4), as long as the power provided by the financial arrangement is limited to emergency power.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010]

NOTIFICATIONS, REPORTS, AND RECORDS

§ 63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary CI RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary CI RICE less than 100 HP, an existing stationary emergency CI RICE, or an existing stationary CI RICE that is not subject to any numerical emission standards.

(b) As specified in § 63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP

located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in § 63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with § 63.6590(b), your notification should include the information in § 63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in § 63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to § 63.10(d)(2).

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010]

§ 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in § 63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in § 63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in § 63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010]

§ 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in § 63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary CI RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency CI RICE.

(3) An existing stationary CI RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(1) An existing emergency stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary CI RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

§63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

OTHER REQUIREMENTS AND INFORMATION

§63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary

RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in § 63.6600 under § 63.6(g).

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in § 63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101–549, 104 Stat. 2399).

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by § 63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous byproduct of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, *etc.* Stationary CI ICE used for peak shaving are not considered emergency stationary ICE. Stationary CI ICE used to supply power to an electric grid or that supply non-emergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under § 63.6640(f). Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may also operate an additional 50 hours per year in non-emergency situations. All other emergency stationary RICE must comply with the requirements specified in § 63.6640(f).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and

motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage

source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Residential/commercial/institutional emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or residences, commercial establishments such as office buildings, hotels, or stores, or institutional establishments such as medical centers, research centers, and institutions of higher education.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine a spark plug (or other sparking device) and with operating characteristics significantly

similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a nonroad engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010]

TABLE 1a TO SUBPART ZZZZ OF PART 63—EMISSION LIMITATIONS FOR EXISTING, NEW, AND RECONSTRUCTED SPARK IGNITION, 4SRB STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for existing, new and reconstructed 4SRB stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or. b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010]

TABLE 1b TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR EXISTING, NEW, AND RECONSTRUCTED SPARK IGNITION, 4SRB STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

[As stated in §§ 63.6600, 63.6630 and 63.6640, you must comply with the following operating emission limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions]

For each...	You must meet the following operating limitation...
1. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR;.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and
or	
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and using NSCR..	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.
2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR;.	Comply with any operating limitations approved by the Administrator.
or	
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and not using NSCR..	

[73 FR 3607, Jan. 18, 2008]

TABLE 2A TO SUBPART ZZZZ OF PART 63—EMISSION LIMITATIONS FOR NEW AND RECONSTRUCTED 2SLB AND COMPRESSION IGNITION STATIONARY RICE >500 HP AND NEW AND RECONSTRUCTED 4SLB STATIONARY RICE ≥250 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2 until June 15, 2007.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2.	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2.	

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

TABLE 2B TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR NEW AND RECONSTRUCTED 2SLB AND COMPRESSION IGNITION STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS, EXISTING NON-EMERGENCY COMPRESSION IGNITION STATIONARY RICE >500 HP, AND NEW AND RECONSTRUCTED 4SLB BURN STATIONARY RICE ≥250 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

As stated in §§ 63.6600, 63.6601, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed lean burn and existing, new and reconstructed compression ignition stationary RICE:

For each . . .	You must meet the following operating limitation . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. Maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. Maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst.	Comply with any operating limitations approved by the Administrator.

[1] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(g) for a different temperature range.

[75 FR 9680, Mar. 3, 2010]

TABLE 2C TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR EXISTING COMPRESSION IGNITION STATIONARY RICE LOCATED AT MAJOR SOURCES OF HAP EMISSIONS

As stated in §§ 63.6600 and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency CI and black start CI.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start CI < 100 HP.	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI RICE 100≤HP≤300 HP.	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2.	
4. Non-Emergency, non-black start CI 300<HP≤500.	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
5. Non-Emergency, non-black start CI>500 HP.	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	

[1] If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

[2] Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3] Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9681, Mar. 3, 2010]

TABLE 2D TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR EXISTING COMPRESSION IGNITION STATIONARY RICE LOCATED AT AREA SOURCES OF HAP EMISSIONS

As stated in §§63.6600 and 63.6640, you must comply with the following emission and operating limitations for existing compression ignition stationary RICE:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI ≤ 300 HP.	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
2. Non-Emergency, non-black start CI 300<HP≤500.	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI > 500 HP.	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
4. Emergency CI and black start CI.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

[1] Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2] If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

[75 FR 9681, Mar. 3, 2010]

TABLE 3 TO SUBPART ZZZZ OF PART 63—SUBSEQUENT PERFORMANCE TESTS

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
1. 2SLB and 4SLB stationary RICE with a brake horsepower >500 located at major sources and new or reconstructed CI stationary RICE with a brake horsepower >500 located at major sources.	Reduce CO emissions and not using a CEMS.	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE with a brake horsepower ≥5,000 located at major sources.	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE with a brake horsepower >500 located at major sources.	Limit the concentration of formaldehyde in the stationary RICE exhaust.	Conduct subsequent performance tests semiannually.[1]
4. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are not limited use stationary RICE.	Limit or reduce CO or formaldehyde emissions.	Conduct subsequent performance tests every 8,760 hrs or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are limited use stationary RICE.	.....	Conduct subsequent performance tests every 8,760 hrs or 5 years, whichever comes first.

[1] After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[75 FR 9682, Mar. 3, 2010]

TABLE 4 TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS

As stated in §§63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE for existing sources:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE.	a. Reduce CO emissions.	i. Measure the O_2 at the inlet and outlet of the control device; and	(1) Portable CO and O_2 analyzer..	(a) Using ASTM D6522–00 (2005)[a] (incorporated by reference, *see* §63.14). Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device.	(1) Portable CO and O_2 analyzer..	(a) Using ASTM D6522–00 (2005)[a,b] (incorporated by reference, *see* §63.14) or Method 10 of 40 CFR appendix A. The CO concentration must be at 15 percent O_2, dry basis.
2. 4SRB stationary RICE.	a. Reduce formaldehyde emissions.	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i).	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005).	(a) Measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03.	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		iv. Measure formaldehyde at the inlet and the outlet of the control device.	(1) Method 320 of 40 CFR part 63, appendix A; or ASTM D6348–03[c], provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130..	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust.	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i).	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005).	(a) Measurements to determine O_2 concentration must be made at the same time and location as the measurements for formaldehyde concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03.	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 of 40 CFR part 63, appendix A; or ASTM D6348–03[c], provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130.	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. Measure CO at the exhaust of the stationary RICE.	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00 (2005)[a], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03.	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour longer runs.

[a] You may also use Methods 3A and 10 as options to ASTM–D6522–00 (2005). You may obtain a copy of ASTM–D6522–00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106. ASTM–D6522–00 (2005) may be used to test both CI and SI stationary RICE.

[b] You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03.

[c] You may obtain a copy of ASTM–D6348–03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[75 FR 9682, Mar. 3, 2010]

TABLE 5 TO SUBPART ZZZZ OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITATIONS AND OPERATING LIMITATIONS

As stated in §§ 63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. 2SLB and 4SLB stationary RICE >500 HP located at a major source and new or reconstructed CI stationary RICE >500 HP located at a major source.	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS.	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. 2SLB and 4SLB stationary RICE >500 HP located at a major source and new or reconstructed CI stationary RICE >500 HP located at a major source.	a. Reduce CO emissions and not using oxidation catalyst.	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
3. 2SLB and 4SLB stationary RICE >500 HP located at a major source and new or reconstructed CI stationary RICE >500 HP located at a major source.	a. Reduce CO emissions, and using a CEMS.	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
4. 4SRB stationary RICE >500 HP located at a major source.	a. Reduce formaldehyde emissions and using NSCR.	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
5. 4SRB stationary RICE >500 HP located at a major source.	a. Reduce formaldehyde emissions and not using NSCR.	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
6. Stationary RICE >500 HP located at a major source.	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR.	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
7. Stationary RICE >500 HP located at a major source.	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR.	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
8. Existing stationary non-emergency RICE ≥100 HP located at a major source, existing non-emergency CI stationary RICE >500 HP, and existing stationary non-emergency RICE ≥100 HP located at an area source.	a. Reduce CO or formaldehyde emissions.	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
9. Existing stationary non-emergency RICE ≥100 HP located at a major source, existing non-emergency CI stationary RICE >500 HP, and existing stationary non-emergency RICE ≥100 HP located at an area source.	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust.	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.

[75 FR 9684, Mar. 3, 2010]

TABLE 6 TO SUBPART ZZZZ OF PART 63—CONTINUOUS COMPLIANCE WITH EMISSION LIMITATIONS AND OPERATING LIMITATIONS

As stated in §63.6640, you must continuously comply with the emissions and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. 2SLB and 4SLB stationary RICE >500 HP located at a major source and CI stationary RICE >500 HP located at a major source.	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS.	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. 2SLB and 4SLB stationary RICE >500 HP located at a major source and CI stationary RICE >500 HP located at a major source.	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS.	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
3. 2SLB and 4SLB stationary RICE >500 HP located at a major source and CI stationary RICE >500 HP located at a major source.	a. Reduce CO emissions and using a CEMS.	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period; and iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. 4SRB stationary RICE >500 HP located at a major source.	a. Reduce formaldehyde emissions and using NSCR.	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and ii. reducing these data to 4-hour rolling averages; and iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. 4SRB stationary RICE >500 HP located at a major source.	a. Reduce formaldehyde emissions and not using NSCR.	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and ii. Reducing these data to 4-hour rolling averages; and iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. 4SRB stationary RICE with a brake HP ≥5,000 located at a major source.	Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved.[a]
7. Stationary RICE >500 HP located at a major source.	Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR.	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. Stationary RICE >500 HP located at a major source.	Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR.	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit[a]; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing stationary CI RICE not subject to any numerical emission limitations.	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary RICE >500 HP that are not limited use stationary RICE, except 4SRB >500 HP located at major sources.	a. Reduce CO or formaldehyde emissions; or. b. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust.	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit.
11. Existing limited use stationary RICE >500 HP that are limited use CI stationary RICE.	a. Reduce CO or formaldehyde emissions; or. b. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust.	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit.

[a] After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[75 FR 9685, Mar. 3, 2010]

TABLE 7 TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR REPORTS

As stated in §63.6650, you must comply with the following requirements for reports:

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in §63.6650(b)(1)–(5) for engines that are not limited use stationary CI RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)–(9) for engines that are limited use stationary CI RICE subject to numerical emission limitations.
	b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or	i. Semiannually according to the requirements in §63.6650(b).

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
	c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).	i. Semiannually according to the requirements in §63.6650(b).
2. Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
	b. The operating limits provided in your Federally enforceable permit, and any deviations from these limits; and	i. *See* item 2.a.i.
	c. Any problems or errors suspected with the meters.	i. *See* item 2.a.i.

[75 FR 9687, Mar. 3, 2010]

TABLE 8 TO SUBPART ZZZZ OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions.	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention.	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)–(4)	Compliance dates for new and reconstructed sources.	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources.	Yes.	
§63.6(c)(1)–(2)	Compliance dates for existing sources.	Yes.	
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources.	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)–(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards.	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria.	Yes.	
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)–(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests.	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.7(e)(2)	Conduct of performance tests and reduction of data.	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA.	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting.	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements.	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)–(3)	Multiple effluents and multiple monitoring systems.	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance.	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	Yes.	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan.	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements.	Yes.	
§63.8(c)(2)–(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements.	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes Except that §63.8(e) only applies as specified in §63.6645.	Except for §63.8(e)(5)(ii), which applies to COMS.
§63.8(f)(1)–(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements.	Yes.	
§63.9(b)(1)–(5)	Initial notifications	Yes Except that §63.9(b) only applies as specified in §63.6645.	Except that §63.9(b)(3) is reserved.
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources.	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test.	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded.	Yes	If alternative is in use.

General provisions citation	Subject of citation	Applies to subpart	Explanation
		Except that § 63.9(g) only applies as specified in § 63.6645.	
§ 63.9(h)(1)–(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. § 63.9(h)(4) is reserved. Except that § 63.9(h) only applies as specified in § 63.6645.
§ 63.9(i)	Adjustment of submittal deadlines	Yes.	
§ 63.9(j)	Change in previous information	Yes.	
§ 63.10(a)	Administrative provisions for record-keeping/reporting.	Yes.	
§ 63.10(b)(1)	Record retention	Yes.	
§ 63.10(b)(2)(i)–(v)	Records related to SSM	No.	
§ 63.10(b)(2)(vi)–(xi)	Records	Yes.	
§ 63.10(b)(2)(xii)	Record when under waiver	Yes.	
§ 63.10(b)(2)(xiii)	Records when using alternative to RATA.	Yes	For CO standard if using RATA alternative.
§ 63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§ 63.10(b)(3)	Records of applicability determination	Yes.	
§ 63.10(c)	Additional records for sources using CEMS.	Yes	Except that § 63.10(c)(2)–(4) and (9) are reserved.
§ 63.10(d)(1)	General reporting requirements	Yes.	
§ 63.10(d)(2)	Report of performance test results	Yes.	
§ 63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.10(d)(4)	Progress reports	Yes.	
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports.	No.	
§ 63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§ 63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§ 63.10(e)(3)	Excess emission and parameter exceedances reports.	Yes.	Except that § 63.10(e)(3)(i) (C) is reserved.
§ 63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§ 63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§ 63.11	Flares	No.	
§ 63.12	State authority and delegations	Yes.	
§ 63.13	Addresses	Yes.	
§ 63.14	Incorporation by reference	Yes.	
§ 63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010]

Subpart AAAAA—National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants

SOURCE: 69 FR 416, Jan. 5, 2004, unless otherwise noted.

WHAT THIS SUBPART COVERS

§ 63.7080 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for lime manufacturing plants. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§ 63.7081 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a lime manufacturing plant (LMP) that is a major source, or that is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions, unless the LMP is located at a kraft pulp mill, soda pulp mill, sulfite pulp mill, beet sugar manufacturing plant, or only processes sludge containing calcium

Appendix G

Citation	Subject	Applies to subpart WWWWW	Explanation
§ 63.6(c)(2), (5)	Compliance dates for CAA section 112(f) standards and for area sources that become major.	No.	
§ 63.6(c)(3)–(4)	[Reserved].		
§ 63.6(d)	[Reserved].		
§ 63.6(e)–(h)	Alternative nonopacity emission standard.	No.	
§ 63.6(i)–(j)	Compliance extension	Yes.	
§ 63.7	Performance testing requirements.	No.	
§ 63.8	Monitoring requirements	No.	
§ 63.9(a)	Applicability and initial notifications addressees.	Yes.	
§ 63.9(b)	Initial notifications	No.	
§ 63.9(c)	Request for extension of compliance.	Yes.	
§ 63.9(d)–(j)	Other notifications	No.	
§ 63.10(a)(1)–(2)	Recordkeeping and reporting requirements, applicability.	Yes.	
§ 63.10(a)(3)–(4)	General information	Yes.	
§ 63.10(a)(5)–(7)	Recordkeeping and reporting requirements, reporting schedules.	No.	
§ 63.10(b)(1)	Retention time	Yes.	
§ 63.10(b)(2)–(i)	Recordkeeping and reporting requirements.	No.	
§ 63.11	Control device requirements	No.	
§ 63.12	State authority and delegations	Yes.	
§§ 63.13–63.16	Addresses, Incorporations by Reference, availability of information, performance track provisions.	Yes.	

Subpart XXXXX [Reserved]

Subpart YYYYY—National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities

SOURCE: 72 FR 74111, Dec. 28, 2007, unless otherwise noted.

APPLICABILITY AND COMPLIANCE DATES

§ 63.10680 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate an electric arc furnace (EAF) steelmaking facility that is an area source of hazardous air pollutant (HAP) emissions.

(b) This subpart applies to each new or existing affected source. The affected source is each EAF steelmaking facility.

(1) An affected source is existing if you commenced construction or reconstruction of the affected source on or before September 20, 2007.

(2) An affected source is new if you commenced construction or reconstruction of the affected source after September 20, 2007.

(c) This subpart does not apply to research and development facilities, as defined in section 112(c)(7) of the Clean Air Act (CAA).

(d) If you own or operate an area source subject to this subpart, you must have or obtain a permit under 40 CFR part 70 or 40 CFR part 71.

§ 63.10681 What are my compliance dates?

(a) Except as provided in paragraph (b) of this section, if you own or operate an existing affected source, you must achieve compliance with the applicable provisions of this subpart by no later than June 30, 2008.

(b) If you own or operate an existing affected source, you must achieve compliance with opacity limit in § 63.10686(b)(2) or (c)(2) by no later than December 28, 2010 if you demonstrate to the satisfaction of the permitting

authority that additional time is needed to install or modify emission control equipment.

(c) If you start up a new affected source on or before December 28, 2007, you must achieve compliance with the applicable provisions of this subpart by no later than December 28, 2007.

(d) If you start up a new affected source after December 28, 2007, you must achieve compliance with the applicable provisions of this subpart upon startup of your affected source.

STANDARDS AND COMPLIANCE REQUIREMENTS

§ 63.10685 What are the requirements for the control of contaminants from scrap?

(a) *Chlorinated plastics, lead, and free organic liquids.* For metallic scrap utilized in the EAF at your facility, you must comply with the requirements in either paragraph (a)(1) or (2) of this section. You may have certain scrap at your facility subject to paragraph (a)(1) of this section and other scrap subject to paragraph (a)(2) of this section provided the scrap remains segregated until charge make-up.

(1) *Pollution prevention plan.* For the production of steel other than leaded steel, you must prepare and implement a pollution prevention plan for metallic scrap selection and inspection to minimize the amount of chlorinated plastics, lead, and free organic liquids that is charged to the furnace. For the production of leaded steel, you must prepare and implement a pollution prevention plan for scrap selection and inspection to minimize the amount of chlorinated plastics and free organic liquids in the scrap that is charged to the furnace. You must submit the scrap pollution prevention plan to the permitting authority for approval. You must operate according to the plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the permitting authority within 60 days following disapproval of a plan. You may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the permitting authority. You must keep a copy of the plan onsite, and you must provide training on the plan's requirements to all plant personnel with materials acquisition or inspection duties. Each plan must include the information in paragraphs (a)(1)(i) through (iii) of this section:

(i) Specifications that scrap materials must be depleted (to the extent practicable) of undrained used oil filters, chlorinated plastics, and free organic liquids at the time of charging to the furnace.

(ii) A requirement in your scrap specifications for removal (to the extent practicable) of lead-containing components (such as batteries, battery cables, and wheel weights) from the scrap, except for scrap used to produce leaded steel.

(iii) Procedures for determining if the requirements and specifications in paragraph (a)(1) of this section are met (such as visual inspection or periodic audits of scrap providers) and procedures for taking corrective actions with vendors whose shipments are not within specifications.

(iv) The requirements of paragraph (a)(1) of this section do not apply to the routine recycling of baghouse bags or other internal process or maintenance materials in the furnace. These exempted materials must be identified in the pollution prevention plan.

(2) *Restricted metallic scrap.* For the production of steel other than leaded steel, you must not charge to a furnace metallic scrap that contains scrap from motor vehicle bodies, engine blocks, oil filters, oily turnings, machine shop borings, transformers or capacitors containing polychlorinated biphenyls, lead-containing components, chlorinated plastics, or free organic liquids. For the production of leaded steel, you must not charge to the furnace metallic scrap that contains scrap from motor vehicle bodies, engine blocks, oil filters, oily turnings, machine shop borings, transformers or capacitors containing polychlorinated biphenyls, chlorinated plastics, or free organic liquids. This restriction does not apply to any post-consumer engine blocks, post-consumer oil filters, or oily turnings that are processed or cleaned to the extent practicable such that the materials do not include lead

components, chlorinated plastics, or free organic liquids. This restriction does not apply to motor vehicle scrap that is charged to recover the chromium or nickel content if you meet the requirements in paragraph (b)(3) of this section.

(b) *Mercury requirements.* For scrap containing motor vehicle scrap, you must procure the scrap pursuant to one of the compliance options in paragraphs (b)(1), (2), or (3) of this section for each scrap provider, contract, or shipment. For scrap that does not contain motor vehicle scrap, you must procure the scrap pursuant to the requirements in paragraph (b)(4) of this section for each scrap provider, contract, or shipment. You may have one scrap provider, contract, or shipment subject to one compliance provision and others subject to another compliance provision.

(1) *Site-specific plan for mercury switches.* You must comply with the requirements in paragraphs (b)(1)(i) through (v) of this section.

(i) You must include a requirement in your scrap specifications for removal of mercury switches from vehicle bodies used to make the scrap.

(ii) You must prepare and operate according to a plan demonstrating how your facility will implement the scrap specification in paragraph (b)(1)(i) of this section for removal of mercury switches. You must submit the plan to the permitting authority for approval. You must operate according to this plan as submitted during the review and approval process, operate according to the approved plan at all times after approval, and address any deficiency identified by the permitting authority within 60 days following disapproval of a plan. You may request approval to revise the plan and may operate according to the revised plan unless and until the revision is disapproved by the permitting authority. The permitting authority may change the approval status of the plan upon 90-days written notice based upon the semiannual compliance report or other information. The plan must include:

(A) A means of communicating to scrap purchasers and scrap providers the need to obtain or provide motor vehicle scrap from which mercury switches have been removed and the need to ensure the proper management of the mercury switches removed from that scrap as required under the rules implementing subtitle C of the Resource Conservation and Recovery Act (RCRA) (40 CFR parts 261 through 265 and 268). The plan must include documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the permitting authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols;

(B) Provisions for obtaining assurance from scrap providers that motor vehicle scrap provided to the facility meet the scrap specification;

(C) Provisions for periodic inspections or other means of corroboration to ensure that scrap providers and dismantlers are implementing appropriate steps to minimize the presence of mercury switches in motor vehicle scrap and that the mercury switches removed are being properly managed, including the minimum frequency such means of corroboration will be implemented; and

(D) Provisions for taking corrective actions (i.e., actions resulting in scrap providers removing a higher percentage of mercury switches or other mercury-containing components) if needed, based on the results of procedures implemented in paragraph (b)(1)(ii)(C) of this section).

(iii) You must require each motor vehicle scrap provider to provide an estimate of the number of mercury switches removed from motor vehicle scrap sent to your facility during the previous year and the basis for the estimate. The permitting authority may request documentation or additional information at any time.

(iv) You must establish a goal for each scrap provider to remove at least 80 percent of the mercury switches. Although a site-specific plan approved under paragraph (b)(1) of this section may require only the removal of convenience light switch mechanisms, the permitting authority will credit all

documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal.

(v) For each scrap provider, you must submit semiannual progress reports to the permitting authority that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches removed, and certification that the removed mercury switches were recycled at RCRA-permitted facilities or otherwise properly managed pursuant to RCRA subtitle C regulations referenced in paragraph (b)(1)(ii)(A) of this section. This information can be submitted in aggregated form and does not have to be submitted for each scrap provider, contract, or shipment. The permitting authority may change the approval status of a site-specific plan following 90-days notice based on the progress reports or other information.

(2) *Option for approved mercury programs.* You must certify in your notification of compliance status that you participate in and purchase motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. If you purchase motor vehicle scrap from a broker, you must certify that all scrap received from that broker was obtained from other scrap providers who participate in a program for the removal of mercury switches that has been approved by the Administrator based on the criteria in paragraphs (b)(2)(i) through (iii) of this section. The National Vehicle Mercury Switch Recovery Program and the Vehicle Switch Recovery Program mandated by Maine State law are EPA-approved programs under paragraph (b)(2) of this section unless and until the Administrator disapproves the program (in part or in whole) under paragraph (b)(2)(iii) of this section.

(i) The program includes outreach that informs the dismantlers of the need for removal of mercury switches and provides training and guidance for removing mercury switches;

(ii) The program has a goal to remove at least 80 percent of mercury switches from the motor vehicle scrap the scrap provider processes. Although a program approved under paragraph (b)(2) of this section may require only the removal of convenience light switch mechanisms, the Administrator will credit all documented and verifiable mercury-containing components removed from motor vehicle scrap (such as sensors in anti-locking brake systems, security systems, active ride control, and other applications) when evaluating progress towards the 80 percent goal; and

(iii) The program sponsor agrees to submit progress reports to the Administrator no less frequently than once every year that provide the number of mercury switches removed or the weight of mercury recovered from the switches, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and certification that the recovered mercury switches were recycled at facilities with permits as required under the rules implementing subtitle C of RCRA (40 CFR parts 261 through 265 and 268). The progress reports must be based on a database that includes data for each program participant; however, data may be aggregated at the State level for progress reports that will be publicly available. The Administrator may change the approval status of a program or portion of a program (e.g., at the State level) following 90-days notice based on the progress reports or on other information.

(iv) You must develop and maintain onsite a plan demonstrating the manner through which your facility is participating in the EPA-approved program.

(A) The plan must include facility-specific implementation elements, corporate-wide policies, and/or efforts coordinated by a trade association as appropriate for each facility.

(B) You must provide in the plan documentation of direction to appropriate staff to communicate to suppliers throughout the scrap supply chain the

need to promote the removal of mercury switches from end-of-life vehicles. Upon the request of the permitting authority, you must provide examples of materials that are used for outreach to suppliers, such as letters, contract language, policies for purchasing agents, and scrap inspection protocols.

(C) You must conduct periodic inspections or provide other means of corroboration to ensure that scrap providers are aware of the need for and are implementing appropriate steps to minimize the presence of mercury in scrap from end-of-life vehicles.

(3) *Option for specialty metal scrap.* You must certify in your notification of compliance status that the only materials from motor vehicles in the scrap are materials recovered for their specialty alloy (including, but not limited to, chromium, nickel, molybdenum, or other alloys) content (such as certain exhaust systems) and, based on the nature of the scrap and purchase specifications, that the type of scrap is not reasonably expected to contain mercury switches.

(4) *Scrap that does not contain motor vehicle scrap.* For scrap not subject to the requirements in paragraphs (b)(1) through (3) of this section, you must certify in your notification of compliance status and maintain records of documentation that this scrap does not contain motor vehicle scrap.

(c) *Recordkeeping and reporting requirements.* In addition to the records required by §63.10, you must keep records to demonstrate compliance with the requirements for your pollution prevention plan in paragraph (a)(1) of this section and/or for the use of only restricted scrap in paragraph (a)(2) of this section and for mercury in paragraphs (b)(1) through (3) of this section as applicable. You must keep records documenting compliance with paragraph (b)(4) of this section for scrap that does not contain motor vehicle scrap.

(1) If you are subject to the requirements for a site-specific plan for mercury under paragraph (b)(1) of this section, you must:

(i) Maintain records of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, and an estimate of the percent of mercury switches recovered; and

(ii) Submit semiannual reports of the number of mercury switches removed or the weight of mercury recovered from the switches and properly managed, the estimated number of vehicles processed, an estimate of the percent of mercury switches recovered, and a certification that the recovered mercury switches were recycled at RCRA-permitted facilities. The semiannual reports must include a certification that you have conducted inspections or taken other means of corroboration as required under paragraph (b)(1)(ii)(C) of this section. You may include this information in the semiannual compliance reports required under paragraph (c)(3) of this section.

(2) If you are subject to the option for approved mercury programs under paragraph (b)(2) of this section, you must maintain records identifying each scrap provider and documenting the scrap provider's participation in an approved mercury switch removal program. If you purchase motor vehicle scrap from a broker, you must maintain records identifying each broker and documentation that all scrap provided by the broker was obtained from other scrap providers who participate in an approved mercury switch removal program.

(3) You must submit semiannual compliance reports to the Administrator for the control of contaminants from scrap according to the requirements in §63.10(e). The report must clearly identify any deviation from the requirements in paragraphs (a) and (b) of this section and the corrective action taken. You must identify which compliance option in paragraph (b) of this section applies to each scrap provider, contract, or shipment.

§63.10686 What are the requirements for electric arc furnaces and argon-oxygen decarburization vessels?

(a) You must install, operate, and maintain a capture system that collects the emissions from each EAF (including charging, melting, and tapping operations) and argon-oxygen

decarburization (AOD) vessel and conveys the collected emissions to a control device for the removal of particulate matter (PM).

(b) Except as provided in paragraph (c) of this section, you must not discharge or cause the discharge into the atmosphere from an EAF or AOD vessel any gases which:

(1) Exit from a control device and contain in excess of 0.0052 grains of PM per dry standard cubic foot (gr/dscf); and

(2) Exit from a melt shop and, due solely to the operations of any affected EAF(s) or AOD vessel(s), exhibit 6 percent opacity or greater.

(c) If you own or operate a new or existing affected source that has a production capacity of less than 150,000 tons per year (tpy) of stainless or specialty steel (as determined by the maximum production if specified in the source's operating permit or EAF capacity and maximum number of operating hours per year), you must not discharge or cause the discharge into the atmosphere from an EAF or AOD vessel any gases which:

(1) Exit from a control device and contain particulate matter (PM) in excess of 0.8 pounds per ton (lb/ton) of steel. Alternatively, the owner or operator may elect to comply with a PM limit of 0.0052 grains per dry standard cubic foot (gr/dscf); and

(2) Exit from a melt shop and, due solely to the operations of any affected EAF(s) or AOD vessel(s), exhibit 6 percent opacity or greater.

(d) Except as provided in paragraph (d)(6) of this section, you must conduct performance tests to demonstrate initial compliance with the applicable emissions limit for each emissions source subject to an emissions limit in paragraph (b) or (c) of this section.

(1) You must conduct each PM performance test for an EAF or AOD vessel according to the procedures in §63.7 and 40 CFR 60.275a using the following test methods in 40 CFR part 60, appendices A–1, A–2, A–3, and A–4:

(i) Method 1 or 1A of appendix A–1 of 40 CFR part 60 to select sampling port locations and the number of traverse points in each stack or duct. Sampling sites must be located at the outlet of the control device (or at the outlet of the emissions source if no control device is present) prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G of appendix A–1 of 40 CFR part 60 to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B of appendix A–3 of 40 CFR part 60 to determine the dry molecular weight of the stack gas. You may use ANSI/ASME PTC 19.10–1981, "Flue and Exhaust Gas Analyses" (incorporated by reference—see §63.14) as an alternative to EPA Method 3B.

(iv) Method 4 of appendix A–3 of 40 CFR part 60 to determine the moisture content of the stack gas.

(v) Method 5 or 5D of appendix A–3 of 40 CFR part 60 to determine the PM concentration. Three valid test runs are needed to comprise a PM performance test. For EAF, sample only when metal is being melted and refined. For AOD vessels, sample only when the operation(s) are being conducted.

(2) You must conduct each opacity test for a melt shop according to the procedures in §63.6(h) and Method 9 of appendix A–4 of 40 CFR part 60. When emissions from any EAF or AOD vessel are combined with emissions from emission sources not subject to this subpart, you must demonstrate compliance with the melt shop opacity limit based on emissions from only the emission sources subject to this subpart.

(3) During any performance test, you must monitor and record the information specified in 40 CFR 60.274a(h) for all heats covered by the test.

(4) You must notify and receive approval from the Administrator for procedures that will be used to determine compliance for an EAF or AOD vessel when emissions are combined with those from facilities not subject to this subpart.

(5) To determine compliance with the PM emissions limit in paragraph (c) of this section for an EAF or AOD vessel in a lb/ton of steel format, compute the process-weighted mass emissions (E_p) for each test run using Equation 1 of this section:

$$E_p = \frac{C \times Q \times T}{P \times K} \qquad \text{(Eq. 1)}$$

Where:

E_p = Process-weighted mass emissions of PM, lb/ton;
C = Concentration of PM or total metal HAP, gr/dscf;
Q = Volumetric flow rate of stack gas, dscf/hr;
T = Total time during a test run that a sample is withdrawn from the stack during steel production cycle, hr;
P = Total amount of metal produced during the test run, tons; and
K = Conversion factor, 7,000 grains per pound.

(6) If you own or operate an existing affected source that is subject to the emissions limits in paragraph (b) or (c) of this section, you may certify initial compliance with the applicable emission limit for one or more emissions sources based on the results of a previous performance test for that emissions source in lieu of the requirement for an initial performance test provided that the test(s) were conducted within 5 years of the compliance date using the methods and procedures specified in paragraph (d)(1) or (2) of this section; the test(s) were for the affected facility; and the test(s) were representative of current or anticipated operating processes and conditions. Should the permitting authority deem the prior test data unacceptable to demonstrate compliance with an applicable emissions limit, the owner or operator must conduct an initial performance test within 180 days of the compliance date or within 90 days of receipt of the notification of disapproval of the prior test, whichever is later.

OTHER INFORMATION AND REQUIREMENTS

§ 63.10690 What parts of the General Provisions apply to this subpart?

(a) You must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) as provided in Table 1 of this subpart.

(b) The notification of compliance status required by §63.9(h) must include each applicable certification of compliance, signed by a responsible official, in paragraphs (b)(1) through (6) of this section.

(1) For the pollution prevention plan requirements in §63.10685(a)(1): "This facility has submitted a pollution prevention plan for metallic scrap selection and inspection in accordance with §63.10685(a)(1)";

(2) For the restrictions on metallic scrap in §63.10685(a)(2): "This facility complies with the requirements for restricted metallic scrap in accordance with §63.10685(a)(2)";

(3) For the mercury requirements in §63.10685(b):

(i) "This facility has prepared a site-specific plan for mercury switches in accordance with §63.10685(b)(1)";

(ii) "This facility participates in and purchases motor vehicle scrap only from scrap providers who participate in a program for removal of mercury switches that has been approved by the EPA Administrator in accordance with §63.10685(b)(2)" and has prepared a plan demonstrating how the facility participates in the EPA-approved program in accordance with §63.10685(b)(2)(iv);

(iii) "The only materials from motor vehicles in the scrap charged to an electric arc furnace at this facility are materials recovered for their specialty alloy content in accordance with §63.10685(b)(3) which are not reasonably expected to contain mercury switches"; or

(iv) "This facility complies with the requirements for scrap that does not contain motor vehicle scrap in accordance with §63.10685(b)(4)."

(4) This certification of compliance for the capture system requirements in §63.10686(a), signed by a responsible official: "This facility operates a capture system for each electric arc furnace and argon-oxygen decarburization vessel that conveys the collected emissions to a PM control device in accordance with §63.10686(a)".

(5) If applicable, this certification of compliance for the performance test requirements in §63.10686(d)(6): "This facility certifies initial compliance with the applicable emissions limit in §63.10686(a) or (b) based on the results of a previous performance test in accordance with §63.10686(d)(6)".

(6) This certification of compliance for the monitoring requirements in §63.10686(e), signed by a responsible official: "This facility has developed and submitted proposed monitoring information in accordance with 40 CFR part 64".

§ 63.10691 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the EPA or a delegated authority such as a State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that Agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (6) of this section.

(1) Approval of an alternative nonopacity emissions standard under 40 CFR 63.6(g).

(2) Approval of an alternative opacity emissions standard under § 63.6(h)(9).

(3) Approval of a major change to test methods under § 63.7(e)(2)(ii) and (f). A "major change to test method" is defined in 40 CFR 63.90.

(4) Approval of major change to monitoring under 40 CFR 63.8(f). A "major change to monitoring" is defined in 40 CFR 63.90.

(5) Approval of a major change to recordkeeping/reporting under 40 CFR 63.10(f). A "major change to recordkeeping/reporting" is defined in 40 CFR 63.90.

(6) Approval of a program for the removal of mercury switches under § 63.10685(b)(2).

§ 63.10692 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2, and in this section as follows:

Argon-oxygen decarburization (AOD) vessel means any closed-bottom, refractory-lined converter vessel with submerged tuyeres through which gaseous mixtures containing argon and oxygen or nitrogen may be blown into molten steel for further refining.

Capture system means the equipment (including ducts, hoods, fans, dampers, etc.) used to capture or transport emissions generated by an electric arc furnace or argon-oxygen decarburization vessel to the air pollution control device.

Chlorinated plastics means solid polymeric materials that contain chlorine in the polymer chain, such as polyvinyl chloride (PVC) and PVC copolymers.

Control device means the air pollution control equipment used to remove particulate matter from the effluent gas stream generated by an electric arc furnace or argon-oxygen decarburization vessel.

Deviation means any instance where an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emissions limitation or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emissions limitation in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Electric arc furnace (EAF) means a furnace that produces molten steel and heats the charge materials with electric arcs from carbon electrodes. An electric arc furnace consists of the furnace shell, roof, and the transformer.

Electric arc furnace (EAF) steelmaking facility means a steel plant that produces carbon, alloy, or specialty steels using an EAF. This definition excludes EAF steelmaking facilities at steel foundries and EAF facilities used to produce nonferrous metals.

Free organic liquids means material that fails the paint filter test by EPA Method 9095B, (revision 2, dated November 1994) (incorporated by reference—see § 63.14) after accounting for water using a moisture determination

test by ASTM Method D2216–05 (incorporated by reference—see §63.14). If, after conducting a moisture determination test, if any portion of the material passes through and drops from the filter within the 5-minute test period, the material contains *free organic liquids*.

Leaded steel means steel that must meet a minimum specification for lead content (typically 0.25 percent or more) and for which lead is a necessary alloy for that grade of steel.

Mercury switch means each mercury-containing capsule or switch assembly that is part of a convenience light switch mechanism installed in a vehicle.

Motor vehicle means an automotive vehicle not operated on rails and usually operated with rubber tires for use on highways.

Motor vehicle scrap means vehicle or automobile bodies, including automobile body hulks, that have been processed through a shredder. *Motor vehicle scrap* does not include automobile manufacturing bundles, or miscellaneous vehicle parts, such as wheels, bumpers or other components that do not contain mercury switches.

Nonferrous metals means any pure metal other than iron or any metal alloy for which an element other than iron is its major constituent by percent in weight.

Scrap provider means the person (including a broker) who contracts directly with a steel mill to provide scrap that contains motor vehicle scrap. Scrap processors such as shredder operators or vehicle dismantlers that do not sell scrap directly to a steel mill are not *scrap providers*.

Specialty steel means low carbon and high alloy steel other than stainless steel that is processed in an argon-oxygen decarburization vessel.

Stainless steel means low carbon steel that contains at least 10.5 percent chromium.

TABLE 1 TO SUBPART YYYYY OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART YYYYY

As required in §63.10691(a), you must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) shown in the following table.

Citation	Subject	Applies to subpart YYYYY?	Explanation
§63.1(a)(1), (a)(2), (a)(3), (a)(4), (a)(6), (a)(10)–(a)(12), (b)(1), (b)(3), (c)(1), (c)(2), (c)(5), (e).	Applicability	Yes.	
§63.1(a)(5), (a)(7)–(a)(9), (b)(2), (c)(3), (c)(4), (d).	Reserved	No.	
§63.2	Definitions	Yes.	
§63.3	Units and Abbreviations	Yes.	
§63.4	Prohibited Activities and Circumvention.	Yes.	
§63.5	Preconstruction Review and Notification Requirements.	Yes.	
§63.6(a), (b)(1)–(b)(5), (b)(7), (c)(1), (c)(2), (c)(5), (e)(1), (e)(3)(i), (e)(3)(iii)–(e)(3)(ix), (f), (g), (h)(1), (h)(2), (h)(5)–(h)(9), (i), (j).	Compliance with Standards and Maintenance Requirements.	Yes.	
§63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv).	Reserved	No.	
§63.7	Applicability and Performance Test Dates.	Yes.	
§63.8(a)(1), (a)(2), (b), (c), (d), (e), (f)(1)–(5), (g).	Monitoring Requirements	Yes	Requirements apply if a COMS or CEMS is used.
§63.8(a)(3)	[Reserved]	No.	
§63.8(a)(4)	Additional Monitoring Requirements for Control Devices in §63.11.	No.	
§63.8(c)(4)	Continuous Monitoring System Requirements.	Yes	Requirements apply if a COMS or CEMS is used.
§63.8(f)(6)	RATA Alternative	Yes	Requirements apply if a CEMS is used.

Citation	Subject	Applies to subpart YYYYY?	Explanation
§ 63.9(a), (b)(1), (b)(2), (b)(5), (c), (d), (f), (g), (h)(1)–(h)(3), (h)(5), (h)(6), (i), (j).	Notification Requirements	Yes.	
§ 63.9(b)(3), (h)(4)	Reserved	No.	
§ 63.9(b)(4)		No.	
§ 63.10(a), (b)(1), (b)(2)(i)–(v), (b)(2)(xiv), (b)(3), (c)(1), (c)(5)–(c)(8), (c)(10)–(c)(15), (d), (e)(1)–(e)(4), (f).	Recordkeeping and Reporting Requirements.	Yes	Additional records for CMS in § 63.10(c) (1)–(6), (9)–(15), and reports in § 63.10(d)(1)–(2) apply if a COMS or CEMS is used.
§ 63.10(b)(2)(xiii)	CMS Records for RATA Alternative.	Yes	Requirements apply if a CEMS is used.
§ 63.10(c)(2)–(c)(4), (c)(9)	Reserved	No.	
§ 63.11	Control Device Requirements	No.	
§ 63.12	State Authority and Delegations	Yes.	
§§ 63.13–63.16	Addresses, Incorporations by Reference, Availability of Information, Performance Track Provisions.	Yes.	

Subpart ZZZZZ—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources

SOURCE: 73 FR 252, Jan. 2, 2008, unless otherwise noted.

APPLICABILITY AND COMPLIANCE DATES

§ 63.10880 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate an iron and steel foundry that is an area source of hazardous air pollutant (HAP) emissions.

(b) This subpart applies to each new or existing affected source. The affected source is each iron and steel foundry.

(1) An affected source is existing if you commenced construction or reconstruction of the affected source before September 17, 2007.

(2) An affected source is new if you commenced construction or reconstruction of the affected source on or after September 17, 2007. If an affected source is not new pursuant to the preceding sentence, it is not new as a result of a change in its compliance obligations pursuant to § 63.10881(d).

(c) On and after January 2, 2008, if your iron and steel foundry becomes a major source as defined in § 63.2, you must meet the requirements of 40 CFR part 63, subpart EEEEE.

(d) This subpart does not apply to research and development facilities, as defined in section 112(c)(7) of the Clean Air Act.

(e) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required by law to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

(f) If you own or operate an existing affected source, you must determine the initial applicability of the requirements of this subpart to a small foundry or a large foundry based on your facility's metal melt production for calendar year 2008. If the metal melt production for calendar year 2008 is 20,000 tons or less, your area source is a small foundry. If your metal melt production for calendar year 2008 is greater than 20,000 tons, your area source is a large foundry. You must submit a written notification to the Administrator that identifies your area source as a small foundry or a large foundry no later than January 2, 2009.

(g) If you own or operate a new affected source, you must determine the initial applicability of the requirements of this subpart to a small foundry or a large foundry based on your facility's annual metal melting capacity at startup. If the annual metal melting capacity is 10,000 tons or less, your area source is a small foundry. If the annual metal melting capacity is greater than 10,000 tons, your area source is a large

CERTIFICATE OF SERVICE

I, Cynthia Hook, hereby certify that a copy of this permit has been mailed by first class mail to Big River Steel LLC, 1425 Ohlendorf Road, Osceola, Arkansas, 72370, on this 18th day of September, 2013.

Cynthia Hook, ASIII, Air Division