State of Ohio Environmental Protection Agency

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2/9/2010

Certified Mail

Yes	TOXIC REVIEW
Yes	PSD
No	SYNTHETIC MINOR
Yes	CEMS
Yes	MACT
Yes	NSPS
Yes	NESHAPS
No	NETTING
Yes	MAJOR NON-ATTAINMENT
Yes	MODELING SUBMITTED

Delauna Pack
Middletown Coke Company
11400 Parkside Drive
Knoxville, TN 37934

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 1409011031
Permit Number: P0104768
Permit Type: Initial Installation
County: Butler

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

It is Ohio EPA's understanding that Middletown Coke plans to set up a Community Advisory Panel (CAP) in the Middletown, Ohio area. Please confirm your intention to initiate a CAP. The purpose of this panel is to facilitate communication between the community and the Middletown Coke facility. It is recommended that this panel is set up such that construction issues can be discussed with the community and that the panel continues on an ongoing basis to facilitate communication during the operation of the plant.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission ("ERAC") under Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and describe the action complained of and the grounds for the appeal. The appeal must be filed with the ERAC within thirty (30) days after notice of the Director's action. A filing fee of $70.00 must be submitted to the ERAC with the appeal, although the ERAC, has discretion to reduce the amount of the filing fee if you can demonstrate (by affidavit) that payment of the full amount of the fee would cause extreme hardship. If you file an appeal of this action, you must notify Ohio EPA of the filing of the appeal (by providing a copy to the Director) within three (3) days of filing your appeal with the ERAC. Ohio EPA requests that a copy of the appeal also be provided to the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the ERAC at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. If you have any questions regarding this permit, please contact the Hamilton County Dept. of Environmental Services. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page http://www.epa.ohio.gov.

Sincerely,

Chris Korleski
Director

Cc: U.S. EPA Region 5 *Via E-Mail Notification*
Hamilton County Dept. of Environmental Services

Ohio Environmental Protection Agency

Division of Air Pollution Control

Response to Comments

Project: Middletown Coke Company Permit to Install (PTI)
Ohio EPA ID # P0104768

Agency Contacts for this Project

Ohio EPA Division of Air Pollution Control:	Alan Lloyd (614) 644-3613 alan.lloyd@epa.state.oh.us
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Ohio EPA held a public hearing on September 2, 2009, regarding a Middletown Coke Company draft PTI for the installation of a coke oven heat recovery coke making facility and associated processes. This document summarizes the comments and questions received at the public hearing and during the associated comment period, which ended on September 9, 2009.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. In addition, a number of comments received may not appear below as they were either unrelated to the proposed project; were rhetorical in nature and do not ask for a response; or the comment stated a belief, opinion, or plea but did not voice a question to be answered. Nevertheless, all comments received are part of the official record and have received consideration by Ohio EPA in making a final decision on the issuance of this permit.

Expressions of Support and Opposition

Comment 1: **Numerous comments were received expressing either support for or opposition to the project.**

Response 1: Ohio EPA appreciates these comments, but may not consider the number of people for or against a site when evaluating permit applications.

Emissions Calculations

Comment 2: **A commenter stated that particulate emissions from conveying hot coke from the transfer car to the quench tower should be calculated the same as emissions from pushing hot coke from ovens.**

Response 2: Particulate emissions from conveying hot coke from the transfer car to the quench tower were calculated using *Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition*, Table 12.5-1, which is also known as AP-42. You can read this document online at www.epa.gov/ttn/chief/ap42. It would not be appropriate to use the same emissions factors for moving coke from the transfer car to the quench tower as are used for pushing. During the pushing operation the hot coke is exposed to atmosphere for the first time but that is not the case when the coke is transferred to the quench tower.

Comment 3: **A commenter believes that the draft permit is based on incorrect emissions factors and stack test data from AK Steel's sintering plant.**

Response 3: Ohio EPA is confident, based on the Agency's extensive experience and the highly detailed review required in this analysis, that the draft permit and final permit were issued using appropriate emissions factors and stack test data.

Ohio EPA reviewed the documents supplied by the commenter, both during the 2008 "netting" permit review and during review for this permit. The following is the agency's response based upon the previous and most recent review of the information:

The Sinter plant windbox is actually emissions unit P908 not F908. The condensable particulate matter 10 microns or less (PM_{10}) emissions in the draft permit to install included condensable

emissions. In response to this comment, Ohio EPA removed the condensable portion of the emissions so the PM_{10} emissions now only include the filterable PM_{10} portion. The particulate matter (PM) windbox emission factor was changed from pounds per hour to pounds per ton because the production rate exceeded the rated maximum of 125 tons/hour during the test. Based upon citizen comments concerning the leak check, Hamilton County Department of Environmental Services' (HCDOES) Monitoring and Analysis Group re-reviewed the October 12, 1998 particulate stack test. Upon review, the Agency agreed that the leak check was outside the acceptable range and the first test run is not valid. Using the values from the two acceptable runs, the pound per ton value was reduced from 0.31 to 0.29. Since the emission credit reduction period is from 1999-2001 this test is the closest period which would best represent the actual emissions. Ohio EPA's guidance is to use the most recent available stack test to the emission credit reduction period to best quantify the actual emissions.

For raw materials unloading AK Steel's previous permit application for the sinter plant raw materials include limestone, dolomite, slag, mill scale, coke breeze, blast furnace sludge, sinter fines, iron ore and oxide wastes. Since various materials were used, AK Steel used an average factor of 0.22 pound/ton. For example, the Reasonably Available Control Measures (RACM) factor for the sinter fines is 0.4 pound/ton. For iron ore handling the emission factor from RACM is 2.0 pounds/ton. Both of these factors are much higher than the 0.22 pound/ton value that AK used. A 50 percent control efficiency for the use of watering and the partial enclosure of one conveyor as a control measure was used in the calculation of the emissions. This will reduce the emissions credit for raw material unloading by 50 percent.

For the emissions from the breaker end and cold screen at the sinter plant, AK Steel started with an uncontrolled emission factor of 6.8 pounds/ton from AP-42. AK Steel apportioned 95 percent of those emissions for the breaker end and 5 percent for the cold screen. The emissions from the cold screen do not vent to a control device but are controlled with a water spray. A 50 percent control efficiency was used for the water spray. For the breaker end emissions, a portion of the emissions are captured and vented to a control device. AK Steel assumed 95 percent of the breaker end emissions are captured by the control system and vented to the baghouse. The 95 percent capture efficiency is consistent with the factor identified in the *National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Plants – Background*

Information for Proposed Standards. This factor is located on page 3-11 of the document. The emissions that are captured then are controlled with a baghouse which has a 99 percent control efficiency. Using this calculation, the controlled emission factor used by AK Steel is actually lower than the controlled emission factor proposed by the commenter. Also the factor proposed by the commenter does not account for the fugitive emissions from the breaker end and cold screen.

For the cold sinter screening the emission factor in AP-42 states it is for "Continuous Drop Conveyor Transfer Station Sinter". It does not reference screening in the description. Normally the screening of material creates more emissions than conveying thus the AP-42 emission factor would under-estimate emissions. A 50 percent control efficiency is used for watering and the partial enclosure of the cold sinter screens.

Ohio EPA reviewed the PM_{10} and particulate matter 2.5 microns or less ($PM_{2.5}$) emission factors used in the application and believes they are the correct factors. The September 29, 1995 test contains no sizing data for PM from the exhaust of the scrubber so the AP-42 emission factor was used.

Concerning the September 29, 1995 stack test AK Steel provided a production rate of 125 tons/hour in a letter dated June 24, 2008. AK Steel stated they no longer have the daily production records. As outlined in their Title V permit, they are only required to maintain this information for five years. The average emissions rate for the three runs was 588 pounds/hour. Since a pound/ton emission factor was used if the production was less than 125 tons/hour then the emission factor would be higher. During the October 12, 1998 PM test the sinter plant did have a maximum production rate of 144 tons/hour. Using this maximum value you obtain 4.0 pounds of SO_2/ton.

The HCDOES Monitoring and Analysis Group re-evaluated the November 23, 1993 stack test to ensure the nitrogen oxides (NOx) testing followed the approved U.S. EPA test methods. Based upon their review, the NOx testing was done in accordance with the U.S. EPA test method. Concerning the production rate for the above test, the production values obtained by the Monitoring and Analysis Group as noted in their summary are the values which should be used. The only stack test conducted for the NOx emissions from the sinter plant windbox was conducted on November 22 and 23, 1993. Since the sinter plant was an existing operation, there was no

permit allowable for the NOx emissions and therefore no requirement for additional NOx testing. Based on the actual stack test, the company developed a pound/ton emission rate for the NOx emissions. They then used the actual production rate in tons from 1999 to 2001 times the NOx emission factor to determine the actual NOx emissions.

Volatile organic compound (VOC) testing for the sinter plant windbox was conducted as part of the November 1993 testing. Ohio EPA agrees with the commenter that the second run of the VOC testing was not valid. This test run was not used to determine the actual emissions. Concerning the production rate for the above test, the production values obtained by the HCDOES Monitoring and Analysis Group as noted in their summary are the values which should be used.

Comment 4: **A commenter believes that AK Steel did not account for increases in raw material unloading when it calculated emissions reductions for offset purposes.**

Response 4: For the purposes of emission offsets and the emission reduction credit (ERC) banking program, a company is required to determine the emission reductions only on an individual emission unit basis. Federal regulations and state rules do not require Ohio EPA to evaluate a company's increases or decreases that occur at other emissions units when determining the amount of emission reduction credits available.

Comment 5: **A commenter stated that SO_2 emissions reductions from the Sinter Plant wind box were miscalculated, as a lack of information on the sulfur in the raw materials means SO_2 emissions cannot be properly evaluated.**

Response 5: Ohio EPA and HCDOES reviewed the 1995 SO_2 stack test and various information on the sulfur content of raw materials used in the sinter plant and determined that the SO_2 emission credit is consistent with the information reviewed. Ohio EPA also developed a material balance which supports the use of the 1995 SO_2 stack test value.

Comment 6: **A commenter believes Ohio EPA should have used a material balance instead of instrumentation, human observation, estimated flow volumes and old data to determine actual monthly SO_2 emissions.**

Response 6: Ohio EPA has established test methods and other procedures for measuring emissions as well as procedures for demonstrating compliance with emission limits. These are in Ohio law, in numerous guidelines (e.g., Engineering Guides) and in a facility's air permit.

In addition, according to U.S. EPA, the use of continuous emissions monitoring systems (CEMS) is the best mechanism for determining on-going compliance with emission limitations. Therefore, Ohio EPA believes that a material balance is not an appropriate way to determine monthly SO_2 emissions.

Comment 7: **A commenter would like to know if SunCoke will use supplemental natural gas in the waste gas collection system at MCC. If so, the emissions must be accounted for in netting calculations.**

Response 7: SunCoke will not use supplemental natural gas in the waste gas collection system at the MCC except during initial startup.

Comment 8: **A commenter would like all hourly emissions rates to be based on the annual emissions rate because Illinois calculates SO_2 emissions at the Gateway plant that way.**

Response 8: The allowable emission rates in the permit were established based on legal requirements under the Clean Air Act and Ohio law. The hourly emission rate is not equivalent to the annual rate because the annual rate is more stringent than the hourly rate. The rates are necessarily different to account for short term variability specific to the process and the controls.

Comment 9: **A commenter states that the dry scrubber should remove 98 percent of sulfur dioxide emissions rather than 92 percent.**

Response 9: SO_2 control efficiencies of 92 percent are considered BACT for nonrecovery coke batteries.

<u>Emissions Offsets</u>

Comment 10: **Commenters stated that SunCoke cannot use emissions offsets from Proctor and Gamble because the offset dates are before the 10 years allowable under Ohio law and SunCoke is using two different 24 month baseline periods for NO_x credits.**

Response 10: The commenter suggests that the definition for baseline actual emissions is the method to quantify emissions for offset credits. However, Ohio's rules state that when establishing the baseline used to calculate emission reduction credits (ERCs), Ohio EPA shall use actual emissions.

In general, Ohio rules define "actual emissions" as the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a consecutive 24 month period. The 24 month period must be before the date of the analysis and be representative of normal emissions unit operation. The director shall allow the use of a different period if it is more representative of normal emissions unit operation. Actual emissions are calculated using the emissions unit's actual operating hours, production rates and types of materials processed, stored or combusted during the selected period.

Federal rules also require Ohio EPA use actual emissions when calculating ERCs. While U.S. EPA has added a new definition for baseline actual emissions that should be applied to netting determinations, it did retain the "actual emissions" definition for emission offset purposes.

Comment 11: A commenter stated that AK Steel has not provided the reports necessary to evaluate the draft permit offset credits.

Response 11: Ohio EPA has received from AK Steel all reports necessary to evaluate their usage of offset credits.

Comment 12: A commenter stated that Middletown Coke Company has not provided information supporting the allowance of NO_x emission offsets from Procter and Gamble.

Response 12: Ohio EPA understands the commenter's concern regarding the information in the draft PTI's staff determination. We have revised the PTI to more accurately reflect the status of the emission offsets used for Middletown Coke Company. We also have incorporated all applicable emission offset requirements consistent with state rules and federal regulations in the final PTI for Middletown Coke Company. Federal regulations require that by the time a new or modified facility begins operation, sufficient offsetting emissions reductions must be obtained. Ohio EPA believes we are accurately following this federal regulation.

Furthermore, Ohio EPA reviewed the Procter and Gamble emission offsets for the Middletown Coke Company and determined that they meet the all the requirements under state rules and federal regulations. Ohio EPA is working to update a State Implementation Plan (SIP) submission previously submitted to U.S. EPA but not yet approved. This revision to the SIP submittal will make it clear that the Procter and Gamble offsets can be used for the Middletown project. The Agency does not include detailed emission offset quantification information in a facility's draft permit, instead, this information is included in the application materials and/or Ohio EPA's staff work product.

Comment 13: **A commenter is concerned that Ohio EPA allowed MCC to use enclosures as a control measure and did not use enclosures as a control measure at AK Steel's sinter plant. Since AK Steel has an enclosure, those emissions shouldn't be used for offsets.**

Response 13: The commenter is correct that Ohio EPA did not assign a control measure to the AK Steel building. U.S. EPA won't allow buildings to be used as a control device. When calculating emissions reduction credits, buildings are treated differently than enclosures. This is because buildings have openings such as doors, windows and vents that fugitive emissions could escape from and an enclosure does not. A control efficiency factor cannot be assigned for emissions captured by a building for this reason. Because an enclosure is completely enclosed and is designed to contain fugitive emissions from release to the atmosphere, a control efficiency factor can be assigned for an enclosure and the emissions can be used in calculating offsets.

Please also see Response 3 for more information about how emissions from the sintering plant were calculated.

Comment 14: **Commenters believe that Ohio EPA should not allow MCC to use offset credits from outside Butler County.**

Response 14: Under the applicable nonattainment new source review rules, emission offsets from any part of a nonattainment area can be used for the purpose of nonattainment new source review permitting. These state rules and federal regulations both allow a new major facility or major modification in need of emission offsets in Butler County to obtain applicable offsets from Warren County, Clermont County, Hamilton County or Butler County (the entire nonattainment area).

Comment 15: **A commenter states that offset credits from one facility should never be allowed to be transferred to a noncompliant facility and SunCoke's Haverhill plant is often out of compliance.**

Response 15: The nonattainment new source review rules contain many requirements that must be met in order for Ohio EPA to approve the issuance of a permit. One of those requirements is that offset credits must be obtained. The rules that describe the need for offsets have many requirements, but do not have any requirements concerning the compliance status of the company requesting the offsets. Therefore, Ohio EPA cannot make compliance status a qualifying criterion for obtaining credits.

The nonattainment new source review rules do have another requirement that says the company obtaining a nonattainment new source review permit must do a compliance certification. However, this compliance certification is a qualifying criterion for the purpose of obtaining a permit, not for the purpose of obtaining credits. Please refer to Response #59 for further details on compliance issues related to general nonattainment new source review permitting requirements.

Comment 16: **A commenter states that Middletown Coke cannot claim previously shut-down sources as offsets for purposes of NSR.**

Response 16: The nonattainment NSR program is specifically designed to allow for the use of previously shut down sources as offsets.

Comment 17: **A commenter states that the air pollutant emission offsets are overestimated and not sufficient for issuance of a NSR Nonattainment PTI.**

Response 17: The commenter is concerned with the way the AK Steel Sinter Plant emission reductions were calculated for the emission offset portion of Middletown Coke Company's permit requirements. Based on the information AK Steel provided Ohio EPA and our technical review of AK Steel's fee emission reports, stack tests and other pertinent data, we feel that the amount of emission reductions is accurately calculated and sufficient for the Middletown Coke Company's permit. For technical responses to the commenter's concerns please refer to Response 3 of this response to comment document.

Comment 18: **Commenters state that Ohio EPA has failed to require emissions offsets that are sufficient, available, verified, creditable and properly quantified and that would provide a net air quality benefit. Further, commenters state that offsets claimed by SunCoke were used in the July 2008 State Implementation Plan and Ohio EPA does not have the latitude to revise the plan.**

Response 18: Ohio EPA has thoroughly reviewed the emission reduction credits (ERCs) that are proposed for Middletown Coke Company's permit-to-install (PTI) P0104768. We believe that our process for ensuring the ERCs are surplus, quantifiable, federally enforceable and permanent follows all applicable Ohio state rules and federal requirements. Please see below for specific responses to the commenter's concern that emission offsets are not sufficient, available, verified, creditable, properly quantified and that they would not proved a net air quality benefit.

<u>Sufficient offsets</u>:

Offsets are only required if the allowable emissions are above the significant level threshold. It is our opinion that VOC emissions are below the significant level threshold and, therefore, the company is not required to obtain emission offsets for this pollutant. The company's PTI incorporates emission limits the company must meet to comply with their permit obligations. It is in the company's and Ohio EPA's best interest to incorporate the correct allowable emission rates so that a company is not in violation of their permit in the future.

As for $PM_{2.5}$ condensable emissions, Ohio EPA will follow what is prescribed in U.S. EPA's final rule, "Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers ($PM_{2.5}$)". U.S. EPA states that, "In this final NSR rule, EPA will not require that States address condensable PM in establishing enforceable emissions limits for either PM_{10} or $PM_{2.5}$ in NSR permits until the completion of a transition period, as described herein" (73 Fed. Reg. at page 28334). Ohio EPA believes our rules are consistent with federal regulation. Therefore, the Agency does not plan to incorporate $PM_{2.5}$ condensable emissions until receiving further guidance from U.S. EPA on accurate, reliable test methods and allowable emission rates.

Availability of emission offsets:

The sintering plant emissions will be used as part of the emissions credits needed for the offset demonstration. The offset permit has been superseded and is no longer valid.

Credibility of emission offsets:

Ohio EPA believes the state does have the ability to include emission reductions that occurred prior to 2005 into our attainment demonstration as existing actual emissions. Both Ohio rules and federal regulations allow for emission reductions that are achieved before the most recent emission inventory year to be included as existing emissions for the purposes of demonstrating attainment with an applicable air quality standard.

The agency also believes that inserting emission reductions as existing emissions in an addendum to the emission inventory is not a violation of federal law (42 USC 7502(c)(3)). This United States Code states that "[nonattainment] plan provisions shall include a comprehensive, accurate, current inventory of actual emissions from all sources or relevant pollutants…" Ohio EPA interprets this regulation to mean that the emissions provided for in the emission inventory have all the necessary information to represent emissions accurately, comprehensively in the most current emissions inventory. Ohio EPA does not plan to insert prior emission reductions into the 2005 emission inventory used to demonstrate attainment for the eight-hour ozone standard or $PM_{2.5}$ standard. Rather, it is including prior emission reductions as an addendum to the emission inventory to be used for the sole purpose of modeling future attainment for the applicable air quality standards. Ohio EPA believes that insertion of emission reductions into the model as if they were existing emissions and then projecting out to show attainment in future years is protective of Ohio's air as well as preserving available emission offsets for future use in nonattainment areas.

Emission offset verification:

Ohio EPA has reviewed the emission reduction credits (ERCs), also known as emission offsets, from both AK Steel and Procter and Gamble (P&G) to ensure the ERCs are quantifiable, federally enforceable and permanent. At the time of draft PTI issuance, AK Steel's ERCs met all of the applicable requirements in Ohio's state rules and federal regulations, except for the surplus requirement.

Therefore, Ohio EPA posted the AK Steel ERCs on the unverified section of our Web site. In regard to Procter and Gamble ERCs, Ohio EPA did not complete ERC verification at the time the draft PTI was issued. Therefore Ohio EPA did not post P&G's ERCs on our ERC banking program Web site. The agency understands that any emission reductions that occurred prior to 2005 would not be considered surplus if U.S. EPA approved our SIP without the emissions reductions included in the inventory. Ohio EPA has submitted a SIP that does not include these emissions. However, U.S. EPA has not acted on this submission. Therefore, it is not currently a part of our federally approved plan. Ohio EPA plans to submit a revision to the plan that includes these emissions back into the inventory. This will include a revised modeling demonstration and technical documentation that will be submitted to U.S. EPA for approval.

Ohio EPA also incorrectly incorporated the total amount of available NOx ERCs from P&G in Middletown Coke Company's draft PTI. When looking back at historical documentation of P&G's ERC review there were multiple iterations prior to completing verification. At the time Ohio EPA issued the Middletown Coke Company's draft PTI, the agency was confident at least 85 tons of NOx emission offsets were available. Ohio EPA is also confident that there are more than 85 tons of NOx ERCs that meet the quantifiable, federally enforceable and permanent requirement.

<u>Proper quantification</u>:

Ohio EPA understands where there may be confusion regarding the Procter and Gamble (P&G) credits when looking back at historical documentation. The agency has done a great deal of work ensuring that P&G's credits were accurately quantified and are available for use. The agency and P&G have gone through several iterations of ERC calculations. The commenter alluded to one of the many interpretations of the available amount of ERCs for P&G in an e-mail from Robyn Kenney dated May 13, 2009. Since that initial review Ohio EPA has gone through a detailed analysis of the available amount of emissions to ensure the ERCs are properly quantified. After months of review Ohio EPA can ensure that the ERC calculations from P&G are accurately quantified and, at times, more conservative than actual emissions. Most importantly, the agency is confident there are at least 85 tons of NOx available from the permanent shutdown of existing boiler for use as emission offsets in the Middletown Coke Company permit.

Net air quality benefit:

Ohio rules state that for a nonattainment area, the use of creditable emission reductions (offsets) will adequately demonstrate a net air quality benefit. In this case, net air quality benefit modeling was not conducted because the pollutant of concern, $PM_{2.5}$, is not entirely emitted directly and modeling would not be able to show a significant difference in ambient concentrations. The reason for this is that the majority of $PM_{2.5}$ is generated in the atmosphere downwind of the emission point due to atmospheric chemistry. Any modeling would not be able to show a significant difference because of the dispersion that occurs by the time the atmospheric chemistry is complete and any $PM_{2.5}$ is formed. Since modeling cannot show any difference, Ohio EPA relies on the offsets to demonstrate the net air quality benefits. It is the agency's belief, consistent with federal regulations that the greater than 1.0:1.0 ratio for $PM_{2.5}$ sufficiently shows a net air quality benefit. This approach is identical to the approach U.S. EPA and Ohio EPA utilize for ozone where no modeling is conducted for the same reason (atmospheric chemistry must occur first).

Secondly, there is no requirement in the federal regulations that limits the amount of years between an emission reduction and the use of an ERC for a major new source review project. As long as the emission reductions are achieved either after the base year used for the most recent attainment demonstration or are included as existing emissions as an addendum to the most recent emissions inventory to demonstrate attainment, then the emission reductions are still considered as providing for a net air quality benefit.

Reporting and Compliance

Comment 19: **A commenter believes that Middletown Coke Company should have same reporting requirements as Jewell Coke in Vansant, Virginia.**

Response 19: Ohio EPA structured the reporting requirements in the permit to assure the permit's emission limitations are met. The reporting requirements were developed to meet Ohio's standards and therefore may not necessarily mirror those of another state's.

Comment 20: **A commenter believes that compliance testing cannot be performed at 90% capacity as required by Ohio law because the allowable coal charges in the draft permit are unrealistic.**

Response 20: The coal charging operation is controlled by a fabric filter which will be tested at its outlet. The maximum number of charges was calculated by SunCoke and confirmed during the application review process that the maximum coal charge was 50 tons per oven. Furthermore, Ohio EPA will require that MCC operate at 90% of that or better (45 tons or more) during compliance testing. If it is demonstrated that the ovens cannot accommodate at least 45 tons of coal during charging and coking operations SunCoke would be required to accept additional restrictions on throughput limits.

Comment 21: **Commenters would like Ohio EPA to require continuous emissions monitors (CEMs) and continuous opacity monitors. Commenters would like HCDOES to establish a process for the public to inspect the records including a summary of monitoring results.**

Response 21: The main stack serving the coke battery will have a continuous SO_2 emissions monitor and will also be monitored for mercury emissions. Commenters asked for a continuous opacity monitor; however, there is no state or federal requirement for such a monitor for this type of operation and Ohio EPA cannot require more in a permit than the law allows. Commenters would also like CEMs to be placed on the waste gas bypass stacks, but there is also no requirement for placement there. In addition, CEMS cannot be used on the waste gas stacks because the temperature of the gas is too high (2000 degrees F.) The bypass stacks will emit emissions that are uncontrolled, but Ohio EPA knows what the uncontrolled emissions will be and they were factored into the air quality modeling analysis.

Data from the monitors on the stacks will be reported to Ohio EPA on a quarterly basis. The public may request these data calling HCDOES at (513) 946-7777.

MCC has also indicted that they plan to implement a community advisory panel (CAP) in the Middletown area. The purpose of the CAP is to facilitate communication between any interested person and the MCC facility. Periodic meetings will be held between MCC personnel and the public. The MCC will be set up in time to discuss any construction issues. These meetings will provide a forum to discuss any of these reports.

Comment 22: **A commenter believes that it is necessary to increase potential fines to SunCoke given their history of noncompliance and vulnerable populations in the area.**

Response 22: The Middletown Coke Company plant has not been built so there is no "history of noncompliance." In general terms, the amount that a company pays in fines can vary. While state law sets maximum fines, rarely does the agency fine someone the maximum. Instead, Ohio EPA will issue an invitation to negotiate that indicates the maximum fine per statute and the offense. The amount of the fine is often determined by the severity of the violation and the company's ability to pay the fine. Ohio EPA's main goal is to bring the facility into compliance rather than to make fines so expensive that the company must go out of business.

Comment 23: **Commenters are concerned that it can take more than two hours for an EPA investigator to respond to complaints from Middletown.**

Response 23: Outside of regular business hours the local air agency has only one inspector available to respond to complaints in a four county area. The length of time it takes to respond to any complaint in this four county area will depend on the location of the inspector at the time the complaint is made and if the inspector is already engaged in another investigation. When an inspector is not onsite at the time a complaint is registered the inspector relies on emissions testing, facility records, knowledge of weather conditions and subsequent compliance inspections to identify noncompliance issues.

In addition, MCC's Community Advisory Panel will be a forum to discuss any concerns citizens may have with the operation of the facility.

Comment 24: **Commenters would like to know how inspectors will differentiate between emissions from MCC and AK Steel in the event of a complaint since the sources are so similar.**

Response 24: Fugitive particulate emissions from the MCC would be identical to fugitive particulate emissions from the Wilputte coke battery at AK Steel. Should both coke batteries be operating simultaneously, inspectors would not be able to determine the source of fugitive nuisance dust based solely on laboratory analysis of dust samples. Inspectors would need to rely additionally on personal observations, emissions testing, facility records, knowledge of

weather conditions and compliance inspections to identify the source of nuisance dust.

Comment 25: **A commenter asserts that the draft permit does not require adequate monitoring and enforceability to ensure compliance with the proposed emission limits.**

Response 25: The terms and conditions of the permit are enforceable. Every emission limitation in the permit contains an associated monitoring and record keeping requirement. The terms and conditions are consistent with similar permits issued by Ohio EPA to other facilities in the state, which Ohio EPA can and does enforce.

Comment 26: **Commenters would like Ohio EPA to mandate a sufficient number of pollution monitors, which must be located at Amanda Elementary School, Garden Manor Nursing Home and elsewhere and monitored by a third party.**

Response 26: The draft permit requires the installation of two particulate matter 10 microns and smaller in diameter (PM_{10}) monitors, four particulate matter 2.5 microns and smaller in diameter ($PM_{2.5}$) monitors and two volatile organic hazardous air pollutant (HAP) monitors in the vicinity of the proposed plant. In the final permit the requirement to install one sulfur dioxide (SO2) monitor was added. Middletown Coke Company is required to purchase the monitors. The monitors will then be installed and operated by the Hamilton County Department of Environmental Services, which already operates various air monitors in Middletown. These monitors will be placed at two different sites near the proposed plant. The requirement to install air monitors, except for the SO2 monitor, was also part of the final permit to install (netting permit) issued to Middletown Coke Company on November 25, 2008. On June 25, 2009, Ohio EPA and HCDOES held a public meeting to accept feedback on where the two monitoring sites would be located. When locating monitoring sites the agency must meet certain siting criteria established by U.S. EPA and receive permission from the property owner. The agency is in the process of narrowing down potential sites at this time. Both Amanda Elementary School and Garden Manor Nursing Home are two sites that have been evaluated.

In addition, Ohio EPA has one of the most extensive air monitoring networks of any state in the country. Ohio EPA uses data loggers to acquire data from ozone and $PM_{2.5}$ monitors throughout the state. These hourly data points are sent to the U.S. EPA's AIRNow Web page (http://airnow.gov/) which makes the data available to the

public on its Web site. There is also a mechanism on the site for having e-mails sent to interested citizens. HCDOES also plans to make the ambient monitoring data from the above sites available on the agency's Web site (http://www.hcdoes.org) once it is reviewed and quality assured.

Control/BACT/LAER

Comment 27: **Commenters believe that the draft permit allows too much venting using bypass stacks and that MCC should be allowed a total of 8 days per year which is BACT. Maintenance should be done on the spray dryer without shutting it down.**

Response 27: Ohio EPA also had concerns about the amount of time allowed. During the processing of the 2008 draft permit, Ohio EPA had multiple conversations with the company concerning this issue. Middletown Coke worked with their contractors to develop an approach that reduces the total hours needed for bypassing. This approach involves combining maintenance activities such that some of the heat recovery steam generator maintenance will occur at the same time as some of the scrubber/baghouse maintenance. The net result will be less hours of bypass each year compared to what was proposed in the draft permit. Ohio EPA agreed with this revised approach and included this approach as a requirement in the permit. Both the heat recovery steam generators and the scrubber/baghouse equipment must be bypassed in order to do some of the recommended maintenance because some maintenance activities cannot be safely accomplished with the units operating.

Comment 28: **Commenters suggest that the FDS Coke facility permit should be evaluated as part of BACT and LAER analyses for the SunCoke permit.**

Response 28: Ohio EPA reviewed the permit issued to FDS Coke as part of the analysis of BACT and LAER for the SunCoke permit. In most cases, the controls selected and the control levels selected are almost identical. For instance, both projects utilize a dry gas sulfur dioxide scrubber and a baghouse to control both sulfur dioxide and particulate from the main stack. Both projects are required to install carbon injection systems in order to control HAPs including mercury.

In other instances control selection is different between the two projects but the difference is supported by the rules. For instance, FDS proposed to use a coal caking process and smaller baghouse on their coke oven charging system. (This system places coal into the ovens at the beginning of the coking cycle.) This process has never been used before for a non-recovery coke oven facility. Because of this fact, it is somewhat experimental. Until it is actually built and it is determined how well it works, it is not entirely clear how effective it will be at controlling emissions.

SunCoke's Middletown project, however, uses a conveyor process with a larger baghouse. This is the tried and true design that has been used on many non-recovery coke oven facilities. The equipment has been used many times and it is well known that it effectively controls charging emissions.

Under Best Available Control Technology (BACT), the rules allow for the use of control processes that have not been used before in order to force technological innovation. Under Lowest Achievable Emission Rate (LAER) rules, an experimental process that has not been used before cannot be required.

Since FDS's project had to employ BACT and SunCoke's Middletown project had to employ LAER, then Ohio EPA could not require SunCoke to utilize FDS's experimental approach to coal charging. Therefore, in this instance, the control determination ends up being slightly different. In both cases, however, Ohio EPA expects high quality control equipment to be installed that meets the applicable rules.

Comment 29: **The draft PTI does not comply with lowest achievable emission rates (LAER) for SO_2 or $PM_{2.5}$.**

Response 29: The MCC is required to meet the most stringent emission limits that are contained in the implementation plan of any state unless the facility demonstrates that the limits are not achievable or that they will meet the most stringent emission limits achieved in practice.

To document that MCC will comply with LAER for SO_2 and $PM_{2.5}$, Ohio EPA reviewed regulations and achieved limits in states with byproduct and nonrecovery coke plants as well as MACT standards and U.S. EPA's RACT/BACT/LAER Clearinghouse with contains case-specific information on the "best available" air pollution technologies (http://cfpub.epa.gov/RBLC/htm/bl02.cf).

This review confirmed that MCC will have SO_2 and $PM_{2.5}$ limits that meet or exceed LAER for controlled emissions. The spray dryer baghouse at MCC will have limits reflective of 92% SO_2 and will employ a filter material demonstrated to provide greater than a 99.9% reduction in emissions of filterable $PM_{2.5}$.

Comment 30: **A commenter stated that Ohio EPA did not use correct information and did not properly evaluate available cost-effective options to reduce SO_2 and $PM/PM_{2.5}$ emissions during MCC BACT analysis.**

Response 30: MCC is required to install the Best Available Control Technology (BACT) as one of the rules to ensure that it meets air quality standards. Ohio EPA reviewed the BACT analysis provided by MCC and determined that SO_2 and particulate emissions, taking into account energy, environmental impact and economic impacts, would have the maximum degree of reduction achievable. This meets the rule.

Ohio EPA ranked available control technologies in descending order of control effectiveness and evaluated them in terms of technical feasibility before selecting the most stringent appropriate control. The Agency also reviewed control technologies permitted in Alabama, Illinois, Indiana, Kentucky, Michigan, New York, Ohio, Pennsylvania, Virginia and West Virginia, MACT standards and EPA's RACT/BACT/LAER Clearinghouse.

Although Ohio EPA issued a PTI to FDS Coke Plant in Oregon, Ohio with different technologies as BACT, that facility was never constructed and the permit limits were never shown to be achievable. There are also significant differences between the proposed MCC and the proposed FDS plant which make a comparison of the FDS Coke BACT limits to the Middletown Coke LAER limits inappropriate.

Comment 31: **A commenter states that Ohio EPA is required by the Clean Air Act's BACT provisions to regulate CO_2 emissions from the SunCoke plant.**

Response 31: Currently, there are no federal or state rules in place that require Ohio to regulate CO_2 emissions. However, the director of Ohio EPA believes that climate change is an issue that must be addressed.

Ohio EPA's mission to lead in environmental stewardship is met by educating the public on how our daily decisions can contribute to

the release of greenhouse gases which directly impacts climate change. We are doing this by providing information about things you can do to reduce your GHG footprint and by encouraging industry to voluntarily register their GHG emissions through The Climate Registry.

In May 2007, the State of Ohio joined with 30 other states to help found the Climate Registry (www.theclimateregistry.org). The Registry is a developing uniform way of calculating and verifying GHG emissions and will serve as a "one-stop shop" for reporting and tracking businesses' GHG emissions.

The Registry will provide for a more accurate system of tracking emissions of GHGs from organizations across North America, resulting in more transparent and consistent data throughout the nation and continent.

In addition to participating in the Registry, Ohio EPA Director Chris Korleski has formed an internal Ohio EPA climate change task force to monitor federal and state developments on this subject. Task force members are actively monitoring the many global warming bills currently under consideration in Congress and Director Korleski is evaluating Ohio EPA's next steps to address climate change at the state level.

Permit Requirements

Comment 32: **Commenters would like Ohio EPA to require surveillance cameras be installed to monitor emissions from charging, pushing, quenching, coking and material handling at the Middletown Coke Company to guarantee compliance. Further, BACT should include cameras.**

Response 32: Surveillance cameras are not an Ohio EPA-approved method to monitor emissions. Furthermore, the draft permit contains provisions to assure compliance with the permit's emission limitations, such as stack testing, parametric monitoring and reporting and facility compliance inspections by Ohio EPA.

Ohio rules establish test methods and other procedures for measuring emissions as well as procedures for demonstrating compliance with emission limits. Numerous engineering guidelines also spell out how monitoring must take place and the information is also spelled out in a facility's air permit.

Finally, Ohio EPA has no authority to demand more monitoring than Ohio law requires.

Comment 33: **A citizen requests that Ohio EPA require a stamped coal charge like it required in the FDS Coke Plant permit.**

Response 33: The FDS oven design is quite different from the SunCoke design. According to the permit application, the FDS ovens are designed to be charged with 67 tons of stamped coal. The ovens at MCC will be designed to be charged with a maximum coal charge of 50 tons. The physical size of the SunCoke oven and the size of the sole flues and common tunnel are designed for a maximum coal charge tonnage of 50 tons.

The only charging procedure ever successfully demonstrated on the SunCoke heat recovery design is charging from the side using a horizontal flight conveyor. To our knowledge, no full scale stamped coal charging system has ever been operated with an oven of the SunCoke design anywhere in the world.

Ohio EPA believes that a better approach to looking at the method of charging of the coal into the coke oven batteries to reduce emissions is to look at the control device used to control those emissions.

For example, both facilities employ a baghouse to control emissions. FDS uses a small baghouse of about 3,000 cubic feet per minute (cfm) compared to MCC which proposes a baghouse rated at 45,000 cfm.

The particulate emissions associated with those operations from their baghouses are similar in quantity.

For example:

FDS: stack particulate emissions (PE) are 0.17 ton per year and fugitive emissions are 2.78 ton per year; stack PM_{10} emissions are 0.17 ton per year and fugitive are 0.83 ton per year. MCC's stack particulate matter/PM_{10} emissions are 3.4 and fugitive PE are 1.23 tons per year and fugitive PM_{10} are 0.37 ton per year; stack particulate matter emissions less than 2.5 microns are 3.4 tons per year and fugitive are 0.18 ton per year.

Based upon the above numbers, Ohio EPA believes that it is appropriate to look at the method of control versus the method of charging when calculating PM emissions.

Comment 34: **Commenters feel that control of fugitive dust from coal piles using "wet suppression" is not adequate and request that coal piles be under roof or have fixed perimeter water sprays.**

Response 34: Ohio EPA relied on its experience with permitting coal storage piles similar to the proposed size of MCC's coal storage piles and incorporated that experience into the draft MCC permit. It would not be feasible to totally enclose piles as large as those planned by MCC; instead the coal piles will be kept damp in order to lessen the fugitive dust. Whether the water sprays used to keep the piles damp are fixed in place or are portable should not impact the facility's ability to remain in compliance with permit limitations.

Comment 35: **A commenter would like Ohio EPA to require SunCoke to install three additional heat recovery steam generators (HRSGs) in order to reduce SO_2 and other emissions during maintenance. The commenter believes that the additional HRSGs are necessary to satisfy BACT and LAER.**

Response 35: Ohio EPA required SunCoke to provide a detailed analysis of various options to minimize the need for uncontrolled bypass operation. (See the addendum to the permit-to-install application "LAER Emissions Control During Plant Maintenance Operations" dated January 2010.) This analysis included many different options including several options for duplicate heat recovery steam generators. Each of these options was evaluated and it was determined that duplicate heat recovery steam generators option did not meet LAER because of multiple technical issues that could not be overcome.

Ohio EPA is unaware of any redundant system and/or control mechanism currently being used on any non-recovery coke oven battery operation and/or control mechanisms similar to those planned for MCC.

In addition, Ohio EPA continues to believe it is appropriate to base its evaluation of BACT by analyzing individual pollutants instead of combining the pollutants as suggested by commenter. This is based upon Ohio EPA's many years of reviewing BACT analyses and its review of U.S. EPA's RACT/BACT/LAER clearinghouse. Ohio EPA is not alone in evaluating pollutants separately; other

states also do not combine pollutants in a cost effectiveness analysis.

Comment 36: **A commenter stated that Ohio EPA must include requirements to ensure bypass stacks are sealed during normal plant operation.**

Response 36: The final permit allows the bypass stacks to be open only for maintenance purposes and only for a limited amount of time. At all other times the bypass stacks must be closed (sealed). In addition, the company has an economic incentive to keep the bypass stacks closed because the hot gasses that they will use to generate electricity would be otherwise lost out the bypass stacks.

Comment 37: **A commenter would like Ohio EPA to require a community liaison to work with SunCoke as well as funds to train community members in visible opacity observations.**

Response 37: Ohio EPA is limited in what it can require in a permit and cannot add requirements beyond what law allows. The Agency has no authority to require SunCoke to do as requested.

MCC has also indicted that they plan to implement a community advisory panel (CAP) in the Middletown area. The purpose of the CAP is to facilitate communication between any interested person and the MCC facility. Periodic meetings will be held between MCC personnel and the public. The CAP will be set up in time to discuss any construction issues.

Comment 38: **A commenter states that the 10 days bypass allowed for heat recovery steam generator (HRSG) maintenance and one hundred percent bypass of coke battery waste gas for flue gas desulfurization (FGD) spray dryer absorber inspection and annual scheduled maintenance is inconsistent with prior BACT determinations.**

Response 38: MCC will be allowed 1560 stack-hours per 12-month period of bypass emissions for all HRSGs combined to be used for periodic scheduled inspection and maintenance. Bypassing of the HRSGs and the spray dryer/baghouse system is required in order to safely inspect and maintain the equipment. The 1560 stack-hours limit allows five days for spray dryer/baghouse and an average of eight days for each HRSG (there are five of those) for system inspection and maintenance. Ohio EPA has worked closely with MCC to minimize the time allowed to conduct bypass inspection and

maintenance. The final permit reduces that number of hours allowed compared to the draft permit. These limits are at least as stringent with the limits established for other similar facilities.

MCC and Ohio EPA considered alternative control technologies during maintenance and inspection but found them to be inappropriate due to either the intense heat of the coke gases or because they were expensive and unproven. No available information was neglected in considering alternative technologies.

Comment 39: **A commenter is concerned that the draft PTI does not include required maximum hourly and daily charging limitations.**

Response 39: There is a limitation of 10 charges per hour for the MCC permit. There is no specific daily limit on charges to the ovens but the maximum potential number of charges would be 100 as there will be only 100 ovens at the MCC and the charge will remain in the ovens approximately 48 hours. There is also an annual throughput limit for coal charged at the MCC. The annual throughput divided by 365 days per year would also limit MCC to an average of 50 pushes per day.

Comment 40: **Commenters suggest that Ohio EPA require a continuous opacity monitor (COM) on the main stack for various reasons, including a requirement at Gateway Energy, nonattainment status and BACT.**

Response 40: Gateway Energy in Illinois installed a PM CEM on its main stack because of a legal settlement separate from any state of Illinois air permit requirement. SunCoke requested the Illinois Environmental Protection Agency incorporate the requirement into a modification of the final air permit after the legal settlement.

Ohio EPA reviewed this legal settlement and has incorporated those contents that it could legally into the MCC draft permit. Ohio EPA chose not to incorporate COM into the final issued MCC permit because neither federal MACT regulations nor Ohio rules require COM for a non-recovery coke battery operation. Instead of COM, certified Ohio EPA and HCDOES staff will conduct visible emissions observations and will require MCC to conduct visible emissions observations to document compliance with opacity limits.

Comment 41: **A commenter believes that the draft permit should regulate condensable PM emissions.**

Response 41: There is a considerable amount of discussion concerning the regulation of condensables in new source permitting going on at the federal level at this time. Based upon our current understanding of this issue, and after receiving input from U.S. EPA, Ohio EPA has chosen not to place limits on condensable PM emissions in this permit.

Comment 42: A commenter would like Ohio EPA to address emissions from diesel trucks and trains servicing MCC in the draft permit.

Response 42: Ohio EPA cannot consider these emissions during our permitting process because the agency has no jurisdiction. U.S. EPA regulates emissions from mobile sources such as cars, truck and trains. Please visit U.S. EPA's Web site for more information: www.epa.gov/OMS/.

Comment 43: A commenter believes that the draft permit has statements or clauses which allow the applicant to not fully comply. Page 7 of the compliance certification is an example. Ohio EPA should modify these areas and hold the applicant to all regulations.

Response 43: Permit terms and conditions must be written to account for a variety of circumstances especially when highly complex pieces of equipment are involved. The permit is not designed to allow noncompliance, rather the permit is written to ensure compliance during a variety of circumstances.

Comment 44: A commenter would like Ohio EPA to require a buffer yard around the MCC to protect residents.

Response 44: Ohio EPA is limited in what it can require in a permit, and cannot add requirements beyond what law allows. The agency has no authority to require this.

Decisions such as whether there should be a buffer around industrial land are local decisions, usually made by local zoning boards.

Comment 45: Commenters would like Ohio EPA to limit Middletown Coke Company to a maximum of four ovens per hour and 52 ovens charged and pushed per day.

Response 45: The MCC will average about four charges and pushes per hour and less than 52 charges and pushes daily. MCC has asked for and

been given an hourly limit of 10 charges and pushes per hour to allow for operational flexibility, especially during startup operations. Modeling has been done at the higher charge and push rate and demonstrated that emissions from the higher rate will comply with applicable ambient air standards.

Public Notification

Comment 46: **A commenter recommends warning signs to be posted at all entrances and along all fences stating all permitted emissions and the harmful effects of each pollutant, how to get contact information and how to get additional information regarding emissions. The commenter would also like MCC to publish the information in all major media publications within the non-attainment area of the project including a map showing the facility's location relative to schools, churches and major roadways.**

Response 46: Ohio EPA is limited in what it can require in a permit, and cannot add requirements beyond what law allows. The agency has no authority to require this.

Comment 47: **A commenter requests that any revisions made between the draft and final permits be re-public noticed to provide the public with an opportunity to comment and request a hearing on the revised draft.**

Response 47: Ohio EPA's public involvement policy is set by Ohio's rules. There is no provision in these rules to allow public comment on revisions made between the draft and final permits. All final actions of the director can be appealed to the Environmental Review Appeals Commission (ERAC). For more information on ERAC, please visit http://epa.ohio.gov/legal/appeal.aspx.

National Ambient Air Quality Standards/ Attainment

Comment 48: **Commenters believe that Ohio EPA should not allow an additional major source of pollutants in Butler County because the county is already in nonattainment for various pollutants.**

Response 48: Ohio EPA shares the citizens' concerns about the nonattainment status of Butler County. While the state is working to bring Butler County into compliance with all air quality standards, the Clean Air

Act does allow for economic development, even in nonattainment areas. These laws and rules are specifically designed to allow new sources to be installed in nonattainment areas as long as reasonable progress is being made to get to attainment and as long as public health is being protected. Ohio EPA believes that these standards are being met.

Comment 49: **A commenter states that the Middletown Coke Company project could require Ohio EPA to revise the schedule for complying with Clean Air Act Standards. The commenter would like to know how far the attainment of clean air standards will be pushed back and would like all documents used in these decisions to be made public.**

Response 49: Ohio EPA believes that these sources are small enough compared to the overall inventory that adding them back in to the inventory will have no bearing on Ohio's ability to meet clean air act standards on the schedule set in the SIP.

An attainment demonstration will have to be performed; however, it has not yet been done. Once the demonstration is finished, it and all documents related to it will be public information that may be requested by contacting Rich Bouder at (614) 644-2782.

Comment 50: **A commenter stated that allowing one hundred percent main stack waste gas bypass emissions for SO_2 and PM_{10} during annual FGD spray dryer absorber and baghouse inspection and maintenance does not comply with the Ohio SIP.**

Response 50: Manufacturer recommended maintenance of the FGD SDA/baghouse will be performed on an annual basis. MCC will need to shut down the FGD SDA/baghouse to do this work. While the emissions controls are shut down, MCC will need to open the bypass stacks and PM and SO_2 will be emitted without going through the control system. During these periods, the SO_2 emissions will potentially exceed pollution limits found in Ohio's rules; however, the rules allow such activities as long as MCC notifies Ohio EPA in advance.

The State Implementation Plan (SIP) is Ohio's plan for bringing all of Ohio into compliance with national air quality standards. Ohio's rules are written to support the programs found in the SIP. These rules state that the director may allow bypass of the control equipment without the shutdown of the emission unit if there is damage to the emission unit or if shutting down the unit would be

impractical. The company is required to obtain the permission from Ohio EPA to operate under this condition. Before beginning operation, the company must have developed operating plans to account for such conditions and will be required to minimize the emissions to the extent practicable during these periods. Because Ohio's rules allow this activity, the permit is not in violation of the SIP.

Health Effects

Comment 51: **Commenters would like Ohio EPA to explain the health effects of the pollution that the Middletown Coke Company will emit, including effects on vulnerable populations, and to define what "protective of human health" means.**

Response 51: When Ohio EPA states that a permit will be protective of human health and the environment, it means that, based on all of the analysis, the pollutant concentrations will be below national ambient air quality standards and below any Ohio EPA air toxic standards. The NAAQS are set by U.S. EPA, are the result of a great deal of research on the federal level into environmental and health effects of various pollutants. U.S. EPA's Office of Research and Development (www.epa.gov/ORD) does a great deal of peer-reviewed scientific research into not only specific pollutants and chemicals, but also how those chemicals could interact and whether they would have different impacts depending on age or health. These studies examine the effects of pollutants and other environmental stressors on human health and the natural environment, how harmful effects occur in the body, and the health risks they represent. The final pollution limits in a permit are set such that there is an additional safety factor to make sure they are protective of children, the elderly and those with compromised immune systems.

Before issuing the draft permit, Ohio EPA did extensive air dispersion modeling of emissions that will occur during normal operating conditions and bypass periods to make sure that the source's proposed emissions will not violate national air quality standards. These standards governing ambient, or outside, air are set by U.S. EPA and the Clean Air Act. These levels are set so that concentrations of pollutants in the air do not become high enough to negatively impact human health. The levels set by U.S. EPA take into consideration health effects short term, high concentrations and impacts from living near a source for many years. This analysis

has shown that, even under worst case conditions, the maximum offsite air quality impacts are below U.S. EPA's standards.

Comment 52: **Commenters believe that Ohio EPA should require significantly stricter limits on emissions in order to protect the health and welfare of the residents of Butler County.**

Response 52: Emissions limits are set by state and federal law, and Ohio EPA cannot make the limits stricter than the law requires. Please see response 51 for more information.

Modeling

Comment 53: **A commenter is concerned that Ohio EPA did not model sulfuric acid (H_2SO_4) emissions for this permit.**

Response 53: The commenter is correct that H_2SO_4 was not modeled and that Ohio EPA has the authority to request such information. However, Ohio law states that if an air toxic pollutant goes thru BACT and/or non-attainment review, then that pollutant is not modeled against Ohio EPA's air toxic policy. Furthermore, there is no federal standard for PSD air dispersion modeling requirements so there would not be a standard to compare the information against.

Comment 54: **Commenters stated that Ohio EPA did not follow Ohio and U.S. EPA guidance when performing the ambient air quality analysis, including modeling all operating scenarios and source emissions. Commenters further feel that incomplete information was provided for public comment and review.**

Response 54: Ohio EPA and SunCoke agreed that the same modeling procedure followed for the netting permit would be followed for the nonattainment new source review permit. U.S. EPA approved the air quality modeling for the netting permit. The worst case scenarios were modeled for each pollutant. Ohio EPA assumes that since the higher emission rates found in the 2008 permit are protective of human health, the lower emission rates found in the 2009 new source review permit will also be protective.

Anyone may view documents pertaining to the modeling by contacting Rich Bouder in Ohio EPA's Central Office at (614) 644-2782.

Comment 55: **A commenter stated that the ambient air quality analysis does not include all PM emissions.**

Response 55: Ohio EPA only requires that the filterable PM emissions are modeled, as stated in the May 2008 U.S. EPA $PM_{2.5}$ rule. All filterable PM emissions were included in the modeling.

Comment 56: **The draft permit is not based on acceptable air quality analysis for numerous pollutants.**

Response 56: Ohio EPA accepts the use of National Weather Service data from airports in the air quality modeling. Cincinnati/Covington Airport surface data and Dayton upper air data used by Middletown Coke Company was deemed representative for the Middletown area.

Ohio EPA only requires that the filterable PM emissions are modeled, as stated in the May 2008 U.S. EPA $PM_{2.5}$ rule. All filterable PM emissions were included in the modeling.

Comment 57: **A commenter would like to know how Ohio EPA was able to model emissions from the bypass stacks if there are no monitors on the stacks and there is no real-life information.**

Response 57: SunCoke calculated the emissions modeled based on information provided to them by the equipment vendor, stack test data and other information from other facilities. These calculations are often used in NSR modeling because the facility has not been constructed yet and this is the only information available.

Comment 58: **A commenter would like Ohio EPA to look at the modeling for both the netting and NSR permits and advise which permit would be better for the residents in terms of overall air quality.**

Response 58: Neither permit is better for the residents. Both the netting and the NSR permit modeling analyses show the facility will meet air quality standards and both permits are protective of human health.

<u>Other Concerns</u>

Comment 59: **Commenters would like to know how SunCoke can certify that all its facilities are in compliance with all applicable regulations as required to receive an NSR permit when SunCoke has facilities with multiple unresolved violations. Commenters also believe that AK Steel and all subsidiaries of**

SunCoke and AK Steel should be required to certify compliance.

Response 59: Ohio EPA has carefully reviewed the language of the compliance certification provision of Ohio's rules (OAC rule 3745-31-22(A)(2)). We have also searched for any U.S. EPA policy concerning this issue. Based on all of this review, Ohio EPA believes that the compliance certification requirement is limited in the following ways:

1. Compliance certification is limited to only facilities that are called "major stationary sources". Non "major stationary sources" (also called minor sources) would not need to be evaluated.
2. Compliance certification is limited to only facilities located in the State of Ohio.
3. The rule does not identify a time period that the certification must cover. Therefore, Ohio EPA's opinion is that the certification is a single point-in-time certification.
4. The rule allows companies to have ongoing violations as long as the company is in compliance with a federally enforceable expeditious schedule to get them back into compliance.
5. Violations that occurred in the past but that are no longer occurring would not preclude a compliance determination as long as the violations were not occurring during the point-in-time that compliance was certified.
6. A Notice of Violation (NOV) from either Ohio EPA or U.S. EPA is an accusation, not a determination that a violation has occurred or is occurring. Violations under an NOV must be evaluated separately to determine if they are ongoing violations such that a compliance determination cannot be done.
7. If two companies are considered one major stationary source (say Company A and Company B), but only one company (Company A) is submitting a permit application and building a new operation, then Company A must certify compliance for any major stationary source for which they can control compliance obligations. Company A does not need to submit a compliance certification for Company B if Company A does not have control over the air pollution compliance obligations of Company B.

Based on the above principles and a proper interpretation of the rule, Ohio EPA determined that SunCoke had to complete a compliance certification for all of the SunCoke major stationary sources located within Ohio, and AK Steel had to complete a

compliance certification for all of the AK Steel major stationary sources located within Ohio. SunCoke had to do the certification because they were installing a major stationary source (the coke plant) in a nonattainment area. AK Steel also had to do the certification because they were installing part of a major stationary source (the coke conveyor) in a nonattainment area.

Ohio EPA evaluated the compliance certifications by reviewing each potential violation. Based on this review, both SunCoke and AK Steel completed an acceptable compliance certification.

Comment 60: **A commenter believes that Ohio EPA must require an analysis of alternatives to the proposed facility, alternative sites, control technologies and other demonstrations to show that the benefits of the proposed facility significantly outweigh the environmental and social costs of the project.**

Response 60: Ohio EPA is following the requirements listed in Ohio rules, which were approved by U.S. EPA. The requirements listed by the commenter are not found in these rules. To read this rule, please visit http://codes.ohio.gov/oac and see OAC rule 3745-31-22.

Comment 61: **Commenters believe that the director of Ohio EPA has not met his delegated responsibility to implement Ohio's NSR regulatory program in a manner that is consistent with CAA, U.S. EPA and Ohio SIP requirements.**

Response 61: Ohio EPA reviews applicable rules and laws thoroughly when making permit decisions and believes that all permitting issues for MCC have been consistent with the Clean Air Act, U.S. EPA and Ohio SIP requirements.

Comment 62: **Commenters state that Ohio EPA cannot issue a major source PTI to Middletown Coke without first revoking the minor source PTI issued to the same facility in November of 2008.**

Response 62: One of the terms and conditions of the final permit says that the final permit supersedes the November 2008 permit. This means that the November 2008 permit is no longer effective.

Comment 63: **A commenter would like Ohio EPA to research if there are any other coke plants in the country that are next to an elementary school, a nursing home and a residential neighborhood.**

Response 63: Because Ohio and other states do not categorize or file permits by what types of communities they are located in, it is not possible for Ohio EPA to fulfill this request. However, the rules are designed to protect public health and welfare no matter where the facility is located and no matter whom the neighbors are.

Comment 64: A commenter asserts that AK Steel does not own land it claims to own and Ohio EPA should not issue a permit for an operation on land the applicant does not own.

Response 64: Ohio EPA does not investigate land ownership as it reviews permit applications. The assumption is made that the applicant has legal right to operate a proposed facility on the site described in the application. Anyone with knowledge that property is being used illegally should contact local law enforcement.

Comment 65: A commenter is concerned that the address used by the MCC is not correct according to the US Post Office and there have been two addresses used for two different permit applications. The commenter would like to know how Ohio EPA can issue two permits at two different addresses for one company and treat them like one entity.

Response 65: The MCC site has entrances on both Hamilton Middletown Road and on Yankee Road. The street address of the proposed facility was originally given to Ohio EPA as being on Hamilton Middletown Road because the company planned to put the emissions sources near the western side of the building site. MCC subsequently altered the construction plans so that the emissions sources would be close to the eastern side of the property and notified Ohio EPA that the street address would be on Yankee Road.

There have been two draft permits issued but there has never been more than one facility planned. Now that the final permit has been issued following the major new source review rules, the original permit is no longer valid.

<u>Comments from U.S. EPA</u>

Comment 66: "The permittee is required to perform a Lowest Achievable Emission Rate (LAER) review for $PM_{2.5}$. The emission limitations based on the LAER requirements are listed under OAC rules 3745-31-(21) through (27) above."

The first sentence reads as though the permittee has to perform the LAER review in the future, when it should be done already. Although this language may have been used in previous permits, it should be clarified.
The second sentence, referring to OAC rule 3745-31-21 through 27 in the chart, should refer to the chart with more precise citation (e.g. Part C.1.b.1.c. for the LAER emission limits for unit F001).

Response 66: Ohio EPA changed the language in the permit to reflect that the LAER study was already performed.

Comment 67: **"Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance."**

Please clarify whether "other" means "additional" or "alternative." (You had referred me to the Permit Terms and Conditions Library when I previously raised this, but was not able to find clarification on this issue there.)

Response 67: The language in the permit was modified to clarify the draft language by indicating the alternative control measures and additional measures could be implemented to achieve compliance.

Comment 68: **"In accordance with the permittee's permit application, the permittee has committed to [control measures or list of control measures] to assure compliance."**

When I previously commented that this sentence should be replaced with "the permittee shall do the following," you had replied that this was standard permit language. I still think it should be changed to clarify that permittee is legally required to perform the indicated control measures.

Also, the list of control measures appears to have been inadvertently omitted in C.2.b.2.d. (p. 22, unit F002)

Response 68: Ohio EPA modified the sentence to include language indicating that the permittee shall implement the measure. The control measure that was omitted has been added to the final permit.

Comment 69: **"These hourly emission limitations were established for permit-to-install (PTI) purposes to reflect potential to emit for this emissions unit based upon the maximum tons of wet coal charged per hour. Therefore, it is not necessary to develop**

monitoring, record keeping, and/or reporting requirements to ensure compliance with these limitations."

I'd previously commented that this term would be appropriate for the staff determination document but not the permit. You replied that this language had already been used in a number of permits and explained that hourly recordkeeping would be unnecessary when the lb/hr limit represented maximum or worst-case emissions. Though I am not disputing that explanation, I believe this language should be in the staff determination rather than the permit as it does not necessarily follow that hourly recordkeeping is unnecessary.

Response 69: The referenced term was removed from the permit based on this comment.

Comment 70: **This comment applies to both the BACT and LAER analyses. MCC rejects or does not consider FDS Coke's control technologies and emission limits, stating that FDS Coke's setup is technically infeasible and unavailable because FDS Coke has not yet been built. Because Ohio EPA has issued FDS Coke a permit with these control technologies and emission limits, MCC's assertion is not a valid basis for rejecting those control technologies and emission limits. In accepting MCC's argument, Ohio EPA is creating an unacceptable conflict between the two permitting actions.**

Response 70: Ohio EPA believes that there is not a conflict between the permits for FDS Coke Company and the final Middletown Coke Company. Please see the response to comment number 28 for a more detailed explanation.

SunCoke must comply with the LAER control requirements. By definition, LAER must be an emission limitation that is *achieved in practice*. The coke charging and pushing control requirements contained in the FDS Coke Company permit have never been achieved in practice because its processes are new designs that have never been built. Therefore, Ohio EPA cannot require SunCoke to use FDS's control scenario because it has never been achieved in practice.

Comment 71: **MCC is using PM_{10} as a surrogate for $PM_{2.5}$. Please note USEPA's decision regarding the surrogate policy in a recent response to petitions to object. This response is available at: http://www.epa.gov/region07/programs/artd/air/title5/petitiondb**

/petition s/lg&e_2nddecision2006.pdf. The discussion of the surrogate policy begins on p. 42. It states that a source must provide an adequate rationale to support the use of PM_{10} as a surrogate for $PM_{2.5}$, and provides examples of how this rationale can be provided. MCC must either provide a rationale for using PM_{10} as a surrogate for $PM_{2.5}$ or base its LAER analysis directly on $PM_{2.5}$.

Response 71: The comment allows for two options. One option is to provide a rationale for using PM_{10} as a surrogate for $PM_{2.5}$ and the other is to base the LAER analysis directly on $PM_{2.5}$.

The following is the LAER analysis based directly on $PM_{2.5}$:

The main control device is a baghouse with enhanced fabric filters which constitutes LAER for $PM_{2.5}$. This control device is equivalent to the controls at Gateway Energy and Coke Company in Granite City, IL which was determined to be LAER for $PM_{2.5}$. All emission controls were analyzed based on $PM_{2.5}$ emissions, and PM_{10} was not used as a surrogate.

Comment 72: MCC is rejecting SCR and SNCR for technical infeasibility, in part due to temperature variation. But since SCR/SNCR takes place downstream of the combustion process, could not the emissions be directed to a temperature-controlled environment feasible for SCR/SNCR use?

Response 72: SCR and SNCR are control devices that are used extensively in coal fired utility boilers to control NO_x emissions. SunCoke commissioned a national expert in SCR/SNCR technology to evaluate whether these technologies were applicable to a nonrecovery coke oven battery. The study concluded that it was not feasible to install SCR or SNCR at MCC.

Comment 73: Given past compliance history, I endorse Robert Snook's comment for putting limits on minimum coking time and maximum coal changing weight. (See his comment letter no. 1, Subject no. 5, p. 15.) This will help ensure that there are no green pushes that would raise emissions beyond the permitted limits.

Response 73: There is no regulatory requirement for minimum coking times or maximum charging weights, and the MCC facility has not been built, so there is no record of compliance history. The U.S. EPA approved method of determining coking time for nonrecovery coke

ovens is established in the MACT standard and proper work practice standards are specified in the permit. The permit will require that the operator verify and document the oven is free of visible emissions as required in the MACT standard prior to pushing the coke. This is the procedure required by U.S. EPA to ensure that the charged oven has completed its coking cycle.

Comment 74: **As limited bypass and maintenance are being cited as BACT/LAER, I believe better reporting is warranted. MCC should submit reports of its emissions during bypass/maintenance periods of operation to Ohio EPA, and these reports should be submitted with the same expediency as deviation reports even if deviations did not occur. Also, I believe the public should be informed at least a day in advance of any bypass/maintenance period of operation, whether through a website or other means.**

Response 74: The emissions that will occur during the bypass period were analyzed using air quality dispersion modeling. This analysis has shown that, even under worst case conditions, the maximum offsite impacts are below U.S. EPA's standards and are protective of public health. Ohio EPA does not believe changing the reporting requirements in the draft permit is warranted.

Ohio EPA is limited in what can be required in a permit, and cannot add a public notification provision. Unplanned releases are considered malfunctions and are regulated under Ohio law. MCC must report the type and quantities of these discharges to Ohio EPA. These reports are available by contacting HCDOES at (513) 946-7777.

MCC has also indicted that they plan to implement a community advisory panel (CAP) in the Middletown area. The purpose of the CAP is to facilitate communication between any interested person and the MCC facility. Periodic meetings will be held between MCC personnel and the public. The CAP will be set up in time to discuss any construction issues. It is also anticipated that information concerning maintenance bypassing events will be communicated to interested parties during the CAP meetings.

Comment 75: **Will MCC be using supplemental natural gas in its waste gas collection system?**

Response 75: Please see response #7.

Comment 76: **Will there be emissions from the activity of pushing coke from the hot push car to the quench car? If so, have these emissions been accounted for?**

Response 76: Please see Response #2.

<u>Comments from SunCoke/Middletown Coke Company</u>

Comment 77: **On Page 62, in c., delete: "Carbon monoxide (CO) emissions from the charging baghouse shall not exceed 0.0028 pound per ton of coal charged, 1.4 lb/hr and 1.28 TPY as a rolling, 12-month summation."**

This is a redundant listing of PSD limitation.

Response 77: Ohio EPA agrees with this comment and will make the deletion in the final permit.

Comment 78: **On page 64, change to read "CO emissions shall not exceed 21.81 lbs/hr and 95.54 TPY as a rolling, 12-month summation."**

Make consistent with other limitations in the PTI with one technology limit, a short term emission rate limit, and an annual emission rate limit.

Response 78: Ohio EPA agrees with this comment and will make the change in the final permit.

Comment 79: **On page 80 (6) change to read "See applicable sections of 40 CFR Part 63, Subpart L (40 CFR 63.300-313)." and (7) "See applicable sections of 40 CFR Part 63, Subpart CCCCC (40 CFR 63.7280-7352)."**

These MACT rules also contain limitations and requirements that are specific to byproduct coke facilities.

Response 79: Ohio EPA agrees with this comment and will make the change in the final permit.

Comment 80: **On page 84 (7) change to read "See applicable sections of 40 CFR Part 63, Subpart L (40 CFR 63.300 -313)." and (8) "See applicable sections of 40 CFR Part 63, Subpart CCCCC (40 CFR 63.7280 -7352)."**

These MACT rules also contain limitations and requirements that are specific to byproduct coke facilities.

Response 80: Ohio EPA agrees with this comment and will make the change in the final permit.

Comment 81: **On page 86 c. change to read "After completion of initial monitoring for emissions of mercury but not later than nine months after certification of the monitoring system, the Permittee shall apply for a revision to this permit to include limits for mercury emissions, which limits reflect emission rates that are achievable with effective control by the combination of the spray dryer, carbon injection system and baghouse and are based on the emission data that has been collected and relevant information about the mercury content of the coal supply to the plant and operation of control devices, including the activated carbon injection system."**

The mercury monitoring system will start operating before it is certified. Some data will be collected on the uncertified system and some after certification. Since the data will be used to recommend an emission limit – only certified data should be used.

Response 81: Ohio EPA agrees with this comment and will make the change in the final permit.

Comment 82: **On page 87 c. change to read "The bag leak detection system shall be equipped with an alarm system that will activate automatically when an increase in relative PM emissions over a preset level is detected and the alarm shall be located such that it can be seen or heard by the appropriate plant personnel."**

Operators typically respond to alarms delivered via computer monitor that are automatically logged and must be acknowledged. For consistency, it would be helpful to make the bag leak alarm procedure consistent with other facility alarms.

Response 82: Ohio EPA agrees with this comment and will make the change in the final permit.

Comment 83: **On page 100 u. change to read "Emission Limitation: CO emissions shall not exceed 21.81 pounds per hour from the coking operation main stack.**

Same as requested revision on page 64 (Comment 78).

Response 83: Ohio EPA agrees with this comment and will make the change in the final permit.

Comment 84: **On page 104: change to read "Metals excepting mercury are then multiplied by 5% to reflect the 95% control efficiency of the main stack spray dryer. Results of the mercury assessment report will determine the mercury control efficiency of the main stack spray dryer."**

This condition is related to determination of HAP emissions from the main stack. MCC is required to provide a detailed report to the Ohio EPA that provides an assessment of the mercury emissions of the plant based on a carbon injection study and monitoring of emissions with a sorbent tube system. This data will be more representative of mercury emissions than an initial stack test.

Response 84: Ohio EPA agrees with this comment and will make the change in the final permit.

Comment 85: **On page 112 hhh change to read "Emission Limitation: VOC shall not exceed 9.13 tpy from the flat push hot car vented to multiclone dust collector. Applicable Compliance Method: Compliance shall be demonstrated by adding the monthly emissions for the calendar year. Monthly emissions shall be determined by multiplying the VOC emission factor, in lb/ton coal, times the tons of coal charged per month, divided by 2,000 pounds/ton. The VOC emission factor (as carbon) shall be calculated from the results of the most recent emission test which demonstrated compliance."**

Make this section consistent with other VOC limits in the PTI.

Response 85: Ohio EPA agrees with this comment and will make the change in the final permit.

End of Response to Comments

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

FINAL

Air Pollution Permit-to-Install
for
Middletown Coke Company

Facility ID:	1409011031
Permit Number:	P0104768
Permit Type:	Initial Installation
Issued:	2/9/2010
Effective:	2/9/2010

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Air Pollution Permit-to-Install
for
Middletown Coke Company

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Authorization

Facility ID: 1409011031
Facility Description: Heat recovery coke plant
Application Number(s): A0036469, A0037844, A0037951
Permit Number: P0104768
Permit Description: Heat recovery coke-making facility
Permit Type: Initial Installation
Permit Fee: $5,400.00
Issue Date: 2/9/2010
Effective Date: 2/9/2010

This document constitutes issuance to:

Middletown Coke Company
3353 Yankee Road
Middletown, OH 45042

Of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Hamilton County Dept. of Environmental Services
250 William Howard Taft Pkwy.
Cincinnati, OH 45219-2660
(513)946-7777

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
Director

Authorization (continued)

Permit Number: P0104768
Permit Description: Heat recovery coke-making facility

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	**F001**
Company Equipment ID:	Paved Roads
Superseded Permit Number:	14-06023
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F002**
Company Equipment ID:	Storage Piles
Superseded Permit Number:	14-06023
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F003**
Company Equipment ID:	Coal Handling
Superseded Permit Number:	14-06023
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F004**
Company Equipment ID:	Coke Handling
Superseded Permit Number:	14-06023
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P001**
Company Equipment ID:	Quench Tower
Superseded Permit Number:	14-06023
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P901**
Company Equipment ID:	Heat Recovery Coke Battery
Superseded Permit Number:	14-06023
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A. 2.a), Severability Clause

(2) Standard Term and Condition A. 3.c) through A. 3.e) General Requirements

(3) Standard Term and Condition A. 6.c) and A. 6.d), Compliance Requirements

(4) Standard Term and Condition A. 9., Reporting Requirements

(5) Standard Term and Condition A. 10., Applicability

(6) Standard Term and Condition A. 11.b) through A. 11.e), Construction of New Source(s) and Authorization to Install

(7) Standard Term and Condition A. 14., Public Disclosure

(8) Standard Term and Condition A. 15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(9) Standard Term and Condition A. 16., Fees

(10) Standard Term and Condition A. 17., Permit Transfers

2. Severability Clause

a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d) This permit does not convey any property rights of any sort, or any exclusive privilege.

e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Hamilton County Dept. of Environmental Services.

(2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Hamilton County Dept. of Environmental Services. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.

(3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Hamilton County Dept. of Environmental Services every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

(4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Hamilton County Dept. of Environmental Services in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

d) The permittee shall submit progress reports to the Hamilton County Dept. of Environmental Services concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Hamilton County Dept. of Environmental Services.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Hamilton County Dept. of Environmental Services. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted

(i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

11. Construction of New Sources(s) and Authorization to Install

a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed through completion of the annual PER covering the last period of operation of the affected emissions unit(s).

d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the PER covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a PER, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.

b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Hamilton County Dept. of Environmental Services must be notified in writing of any transfer of this permit.

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) 5 and 6.

2. The following emissions units contained in this permit are subject to MACT Subpart L and Subpart CCCCC: P901 and Subpart CCCCC: P001. The complete MACT requirements, including the MACT General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA District office or local air agency.

3. Emissions Offset requirements:

   The permittee shall submit a letter to the Hamilton County Environmental Services and to Ohio EPA, prior to start up, documenting that Middletown Coke Company obtained legal ownership of the emission offsets from AK Steel – Middletown Works (Facility ID 1409010006); 394.57 tons per year (tpy) of NOx, 1209.92 tpy of SO2, and 117.81 tpy of PM2.5 and emission offsets from facility ID: 1431390903: 85 tpy NOx. In accordance to OAC rule 3745-31-26(A)(1) and (C), and 40 C.F.R. Part 51, Appendix S, the offset ratio for NOx, SO2, and PM2.5 shall be greater than 1.0 to 1.0.

   Butler County is in non-attainment for the eight hour ozone standard and the PM 2.5 standard. In accordance with the requirements in OAC rule 3745-31-22(A)(3) emission reduction shall be used to offset the net emission increase generated by this project to provide a net air quality benefit as specified under OAC rule 3745-31-22(A)(4). The permanent shutdown or permanent emission reduction of sources as specified in the below table shall be approved by Ohio EPA as verified emission reduction credits (ERCs) as defined in OAC 3745-111-01 before Middletown Coke Company begins operation. Any verified ERCs that are not used for this permit to install (PTI) shall be banked in accordance to OAC 3745-31-24(I), OAC rule 3745-111-02 and OAC rule 3745-111-05:

A	B	C	D	E	F
Company Name, Address, Contact Person & Phone # Providing Offsets	**Emissions Unit ID No. & Description**	**TPY PM2.5 ERC used for PTI**	**TPY SO2 ERC used for PTI**	**TPY of NOx ERC used for PTI**	**Emission Reduction Activity and Date of reduction**
AK Steel – Middletown Works, (Facility ID 14-09-01-0006)	*Raw Material Unloading (Emissions Unit F009)*	*+9.27*	0	0	Permanent shutdown April 1, 2004
	Windbox (Emissions Unit P908	+104.24	+1209.92	+394.57	Permanent shutdown April 1, 2004
	Breaker End (Emissions Unit P936)	+0.87	0	0	Permanent shutdown April 1, 2004
	Cold Sinter Screening	+3.43	0	0	Permanent shutdown April 1, 2004

A	B	C	D	E	F
Company Name, Address, Contact Person & Phone # Providing Offsets	**Emissions Unit ID No. & Description**	**TPY PM2.5 ERC used for PTI**	**TPY SO2 ERC used for PTI**	**TPY of NOx ERC used for PTI**	**Emission Reduction Activity and Date of reduction**
	(Emissions Unit F007)				
The Procter and Gamble Company Facility ID 1431390903	Boiler 1 (Emissions Unit B008)	0	0	2.17	Permanent Shutdown July 1, 1999
	Boiler 2 (Emissions Unit B001)	0	0	4.43	Permanent Shutdown July 1, 1999
	Boiler 3 (Emissions Unit B021)	0	0	78.40	Permanent Shutdown 5/21/2001

4. In accordance with OAC rule 3745-31-22-(A)(4), the emission offsets discussed above must provide a positive net air quality benefit in the affected area pursuant to rule 3745-31-25 of the Administrative Code. The permittee shall demonstrate compliance with OAC rule 3745-31-22-(A)(4) by complying with the requirements listed in OAC rule 3745-31-22-(A)(1) thru (A)(3) as specified in the terms and conditions of this PTI.

5. The permittee shall purchase in coordination with the Hamilton County Department of Environmental Services two Particulate Matter 10 Microns and Smaller in Diameter (PM10) monitors, four Particulate Matter 2.5 Microns and Smaller in Diameter (PM2.5) monitors, one Sulfur Dioxide (SO2) monitor, and two Volatile Organic Hazardous Air Pollutant monitors. These monitors will be sited and operated by the Hamilton County Department of Environmental Services. All sitting costs shall be paid for by the permittee. All air quality monitors installed as required by this permit will be sited and operated in accordance with all Ohio EPA and USEPA regulations. The Hazardous Air Pollutant monitor samples will be analyzed using the USEPA Compendium of Methods for the Determination of Toxic Organic Compound in the Ambient Air in the section TO-14A. Ohio EPA plans to have all monitors installed and operating by the start-up date of the coke oven batteries. Ohio EPA plans to operate the PM10 monitor on a one-day-in-six schedule, the PM2.5 monitor on a one-day-in-three schedule, the SO2 monitor on a twenty-four hour schedule, and the volatile organic hazardous air pollutant monitor on a one-day-in-twelve schedule. The permittee shall reimburse the Hamilton County Department of Environmental Services for ongoing operational and analysis costs for the monitors.

6. The PM10, PM2.5, and SO2 ambient monitors listed above shall be operated for at least five years after start-up of emissions unit P901. The Hazardous Air Pollutant monitors shall be operated for at least two years after start-up of the emissions unit. After the noted times, the permittee can request the Director to examine the ambient air quality data collected to determine if further ambient monitoring is necessary. The director shall have at least one year to make a decision on the need for the continued operation of the monitoring network. In determining the further need for the continued operation of the monitoring network, the Director shall consider the concentrations measured by the monitors, the

trends in air quality concentrations, and the value of the air quality data in fulfilling the goals and requirements of the federal Clean Air Act and Chapter 3704 of the Ohio Revised Code.

7. The following emissions units (EU) are also part of this project:

Emissions unit description	Permits	Emissions in tons per year
Unpaved roadways associated with Dick's Creek remediation	AK Steel Corporation Premise number 1409010006; Permit number P010457 issued final on 4/22/2009.	0.68 of PM; 0.17 of PM10.
Coke transfer conveyor system from the Middletown Coke Company to railcar loading and truck loading on AK Steel's property	AK Steel Corporation Premise number 1409010006; Permit number P010457 issued draft on 6/1/2009.	0.66 of PM; 0.58 of PM10; 0.18 of PM2.5.

8. Status of the previously issued permit

This permit (#P0104768) supersedes the previous permit (#14-06023, issued November 25, 2008) issued for this site.

C. Emissions Unit Terms and Conditions

1. F001, Paved Roads

Operations, Property and/or Equipment Description:

Paved Roadways and Parking Areas

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	See b)(2)a.
b.	OAC rule 3745-31-10 through 20	Fugitive particulate emissions (PE) shall not exceed 1.08 TPY as a rolling 12-month summation. Fugitive particulate matter emissions with a diameter of 10 microns and less (PM10) shall not exceed 0.21 TPY (filterable PM10) as a rolling 12-month summation. There shall be no visible particulate emissions except for 1 minute during any 60-minute period. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-08(B).
c.	OAC rule 3745-31-21 through 27	Fugitive particulate matter emissions with a diameter of 2.5 microns and less (PM2.5) shall not exceed 0.05 TPY (filterable PM2.5) as a rolling 12-month summation. There shall be no visible particulate emissions except for 1 minute during any 60-minute period. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-08(B).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
d.	OAC rule 3745-17-07(B)	The particulate emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-17-08(B).
e.	OAC rule 3745-17-08(B)	Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See b)(2)d. through b)(2)h.

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) are equivalent to the ton per year and visible emissions limitations listed under paragraph b)(1)b and c above.

b. The permittee has performed a Lowest Achievable Emission Rate (LAER) review for PM2.5. The emission limitations based on the LAER requirements are listed under OAC rules 3745-31-(21) through (27) in b)(1)c. above.

c. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of paved roadways and watering for control measures constitutes BACT for this emissions unit. The emission limits based on the BACT requirements are listed under OAC rules 3745-31-10 through 3745-31-20 in b)(1)b. above.

d. Nothing in this paragraph shall prohibit the permittee from employing additional or alternative control measures to ensure compliance. The permittee shall employ best available control measures on all paved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee shall treat the paved roadways and parking areas by watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing additional or alternative control measures to ensure compliance.

e. The permittee shall employ best available control measures on the unpaved shoulders of all paved roadways for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee shall treat the unpaved shoulders of all paved roadways with water at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing additional or alternative control measures to ensure compliance.

f. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for a

paved roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

g. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.

h. Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform inspections of the paved roadways and parking areas in accordance with the following frequencies:

paved roadways	minimum inspection frequency
All	Daily
paved parking areas	minimum inspection frequency
All	Daily

The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

(2) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and,

d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in d)(2)d. shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

(1) The permittee shall submit deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and,

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

PE shall not exceed 1.08 TPY as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the vehicle miles traveled (VMT) per year for the average vehicle fleet weight times the 0.62 pound/VMT emission factor and divide by 2,000 pounds/ton.

The particulate emission factors were calculated using AP-42 Section 13.2.1, Equation (2), dated 11/06.

b. Emission Limitation:

There shall be no visible particulate emissions except for 1 minute during any 60-minute period.

Applicable Compliance Method:

Compliance with the visible emission limitation for the paved roadways and/or parking areas identified in this permit shall be determined in accordance with U.S. EPA Method 22 and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

c. Emission Limitation:

PM10 emissions shall not exceed 0.21 TPY as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated multiplying the vehicle miles traveled (VMT) per year for the average vehicle fleet weight times the 0.121 pound/VMT emission factor times and divide by 2,000 pounds/ton.

The particulate emission factors were calculated using AP-42 Section 13.2.1, Equation (2), dated 11/06.

d. Emission Limitation:

Filterable PM2.5 emissions shall not exceed 0.05 TPY as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated multiplying the vehicle miles traveled (VMT) per year for the average vehicle fleet weight times the 0.03 pound/VMT emission factor times and divide by 2,000 pounds/ton.

The particulate emission factors were calculated using AP-42 Section 13.2.1, Equation (2), dated 11/06.

g) Miscellaneous Requirements

(1) None.

2. F002, Storage Piles

Operations, Property and/or Equipment Description:

Coal and Coke Storage Piles

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-10 through 20	Particulate emissions (PE) from wind erosion at coal and coke piles and load-in and load-out at coal and coke piles shall not exceed 7.51 ton per year (TPY) as a rolling 12-month summation. Particulate matter emissions with a diameter of 10 microns and less (PM10) shall not exceed 3.64 TPY (filterable PM10) as a rolling 12-month summation. There shall be no visible particulate emissions except for 1 minute during any 60-minute period. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-08(B) and 40 CFR 60 Subpart Y.
b.	OAC rule 3745-31-21 through 27	Particulate matter emissions with a diameter of 2.5 microns and less (PM2.5) shall not exceed 1.29 TPY (filterable PM2.5) as a rolling 12-month summation. There shall be no visible particulate emissions except for 1 minute during any 60-minute period. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-08(B) and 40 CFR 60

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Subpart Y.
c.	OAC rule 3745-17-07(B)	The particulate emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-17-08(B).
d.	OAC rule 3745-17-08(B)	See b)(2)c. through b)(2)f.
e.	OAC rule 3745-31-05(A)(3)	See b)(2)g.
f.	40 CFR 60 Subpart Y	See b)(2)h.

(2) Additional Terms and Conditions

a. The storage piles that are covered by this permit and subject to the requirements of OAC rule 3745-31-10 are listed below:

coal storage pile(s)

coke storage pile(s)

b. The permittee has performed a Lowest Achievable Emission Rate (LAER) review for PM2.5. The emission limitations based on the LAER requirements are listed under OAC rules 3745-31-(21) through (27) in b)(1)b. above.

Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the use of a berm for wind reduction, maintaining material in a wet condition, loading material with a radial stacker or stacker conveyor and loading material out with front-end loader as control measures constitutes BACT for this emissions unit. "Maintaining material in a wet condition" does not require the permittee to constantly apply water. The emission limits based on the BACT requirements are listed under OAC rules 3745-31-10 through 3745-31-20 in b)(1)a. above.

c. The permittee shall employ best available control measures on all load-in and load-out operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee shall the following control measures to ensure compliance: fugitive emissions shall be controlled through maintaining the material handled in a moist condition and the application of water as necessary.

d. The above-mentioned control measure(s) shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.

e. The permittee shall employ best available control measures for wind erosion from the surfaces of all storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee shall treat the open coal storage pile with water at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing additional or alternative control measures to ensure compliance.

f. The above-mentioned control measure(s) shall be employed for wind erosion from each pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure(s) shall not be necessary for a storage pile that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.

g. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) are equivalent to the ton per year and visible emissions limitations listed under paragraph b)(1)a and b above.

h. The permittee shall prepare and operate in accordance with a fugitive coal dust emissions control plan that is appropriate for the site conditions as specified in 40 CFR 60.254.

i. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform inspections of each load-in operation at each storage pile in accordance with the following frequencies:

storage pile identification	minimum load-in inspection frequency
All	Daily

(2) Except as otherwise provided in this section, the permittee shall perform inspections of each load-out operation at each storage pile in accordance with the following frequencies:

storage pile identification	minimum load-out inspection frequency
All	Daily

(3) Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile in accordance with the following frequencies:

storage pile identification	minimum wind erosion inspection frequency
All	Daily

(4) No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

(5) The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for load-in and load-out of a storage pile, and wind erosion from the surface of a storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.

(6) If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

(7) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and,

d. on a calendar quarter basis, the total number of days the control measures were implemented and, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).

The information required in d)(7)d. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

(1) The permittee shall submit deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and,

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

(2) The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

PE from wind erosion at coal and coke piles and load-in and load-out at coal and coke piles shall not exceed 7.51 TPY as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by calculating the sum of the following:

i. Coal pile load-in - PE

Multiply the maximum tons of coal handled per year times the 0.0017 pound/ton particulate emission factor and divide by 2,000 pounds per ton. The particulate emission factor calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) and Table 13.2.4-1, dated 11/06.

ii. Coal pile wind erosion - PE

Multiply the maximum area of the coal storage pile, in acres, times the 365, the maximum number of days per year, times the 10.08 pound/day/acre emission factor times the 0.50 assuming a 50% control efficiency for the water sprays and divide by 2,000 pounds per ton. The particulate emission factor was calculated in accordance with AP-40, Section 4, Equation 5. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

ii. Coal pile load-out – PE

Multiply the maximum tons of coal handled per year times the 0.0017 pound/ton emission factor times 0.05 assuming a 95% control efficiency for underpile feed load-out, and divide by 2,000 pounds per ton. The particulate emission factor calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) and Table 13.2.4-1, dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

iv. Coke pile load-in - PE

Multiply the maximum tons of coke handled per year times the 0.0017 pound/ton particulate emission factor and divide by 2,000 pounds per ton. The particulate emission factor calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) and Table 13.2.4-1, dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

V. Coke pile wind erosion - PE

Multiply the maximum area of the coal storage pile, in acres, times the 365, the maximum number of days per year, times the 2.19 pound/day/acre emission factor and divide by 2,000 pounds per ton. The particulate emission factor was calculated in accordance with AP-40, Section 4, Equation 5.

vi. Coke breeze pile wind erosion - PE

Multiply the maximum area of the coal storage pile, in acres, times the 365, the maximum number of days per year, times the 10.74 pound/day/acre emission factor and divide by 2,000 pounds per ton. The particulate emission factor was calculated in accordance with AP-40, Section 4, Equation 5.

vii. Coke pile load-out - PE

Multiply the maximum tons of coal handled per year times the 0.0017 pound/ton emission factor and divide by 2,000 pounds per ton. The particulate emission factor calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) and Table 13.2.4-1, dated 11/06.

b. Emission Limitation:

PM10 emissions from wind erosion at coal and coke piles and load-in and load-out at coal and coke piles shall not exceed 3.64 TPY as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by calculating the sum of the following:

i. Coal pile load-in - PM10

Multiply the maximum tons of coal handled per year times the 0.0008 pound/ton emission factor and divide by 2,000 pounds per ton. The PM10 emission factor is calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) and Table 13.2.4-1, dated 11/06.

ii. Coal pile wind erosion - PM10

Multiply the maximum area of the coal storage pile, in acres, times 365, the maximum number of days per year, times the 5.04 pound/day/acre emission factor times the 0.50 assuming a 50% control efficiency for the

water sprays and divide by 2,000 pounds per ton. The PM_{10} emission factor was calculated in accordance with AP-40, Section 4, Equation 5. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

iii. Coal pile load-out - PM10

Multiply the maximum tons of coal handled per year times the 0.0008 pound/ton emission factor times 0.05 assuming a 95% control efficiency for underpile feed load-out, and divide by 2,000 pounds per ton. The PM_{10} emission factor calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) and Table 13.2.4-1, dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

iv. Coke pile load-in - PM10

Multiply the maximum tons of coal handled per year times the 0.0008 pound/ton particulate emission factor and divide by 2,000 pounds per ton. The particulate emission factor calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) and Table 13.2.4-1, dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

v. Coke pile wind erosion - PM10

Multiply the maximum area of the coal storage pile, in acres, times the 365, the maximum number of days per year, times the 1.10 pound/day/acre emission factor and divide by 2,000 pounds per ton. The particulate emission factor was calculated in accordance with AP-40, Section 4, Equation 5.

vi. Coke breeze pile wind erosion - PM10

Multiply the maximum area of the coal storage pile, in acres, times the 365, the maximum number of days per year, times the 5.37 pound/day/acre emission factor and divide by 2,000 pounds per ton. The particulate emission factor was calculated in accordance with AP-40, Section 4, Equation 5.

vii. Coke pile load-out - PM10

Multiply the maximum tons of coal handled per year times the 0.0008 pound/ton emission factor and divide by 2,000 pounds per ton. The particulate emission factor calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) and Table 13.2.4-1, dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

c. Emission Limitation:

Filterable PM2.5 emissions from wind erosion at coal and coke piles and load-in and load-out at coal and coke piles shall not exceed 1.29 TPY as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by calculating the sum of the following:

i. Coal pile load-in - PM2.5

Multiply the maximum tons of coal handled per year times the 0.00025 pound/ton emission factor and divide by 2,000 pounds per ton. The PM2.5 emission factor is calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) and Table 13.2.4-1, dated 11/06.

ii. Coal pile wind erosion – PM2.5

Multiply the maximum area of the coal storage pile, in acres, times 365, the maximum number of days per year, times the 2.02 pound/day/acre emission factor times the 0.50 assuming a 50% control efficiency for the water sprays and divide by 2,000 pounds per ton. The PM2.5 emission factor was calculated in accordance with AP-40, Section 4, Equation 5. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

iii. Coal pile load-out – PM2.5

Multiply the maximum tons of coal handled per year times the 0.00025 pound/ton emission factor times 0.05 assuming a 95% control efficiency for underpile feed load-out, and divide by 2,000 pounds per ton. The $PM_{2.5}$ emission factor calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) and Table 13.2.4-1, dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

iv. Coke pile load-in - PM2.5

Multiply the maximum tons of coal handled per year times the 0.00025 pound/ton particulate emission factor and divide by 2,000 pounds per ton. The particulate emission factor calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) and Table 13.2.4-1, dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

v. Coke pile wind erosion - PM2.5

Multiply the maximum area of the coal storage pile, in acres, times the 365, the maximum number of days per year, times the 0.44 pound/day/acre emission factor and divide by 2,000 pounds per ton. The particulate emission factor was calculated in accordance with AP-40, Section 4, Equation 5.

vi. Coke breeze pile wind erosion - PM2.5

Multiply the maximum area of the coal storage pile, in acres, times the 365, the maximum number of days per year, times the 2.15 pound/day/acre emission factor and divide by 2,000 pounds per ton. The

particulate emission factor was calculated in accordance with AP-40, Section 4, Equation 5.

vii. Coke pile load-out - PM2.5

Multiply the maximum tons of coal handled per year times the 0.00025 pound/ton emission factor and divide by 2,000 pounds per ton. The particulate emission factor calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) and Table 13.2.4-1, dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

d. Emission Limitation:

There shall be no visible emissions except for 1 minute in any hour from coal or coke storage piles.

Applicable Compliance Method:

Compliance with the visible emission limitation for the material storage piles areas identified in this permit shall be determined in accordance with U.S. EPA Method 22 and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

(1) None.

3. F003, Coal Handling

Operations, Property and/or Equipment Description:

Coal Handling, Processing and Transfer

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 20	Particulate emissions (PE) that are fugitive shall not exceed 3.47 tons per year (TPY) as a rolling, 12-month summation. Particulate emissions (PE) from this source shall not exceed 4.6 lbs per hour (lb/hr). Filterable particulate matter emissions with a diameter of 10 microns and less (PM10) that are fugitive shall not exceed 1.67 TPY as a rolling, 12-month summation. Visible particulate emissions that are fugitive shall not exceed 10% opacity, as a 3-minute average. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-08(B). See c)(1).
b.	OAC rules 3745-31-21 through 27	Filterable particulate emissions with a diameter of 2.5 microns and less (PM2.5) that are fugitive shall not exceed 0.52 TPY as a rolling, 12-month summation. Visible particulate emissions that are

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		fugitive shall not exceed 10% opacity, as a 3-minute average. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-08(B). See c)(1).
c.	OAC rule 3745-17-07(B)(1)	The particulate emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-17-08(B), OAC rules 3745-31-21 through 27.
d.	OAC rule 3745-17-08(B)	Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See b)(2)d. and b)(2)e.
e.	40 CFR Part 60, Subpart Y	The visible emission limitation for fugitive particulate emissions specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-17-08(B), OAC rules 3745-31-10 through 20 and OAC rules 3745-31-21 through 27.
f.	OAC rule 3745-31-05(A)(3)	See b)(2)h.

(2) Additional Terms and Conditions

a. The material handling operation(s) that are covered by this permit and subject to the above-mentioned requirements are listed below:

coal unloading via rail car bottom dumping

coal conveying via enclosed belt conveyor

coal transfer via enclosed belt conveyor to belt conveyor

coal crushing.

b. The permittee has performed a Lowest Achievable Emission Rate (LAER) review for PM2.5. The emission limitations based on the LAER requirements are listed under OAC rules 3745-31-(21) through (27) in b)(1)b. above. It has been determined that enclosure and wet suppression control measures constitute LAER for coal unloading in this emissions unit, enclosure and wet suppression constitute LAER for coal transfer by conveyor and enclosure and wet material constitute LAER for coal crushing.

c. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that enclosure and wet suppression control measures constitute BACT for coal unloading in this emissions unit, enclosure and wet suppression constitute BACT for coal transfer by conveyor and enclosure and wet material constitute BACT for coal crushing. The emission limits based on the BACT requirements are listed under OAC rules 3745-31-10 through 3745-31-20 in b)(1)a. above.

d. The permittee shall employ best available control measures for the above-identified material handling operation(s) for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee shall perform the following control measure(s) to ensure compliance:

material handling operation(s)	control measure(s)
rail car bottom dumping	partial enclosure and wet material
enclosed belt conveyors and transfer points (9)	total enclosure and wet material
unenclosed belt conveyors and transfer points (6)	wet material
coal crushing	total enclosure and wet material

Nothing in this paragraph shall prohibit the permittee from employing additional or alternative control measures to ensure compliance. All conveyors shall be totally enclosed except at points where safety related concerns are present. The permittee shall apply water in sufficient volume and frequency to maintain these operations in compliance with the opacity limitation in b)(1).

e. For each material handling operation that is not adequately enclosed to eliminate visible emissions, the above-identified control measure(s) shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during the operation of the material handling operation(s) until further observation confirms that the use of the control measure(s) is unnecessary.

f. Compliance with the emission limitations in b) and implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rules 3745-31-10 through 20 and OAC rules 3745-31-21 through 27.

g. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

h. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) are equivalent to the pound per hour, ton per year and visible emissions limitations listed under paragraph b)(1)a and b above.

c) Operational Restrictions

(1) The maximum annual wet coal usage rate for this emissions unit shall not exceed 912,500 based upon a rolling, 12-month summation of the wet coal usage rates.

To ensure enforceability during the first 12 calendar months of operation, the permittee shall not exceed the wet coal usage levels specified in the following table:

Month	Maximum Allowable Cumulative Production
1	77,500
1-2	152,083
1-3	228,125
1-4	304,167
1-5	380,208
1-6	456,250
1-7	532,292
1-8	608,333
1-9	684,375
1-10	760,417
1-11	836,458
1-12	912,500

After the first 12 calendar months of operation, compliance with the annual wet coal usage rate limitation shall be based upon a rolling, 12-month summation of the wet coal usage rates.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information

a. The wet coal usage rate for each month.

b. Beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the wet coal usage rates.

Also, during the first 12 calendar months of operation, the permittee shall record the cumulative wet coal usage rate for each calendar month.

(2) Except as otherwise provided in this section, for material handling operations that are not totally enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

material handling operation(s)	minimum inspection frequency
unenclosed transfer conveyors	daily
railcar bottom dump	daily

The above-mentioned inspections shall be performed during representative, normal operating conditions.

(3) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measure(s);

c. the dates the control measure(s) was (were) implemented; and,

d. on a calendar quarter basis, the total number of days the control measure(s) was (were) implemented.

The information in d)(3)d. shall be kept separately for each material handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

(1) Pursuant to the NSPS, the permittee is hereby advised of the requirement to report the following at the appropriate times:

Construction date (no later than 30 days after such date);

Actual start-up date (within 15 days of such date); and

Date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Hamilton County Department of Environmental Services

250 William Howard Taft Road

Cincinnati, Ohio 45219

(2) The permittee shall submit deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency; and

b. each instance when a control measure, that was to be performed as a result of an inspection, was not implemented.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

PE that are fugitive shall not exceed 4.6 lbs/hour nor 3.47 tpy as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by calculating the sum of the following:

i. Coal railcar unloading:

Multiply the maximum tons of coal processed per hour or unloaded per year, times the 0.0017 pound/ton emission factor times 0.10, assuming a 90% control efficiency for wet suppression and partial enclosure, and divide by 2,000 pounds per ton. The particulate emission factor was calculated from AP-42, Section 13.2.4, Equation (1) dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

ii. Coal transfer points with enclosure and wet suppression:

Multiply the maximum tons of coal processed per hour or handled per year, times the number of transfer points, times the 0.0017 pound/ton emission factor times 0.05, assuming a 95% control efficiency for totally enclosed transfer points and wet suppression, and divide by 2,000 pounds per ton. The particulate emission factor was calculated from AP-42, Section 13.2.4 Equation (1) dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

iii. Unenclosed coal transfer points:

Multiply the maximum tons of coal processed per hour or handled per year, times the number of transfer points, times the 0.0017 pound/ton emission factor times the 50% control efficiency for wet suppression and divide by 2,000 pounds per ton. The particulate emission factor was calculated from AP-42, Section 13.2.4, Equation (1) dated 11/06. The control efficiency was obtained from RACM Table 2.22-3, dated 10/80.

iv. Coal screening/crushing with total enclosure and wet material:

Multiply the maximum tons of coal processed per hour or handled per year times the 0.16 pound/ton emission factor times 0.01, assuming a 99% control efficiency for total enclosure and wet material, and divide by 2,000 pounds per ton. The particulate emission factor was calculated from AP-42, 5th Edition, Section 13.2.4, Equation (1) dated 11/06. The control efficiency was obtained from AP-40 and Ohio RACM.

b. Emission Limitation:

Visible particulate emissions shall not exceed 10% opacity as a 3-minute average

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(3).

The visible emission observations shall be performed at the appropriate non-stack egress points from this emissions unit.

c. Emission Limitation:

PM10 that are fugitive shall not exceed 1.67 TPY as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. Monthly emissions shall be determined by calculating the sum of the following:

i. Coal railcar unloading

Multiply the maximum tons of coal unloaded per month, times the 0.0008 pound/ton emission factor times 0.10, assuming a 90% control efficiency for wet suppression and partial enclosure, and divide by 2,000 pounds per ton. The PM10 emission factor was calculated from AP-42, Section 13.2.4, Equation (1) dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

ii. Coal transfer points with enclosure and wet suppression

Multiply the maximum tons of coal handled per month, times the number of controlled transfer points, times the 0.0008 pound/ton emission factor times 0.05, assuming a 95% control efficiency for totally enclosed transfer points and wet suppression, and divide by 2,000 pounds per ton. The PM10 emission factor was calculated from AP-42 5th Edition, Section 13.2.4, Equation (1) dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

iii. Unenclosed coal transfer points

Multiply the maximum tons of coal handled per month, times the number of uncontrolled transfer points, times the 0.0008 pound/ton emission factor times the 50% control efficiency for wet suppression and divide by 2,000 pounds per ton. The PM10 emission factor was calculated from AP-42, Section 13.2.4, Equation (1) dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

iv. Coal screening/crushing with total enclosure and wet material:

Multiply the maximum tons of coal handled per year times the 0.08 pound/ton emission factor times 0.01, assuming a 99% control efficiency for total enclosure and wet material, and divide by 2,000 pounds per ton. The particulate emission factor was calculated from AP-42, Section 13.2.4, Equation (1) dated 11/06. The control efficiency was obtained from AP-40 and Ohio RACM.

d. Emission Limitation:

PM2.5 that are fugitive shall not exceed 0.52 ton/year as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. Monthly emissions shall be determined by calculating the sum of the following:

i. Coal railcar unloading

Multiply the maximum tons of coal unloaded per month, times the 0.00025 pound/ton emission factor times 0.10, assuming a 90% control efficiency for wet suppression and partial enclosure, and divide by 2,000 pounds per ton. The PM2.5 emission factor was calculated from AP-42, Section 13.2.4, Equation (1) dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

ii. Coal transfer points with enclosure and wet suppression

Multiply the maximum tons of coal handled per month, times the number of controlled transfer points, times the 0.00025 pound/ton emission factor times 0.05, assuming a 95% control efficiency for totally enclosed transfer points and wet suppression, and divide by 2,000 pounds per ton. The PM2.5 emission factor was calculated from AP-42, 5th Edition, Section 13.2.4, Equation (1) dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

iii. Unenclosed coal transfer points

Multiply the maximum tons of coal handled per month, times the number of uncontrolled transfer points, times the 0.00025 pound/ton emission

factor times the 50% control efficiency for wet suppression and divide by 2,000 pounds per ton. The PM2.5 emission factor was calculated from AP-42, Section 13.2.4, Equation (1) dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

iv. Coal screening/crushing with total enclosure and wet material:

Multiply the maximum tons of coal handled per year, times the 0.024 pound/ton emission factor times 0.01, assuming a 99% control efficiency for total enclosure and wet material, and divide by 2,000 pounds per ton. The particulate emission factor was calculated from AP-42, Section 13.2.4, Equation (1) dated 11/06. The control efficiency was obtained from AP-40 and Ohio RACM.

(2) Compliance with the requirements of c)(1) shall be demonstrated by the monitoring and record keeping required in d)(1).

g) Miscellaneous Requirements

(1) None.

4. F004, Coke Handling

Operations, Property and/or Equipment Description:

Coke and breeze handling and processing

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 20	Particulate emissions (PE) and filterable particulate matter emissions with a diameter of 10 microns and less (PM10) from the crushing/screening baghouse shall not exceed 3.43 pounds per hour. Particulate emissions and filterable particulate matter emissions with a diameter of 10 microns and less (PM10) from the crushing/screening baghouse shall not exceed 0.008 grain per dry standard cubic foot of exhaust gases. PE from the coke and breeze handling and processing shall not exceed 18.6 TPY as a rolling, 12-month summation. Filterable particulate matter emissions with a diameter of 10 microns and less (PM10) from the coke and breeze handling and processing shall not exceed 16.71 TPY as a rolling, 12-month summation. Visible particulate emissions of fugitive dust from this emissions unit shall not exceed 10% opacity as a 3-minute average. Visible particulate emissions from any stack shall not exceed 20% opacity as a

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		6-minute average, except as provided by rule. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-07(B) and OAC rule 3745-17-08(B).
b.	OAC rules 3745-31-21 through 27	Filterable particulate matter emissions with a diameter of 2.5 microns and less (PM2.5) from the crushing/screening baghouse shall not exceed 3.43 pounds per hour. Filterable particulate matter emissions with a diameter of 2.5 microns and less (PM2.5) from the crushing/screening baghouse shall not exceed 0.008 grain per dry standard cubic foot of exhaust gases. Visible particulate emissions of fugitive dust from this emissions unit shall not exceed 10% opacity as a 3-minute average. Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule. Filterable particulate matter emissions with a diameter of 2.5 microns and less (PM2.5) from the coke and breeze handling and processing shall not exceed 15.55 TPY as a rolling, 12-month summation. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-07(B) and OAC rule 3745-17-08(B).
c.	OAC rule 3745-17-07(A)	The particulate emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-17-08(B).
d.	OAC rule 3745-17-07(B)(1)	The particulate emission limitation required by this applicable rule is less

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		stringent than the emission limitation established pursuant to OAC rule 3745-17-08(B).
e.	OAC rule 3745-17-08(B)	Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See b)(2)b. through b)(2)d. and b)(2)f.
f.	OAC rule 3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 20, OAC rules 3745-31-21 through 27 and OAC rule 3745-17-08(B).

(2) Additional Terms and Conditions

a. The material handling operation(s) that are covered by this permit and subject to the above-mentioned requirements are listed below:

coke conveying - enclosed

coke conveying - unenclosed

coke breeze silo

crushing/screening baghouse

coke loading – railcars and/or trucks

b. The permittee has performed a Lowest Achievable Emission Rate (LAER) review for PM2.5. The emission limitations based on the LAER requirements are listed under OAC rules 3745-31-(21) through (27) in b)(1)b. above. It has been determined that enclosure and wet suppression control measures constitute LAER for coke being transferred by belt conveyor at this emissions unit and enclosure and fabric filter control measures constitute LAER for coke screening and crushing.

c. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that enclosure and wet suppression control measures constitute BACT for coke being transferred by belt conveyor at this emissions unit and enclosure and fabric filter control measures constitute BACT for coke screening and crushing. The emission limits based on the BACT requirements are listed under OAC rules 3745-31-10 through 3745-31-20 in b)(1)a. above.

d. The permittee shall employ best available control measures for the above-identified material handling operation(s) for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the

permittee's permit application, the permittee shall perform the following control measure(s) to ensure compliance:

Material handling operation(s)	Control measure(s)
coke crushing/screening	fabric filter
coke conveying – enclosed	enclosure, wet material
coke conveying – partially enclosed	enclosure, dry material
coke conveying - unenclosed	wet material
coke breeze silo	enclosure, wet material
coke loading of railcars and trucks (alternative to conveyor transport)	wet material

Nothing in this paragraph shall prohibit the permittee from employing additional or alternative control measures to ensure compliance.

e. For each material handling operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during the operation of the material handling operation(s) until further observation confirms that the use of the control measure(s) is unnecessary.

Compliance with the emission limitations in section b) and implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rules 3745-31-10 through 20 and OAC rules 3745-31-21 through 27 and the requirements OAC rule 3745-31-05(A)(3).

f. All coke transfer conveyors shall be fully enclosed except at points where safety concerns are present.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly install, operate and maintain equipment to continuously monitor the pressure drop, in inches of water, across the coke crushing/screening baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the coke crushing/screening baghouse once per each shift of operation. The monitoring

equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s).

Whenever the monitored value for the pressure drop deviates from the limit or range specified in this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

a. a description of the corrective action;

b. the date corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the pressure drop readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The range or limit of 3 to 12 inches of water on the pressure drop across the coke crushing/screening baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

Except as otherwise provided in this section, for material handling operations that are not adequately enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

Material-handling operation(s)	Minimum inspection frequency
coke loading of railcars and trucks	daily
coke conveying via belt conveyors	daily
coke transfer points (belt conveyor to belt conveyor and crusher to belt conveyor)	daily

The above-mentioned inspections shall be performed during representative, normal operating conditions.

If the daily checks show emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

(2) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measure(s);

c. the dates the control measure(s) was (were) implemented; and,

d. on a calendar quarter basis, the total number of days the control measure(s) was (were) implemented.

The information in d)(2)d. shall be kept separately for each material handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

(1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the coke crushing/screening baghouse during the operation of the emissions unit(s):

a. each period of time when the pressure drop across the baghouse was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;

b. an identification of each incident of deviation described in "a" (above) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s).

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

(2) The permittee shall submit deviation reports that identify any of the following occurrences:

a. each day during which an inspection was not performed by the required frequency; and,

b. each instance when a control measure, that was to be performed as a result of an inspection, was not implemented.

These deviation (excursion) reports are due by the dates described in the Standard Terms and Conditions of this permit.

f) Testing Requirements

(1) Emission testing requirements

The permittee shall conduct, or have conducted, emission testing for the crushing/screening baghouse in accordance with the following requirements:

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after initial startup of the emissions unit.

b. The emission testing shall be conducted to demonstrate compliance with the PE limits.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulates, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio

EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

(2) Compliance with the emission limitation(s) in b) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

PE/PM10/PM2.5 emissions from the crushing/screening baghouse shall not exceed 3.43 pounds per hour.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures and methods required in OAC rule 3745-17-03(B)(10).

The 3.43 pound per hour limit for PE was determined by multiplying the emission factor (grain loading) of 0.008 gr/dscf times 1 pound divided by 7000 grains times airflow of 50,000 scfm times 60 minutes per hour. The emission factor for PE was used as a surrogate for PM10 and PM2.5 where PM10 and PM2.5 factors were not available. The 0.008 gr/dscf emissions factor for PE is a controlled emissions factor provided as an engineering estimate by the permittee.

b. Emission Limitation:

PE shall not exceed 18.6 TPY as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by calculating the sum of the following:

i. Totally enclosed coke transfer points

Multiply the maximum tons of coke handled per year per each conveyor times the 0.00169 pound/ton emission factor times 0.05, assuming a 95% control efficiency for the full enclosures and wet material, and divide by 2,000 pounds per ton.

The particulate emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

ii. Partially enclosed coke transfer points and coke loadout / wet material

Multiply the maximum tons of coke handled per year per each transfer point times the 0.00169 pound/ton emission factor times 0.15 assuming 85% control efficiency for the partial enclosures and wet material and divide by 2,000 pounds per ton. The particulate emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06.

iii. Partially enclosed coke transfer points / dry material

Multiply the maximum tons of coke handled per year per each transfer point times the 0.00169 pound/ton emission factor times 0.5 assuming 50% control efficiency for the partial enclosure and divide by 2,000 pounds per ton. The particulate emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06.

iv. Unenclosed coke transfer points / dry material

Multiply the maximum tons of coke handled per year times the 0.00169 pound/ton emission factor and divide by 2,000 pounds per ton. The particulate emission factor was calculated from AP-42 5th, Section 13.2.4, Equation (1), dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

v. Coke breeze silo / partially enclosed bunker

Multiply the maximum tons of coke breeze handled per year times 2, the number of transfer points (load-out and load-in), times the 0.00169 pound/ton emission factor times 0.15, assuming an 85% control efficiency for the partial enclosure and wet material, and divide by 2,000 pounds per ton. The particulate emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

vi. Crushing/screening baghouse

An emission rate, in terms of pounds per ton of coke shall be calculated from the hourly rate of particulate emissions determined in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures and methods required in OAC rule 3745-17-03(B)(10). Multiply the emission rate in pounds per ton times the throughput, in tons, and divide by 2,000 pounds per ton.

c. Emission limitation:

Visible particulate emissions of fugitive dust from this emissions unit shall not exceed 10% opacity as a 3-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(3).

d. Emission Limitation:

Visible particulate emissions from the crushing/screening baghouse shall not exceed 20% opacity as a 6-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(1).

e. Emission Limitation:

PE from the crushing/screening baghouse shall not exceed 0.008 grain per dry standard cubic foot of exhaust gases.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures and methods required in OAC rule 3745-17-03(B)(10).

Note: PE was used as a surrogate for PM10 and PM2.5 for purposes of compliance with both the PM10 and PM2.5 fractions of PE.

f. Emission Limitation:

PM10 shall not exceed 16.71 TPY as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. Monthly emissions shall be determined by calculating the sum of the following:

i. Totally enclosed coke transfer points

Multiply the maximum tons of coke handled per year per each conveyor times the 0.0008 pound/ton emission factor times 0.05, assuming a 95% control efficiency for complete enclosure and wet material, and divide by 2,000 pounds per ton.

The PM_{10} emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

ii. Partially enclosed coke transfer points and coke loadout / wet material

Multiply the maximum tons of coke handled per year per each transfer point times the 0.0008 pound/ton emission factor times 0.15 assuming 85% control efficiency for the partial enclosures and wet material and divide by 2,000 pounds per ton. The PM10 emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06.

iii. Partially enclosed coke transfer points / dry material

Multiply the maximum tons of coke handled per year per each transfer point times the 0.0008 pound/ton emission factor times 0.5 assuming 50% control efficiency and divide by 2,000 pounds per ton. The PM10 emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06.

iv. Unenclosed coke transfer points / dry material

Multiply the maximum tons of coke handled per year times the 0.0008 pound/ton emission factor and divide by 2,000 pounds per ton. The PM10 emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

v. Coke breeze silo / partially enclosed bunker

Multiply the maximum tons of coke breeze handled per year times 2, the number of transfer points (load-out and load-in), times the 0.0008 pound/ton emission factor times 0.15, assuming a 85% control efficiency for partial enclosure and wet material, and divide by 2,000 pounds per ton. The PM10 emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

vi. Crushing/screening baghouse

The emission factor for PE was used as a surrogate for PM10 and PM2.5 where PM10 and PM2.5 factors were not available. An emission rate, in terms of pounds per ton of coke shall be calculated from the hourly rate of particulate emissions determined in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures and methods required in OAC rule 3745-17-03(B)(10). Multiply the emission rate in pounds per ton times the throughput, in tons, and divide by 2,000 pounds per ton.

g. Emission Limitation:

PM2.5 shall not exceed 15.55 TPY as a rolling, 12-month summation

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. Monthly emissions shall be determined by calculating the sum of the following:

i. Totally enclosed coke transfer points

Multiply the maximum tons of coke handled per year per each conveyor times the 0.00025 pound/ton emission factor times 0.05, assuming a 95% control efficiency for total enclosure and wet material, and divide by 2,000 pounds per ton.

The PM2.5 emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

ii. Partially enclosed coke transfer points and coke loadout / wet material

Multiply the maximum tons of coke handled per year per each transfer point times the 0.00025 pound/ton emission factor times 0.15 assuming 85% control efficiency for the partial enclosures and wet material and divide by 2,000 pounds per ton. The PM2.5 emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06.

iii. Partially enclosed coke transfer points / dry material

Multiply the maximum tons of coke handled per year per each transfer point times the 0.00025 pound/ton emission factor times 0.5 assuming 50% control efficiency for the partial enclosures and wet material and divide by 2,000 pounds per ton. The PM2.5 emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06.

iv. Unenclosed coke transfer points / dry material

Multiply the maximum tons of coke handled per year times the 0.00025 pound/ton emission factor and divide by 2,000 pounds per ton. The PM2.5 emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

v. Coke breeze silo / partially enclosed bunker

Multiply the maximum tons of coke breeze handled per year times 2, the number of transfer points (load-out and load-in), times the 0.00025 pound/ton emission factor times 0.15, assuming an 85% control efficiency for partial enclosure and wet material, and divide by 2,000 pounds per ton. The PM2.5 emission factor was calculated from AP-42, Section 13.2.4, Equation (1), dated 11/06. The control efficiency was obtained from RACM, Table 2.2.1-2, dated 10/80.

vi. Crushing/screening baghouse

The emission factor for PE was used as a surrogate for PM10 and PM2.5 where PM10 and PM2.5 factors were not available. An emission rate, in terms of pounds per ton of coke shall be calculated from the hourly rate of particulate emissions determined in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 through 5 and the

procedures and methods required in OAC rule 3745-17-03(B)(10). Multiply the emission rate in pounds per ton times the throughput, in tons, and divide by 2,000 pounds per ton.

g) Miscellaneous Requirements

(1) None.

5. P001, Quench Tower

Operations, Property and/or Equipment Description:

Quench Tower

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rules 3745-31-10 through 20	Filterable particulate emissions (PE) from this emissions unit shall not exceed 0.12 pound per ton of coal charged, 60 pounds per hour and 54.75 tons per year as a rolling, 12-month summation. Filterable particulate matter emissions 10 microns and less in diameter (PM10) from this emissions unit shall not exceed 0.044 pound per ton of coal charged, 22.0 pounds per hour and 20.08 tons per year as a rolling, 12-month summation. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 3745-17-07(B)(1), and 40 CFR Part 63, Subpart CCCCC.
b.	OAC rules 3745-31-21 through 27	Filterable particulate matter emissions 2.5 microns and less in diameter (PM2.5) from this emissions unit shall not exceed 0.027 pound per ton of coal charged, 13.5 pounds per hour and 12.32 tons per year as a rolling, 12-month summation. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 3745-17-07(B)(1), and 40 CFR Part 63, Subpart CCCCC.
c.	OAC rule 3745-31-05(A)(3)	Hazardous Air Pollutant (HAP) emissions

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		(excluding HCl) from emissions units P001 and P901 shall not exceed 3.6 tons per year. HCl emissions from emissions units P001 and P901 shall not exceed 118.04 tons per year. See b)(2)b. The requirements of this rule include compliance with OAC rules 3745-31-10 through 20 and OAC rules 3745-31-21 through 27, OAC rule 3745-17-07(A)(1) and OAC rule 3745-17-07(B)(1) and 40 CFR Part 63, Subpart CCCCC.
d.	OAC rule 3745-17-07(A)(1)	Visible particulate stack emissions from this emissions unit shall not exceed 20 per cent opacity as a 6 minute average.
e.	40 CFR Part 63, Subpart CCCCC	See b)(2)a. below.
f.	40 CFR 63.1-15 (40 CFR 63.7350)	Table 1 to Subpart CCCCC of 40 CFR Part 63 - Applicability of General Provisions to Subpart CCCCC shows which parts of the General Provisions in 40 CFR 63.1-15 apply.
g.	OAC rule 3745-17-07(B)(1)	Visible particulate fugitive emissions from this emissions unit shall not exceed 20 per cent opacity as a 3 minute average.
h.	OAC rule 3745-31-05(E)	Lead emissions shall not exceed 0.28 ton per year as a rolling 12-month summation for emissions units P001 and P901 combined.

(2) Additional Terms and Conditions

a. The concentration of total dissolved solids (TDS) in the water used for quenching shall not exceed 1,100 milligrams per liter (mg/L).

[40 CFR 63.7295 (a)(1)(i) or (ii)]

b. Compliance with OAC rule 3745-31-05(A)(3), shall be demonstrated by a TDS concentration limit of 1100 mg/L and the operation and maintenance of an interior baffle system with baffle plates which allow no more than 5 per cent of the cross sectional area of the tower to be uncovered or open to the sky.

c. The permittee has performed a Lowest Achievable Emission Rate (LAER) review for PM2.5. The emission limitations based on the LAER requirements are listed

under OAC rules 3745-31-(21) thru (27) in b)(1)b. above. It has been determined that a wet system with baffled tower, including improved baffle design, and water with controlled TDS as control measures constitute LAER for coke quenching.

d. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that a wet system with baffled tower, including improved baffle design, and water with controlled TDS as control measures constitute BACT for coke quenching. The emission limits based on the BACT requirements are listed under OAC rules 3745-31-10 through 3745-31-20 in b)(1)a. above.

e. These hourly emission limitations were established for permit-to-install (PTI) purposes to reflect potential to emit for this emissions unit based upon the maximum tons of wet coal charged per hour.

f. The throughput from this emission unit is limited by the coke throughput limitation on emission unit P901.

c) Operational Restrictions

(1) See 40 CFR Part 63, Subpart CCCCC (40 CFR 63.7280-7352).

d) Monitoring and/or Recordkeeping Requirements

(1) See 40 CFR Part 63, Subpart CCCCC (40 CFR 63.7280 -7352).

(2) The permittee shall maintain monthly records of the following information:

a. the wet coal usage rate for each month; and,

b. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the wet coal usage rates.

c. the rolling, 12-month summation of the PE, PM10, PM2.5 and lead emissions for this emissions unit.

Also, during the first 12 calendar months of operation, the permittee shall record the cumulative wet coal usage rate for each calendar month.

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports which identify all exceedances of any of the 54.75 tons per year of PE, the 20.08 tons per year of PM10, the 12.32 tons per year of PM2.5 and the 0.28 ton per year of lead from P001 and P901 combined, as a rolling, 12-month summation emission limitations.

(2) These reports are due by the date described in the Standard Terms and Conditions of this permit.

(3) See 40 CFR Part 63, Subpart CCCCC (40 CFR 63.7280 -7352).

(4) The permittee shall submit semiannual written reports that (a) identify all days during which visible emissions from the egress points (i.e. building windows, doors, roof

monitors, etc.) serving this emissions unit exceeded the allowable emission rate specified in b)(1)g. of this permit, and (b) describe any corrective actions taken to minimize or eliminate visible emissions.

f) Testing Requirements

(1) Compliance with the emission limitation(s) in b) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

Hazardous Air Pollutant (HAP) emissions for emissions units P001 and P901 shall not exceed 121.7 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated by calculating the sum of i through iv below:

i. Coking emission control system - Main Stack:

Compliance shall be demonstrated by multiplying the summation of the individual HAP pollutant pound per ton emission factors [Table 12.2-20 of AP-42 Section 12.2 dated May 2008] by the maximum annual coal charge rate divided by 2000 lbs/ton. Metals are then multiplied by 5% to reflect the 95% control efficiency of the main stack spray dryer except for mercury. Testing of the main stack spray dryer will determine the mercury control efficiency of the main stack spray dryer.

ii. Pushing Stack:

Compliance shall be determined by multiplying the emission factor of 0.00024 lb total combined HAPs/wet ton coal charged, multiplying the emission factor of each of the following: 0.00021 lb Benzene Soluble Compounds (BSO)/wet ton coal charged, 0.000012 lb Arsenic/wet ton coal charged, 0.000015 lb lead/wet ton coal charged, and 0.0000021 lb manganese/wet ton coal charged by the wet tons of coal charged per year divided by 2000 lbs per ton. Emissions factors are from October 1989 Jewell Stack Test except for lead obtained from AP-42, table 12.2-10 dated May 2008.

iii. Charging control system-baghouse stack: Compliance shall be demonstrated by multiplying the emission factor, in pounds/ton, times the maximum tons of coal charged per year, divided by 2,000 pounds/ton. The HAPs emission factor was obtained from AP-42, Section 12.2, Table 12.2-21, dated May 2008.

iv. Quench Tower: Compliance shall be determined by multiplying the summation of the HAP emission factor, in pounds/ton, times the wet tons of coal charged per year, and divide by 2000 pounds/ton. The HAPs emission factor shall be calculated from the results of the most recent quench water analysis which demonstrated compliance.

v. Heat Recovery Steam Generator (HRSG) and Spray Dryer (SD) bypass Stacks: Compliance shall be demonstrated by multiplying the summation of the individual HAP pollutant pound per ton emission factors [Table 12.2-20 of AP-42 Section 12.2 dated May 2008 and the Haverhill April 2006 stack test for lead] by the tons of coal charged per day multiplied by an estimated percentage of total waste gas venting through the 5 vent stacks divided by 2,000 lbs/ton.

b. Emission Limitation:

PE from this emissions unit shall not exceed 0.12 pound per ton of coal charged and 60 pounds per hour.

Applicable Compliance Method:

The lb/ton emission factor was obtained from AP-42 5th edition, Section 12.2, Table 12.2-12 (the PE emission factor for quenching with baffles and water with a TDS concentration of 1100 mg/L) times (1-0.73) control efficiency for improved baffle design documented by the applicant in the permit application.

Compliance with the pound per hour emission limit shall be demonstrated by multiplying the emission factor of 0.448 lb PE/wet ton coal charged times the maximum wet tons of coal charged per hour. The PE emission factor was obtained from AP-42 5th edition, Section 12.2, Table 12.2-12 (the PE emission factor for quenching with baffles and water with a TDS concentration of 1100 mg/L) times (1-0.73) control efficiency for improved baffle design documented by the applicant in the permit application.

c. Emission Limitation:

PM10 from this emissions unit shall not exceed 0.044 pound per ton of coal charged and 22.0 pounds per hour.

Applicable Compliance Method:

The lb/ton emission factor was obtained from AP-42 5th edition, Section 12.2, Table 12.2-12 (the PM emission factor for quenching with baffles and water with a TDS concentration of 1100 mg/L is 0.448 lb PM/ton of coal charged per AP42 table 12.2-12, 5/2008 and 9.8% of PM is PM10 per AP-42, Table 12.2-4, 1/95).

Compliance with the pound per hour emission limit shall be demonstrated by multiplying the emission factor of 0.0439 lb PM10/wet ton coal charged times the maximum wet tons of coal charged per hour. The PM10 emission factor was obtained from AP-42 5th edition, Section 12.2, Table 12.2-12 (the PM emission factor for quenching with baffles and water with a TDS concentration of 1100 mg/L is 0.448 lb PM/ton of coal charged per AP42 table 12.2-12, 5/2008 and 9.8% of PM is PM10 per AP-42, Table 12.2-4, 1/95).

d. Emission Limitation:

PM2.5 from this emissions unit shall not exceed 0.027 pound per ton of coal charged and 13.5 pounds per hour.

Applicable Compliance Method:

The lb/ton emission factor was obtained from AP-42 5th edition, Section 12.2, Table 12.2-12 (the PM emission factor for quenching with baffles and water with a TDS concentration of 1100 mg/L is 0.448 lb PM/ton of coal charged per AP42 table 12.2-12, 5/2008 and 6% of PM is PM2.5 per AP-42, Table 12.2-4, 1/95).

Compliance shall be demonstrated by multiplying the emission factor of 0.027 lb PM2.5/wet ton coal charged times the maximum wet tons of coal charged per hour. The PM2.5 emission factor was obtained from AP-42 5th edition, Section 12.2, Table 12.2-12 (the PM emission factor for quenching with baffles and water with a TDS concentration of 1100 mg/L is 0.448 lb PM/ton of coal charged per AP42 table 12.2-12, 5/2008 and 6 % of PM is PM2.5 per AP-42, Table 12.2-4, 1/95).

e. Emission Limitation:

PE from this emissions unit shall not exceed 54.75 tons per year as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emission for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the emission factor of 0.448 pound per ton times the maximum wet tons of coal charged per month, and divide by 2,000 pounds/ton.

The PE emission factor was obtained from AP-42 5th edition, Section 12.2, Table 12.2-12 (the PE emission factor for quenching with baffles and water with a TDS concentration of 1100 mg/L) times (1-0.73) control efficiency for improved baffle design documented by the applicant in the permit application.

f. Emission Limitation:

PM10 from this emissions unit shall not exceed 20.08 tons per year as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emission for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the PM10 emission factor of 0.044 pounds/ton coal charged, times the tons of coal charged per month, divided by 2,000 pounds/ton.

The PM10 emission factor was obtained from AP-42 5th edition, Section 12.2, Table 12.2-12 (the PM emission factor for quenching with baffles and water with a TDS concentration of 1100 mg/L is 0.448 lb PM/ton of coal charged per AP42 table 12.2-12, 5/2008 and 9.8% of PM is PM10 per AP-42, Table 12.2-4, 1/95).

g. Emission Limitation:

PM2.5 from this emissions unit shall not exceed 12.32 tons per year as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emission for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the PM2.5 emission factor of 0.027 pound/ton coal charged, times the tons of coal charged per month, divided by 2,000 pounds/ton. The PM2.5 emission factor was obtained from AP-42 5th edition, Section 12.2, Table 12.2-12 (the PM emission factor for quenching with baffles and water with a TDS concentration of 1100 mg/L is 0.448 lb PM/ton of coal charged per AP42 table 12.2-12, 5/2008 and 6 % of PM is PM2.5 per AP-42, Table 12.2-4, 1/95).

h. Emission Limitation:

Visible particulate stack emissions from the quench tower shall not exceed 20 percent opacity as a 6-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9.

i. Emission Limitation:

[40 CFR 63.7295 (a)(1)(i)]

The concentration of total dissolved solids (TDS) in the water used for quenching must not exceed 1,100 milligrams per liter (mg/L).

Applicable Compliance Method:

[40 CFR 63.7325(a)(1)]

Take the quench water sample from a location that provides a representative sample of the quench water as applied to the coke (e.g., from the header that feeds water to the quench tower reservoirs). Conduct sampling under normal and representative operating conditions.

[40 CFR 63.7325(a)(2)]

Determine the TDS concentration of the sample using Method 160.1 in 40 CFR part 136.3 (see 'residue - filterable'), except that you must dry the total filterable residue at 103 to 105 °C (degrees Centigrade) instead of 180 °C.

j. Emission Limitation:

Lead emissions shall not exceed 0.28 ton per year for as a rolling, 12-month summation for emissions units P901 and P001 combined.

Applicable Compliance Method:

Compliance shall be demonstrated by calculating the sum of the following:

i. HRSG bypass stacks and lime spray dryer/baghouse control system main stack

Compliance shall be demonstrated by adding the current month's emissions to the emission for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the lead emission factor, in pounds/ton, times the wet tons of coal charged per month, divided by 2,000 pounds/ton. The lead emission factor shall be calculated from the results of the most recent stack test which demonstrated compliance.

ii. Charging

Compliance shall be demonstrated by adding the current month's emissions to the emission for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the lead emission factor of 0.0000001 pounds/ton, times the wet tons of coal charged per month, divided by 2,000 pounds/ton. The lead emission factor was obtained from AP-42, Section 12.2, Table 12.2-21, revised 7/2007.

iii. Pushing

Compliance shall be demonstrated by adding the current month's emissions to the emission for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the lead emission factor, in pounds/ton, times the wet tons of coal charged per month, divided by 2,000 pounds/ton. The lead emission factor shall be calculated from the results of the most recent stack test which demonstrated compliance.

iv. Quench tower

Compliance shall be demonstrated by adding the current month's emissions to the emission for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the lead emission factor, in pounds/ton, times the wet tons of coal charged per month, divided by 2,000 pounds/ton. The lead emission factor shall be calculated from the results of the most recent water analysis which demonstrated compliance.

k. Emission Limitation:

Visible particulate fugitive emissions shall not exceed 20 percent opacity as a three-minute average.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with U.S. EPA Method 9 and the methods and procedures required in OAC rule 3745-17-03(B)(3).

g) Miscellaneous Requirements

(1) None.

6. P901, Heat Recovery Coke Battery

Operations, Property and/or Equipment Description:

Heat Recovery Coke Battery

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	40 CFR Part 63, Subpart A (40 CFR 63.1-15)	The following citations of the General Provisions of 40 CFR Part 63 apply to operations subject to 40 CFR Part 63 Subpart L: 40 CFR 63.1-6, 63.8, 63.10, and 63.12-15. Table 1 to 40 CFR Part 63 Subpart CCCCC shows which parts of the General Provisions of 40 CFR Part 63 apply to operations subject to 40 CFR Part 63 Subpart CCCCC.
b.	Coal charging operations with baghouse and traveling hood OAC rules 3745-31-10 through 20 (BACT) OAC rule 3745-31-05(A)(3) (these limits are the same as the BACT limits)	Particulate emissions (PE) and filterable particulate matter emissions 10 microns and less in diameter (PM10) shall not exceed 0.0081 pound per ton of dry coal charged, 3.7 pounds per hour and 3.4 tons per year (TPY) as a rolling, 12-month summation from the charging baghouse. Fugitive PE from charging shall not exceed 1.35 pounds per hour and 1.23 TPY as a rolling, 12-month summation. Fugitive PM10 emissions from charging shall not exceed 0.41 pound per hour and 0.37 TPY as a rolling, 12-month summation. Sulfur dioxide (SO2) emissions from the charging baghouse shall not exceed

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		0.0003 pound per ton of coal charged, 0.15 lb/hr and 0.14 TPY as a rolling, 12-month summation. Carbon monoxide (CO) emissions from the charging baghouse shall not exceed 0.0028 pound per ton of coal charged, 1.4 lb/hr and 1.28 TPY as a rolling, 12-month summation. Visible particulate emissions from the charging baghouse stack shall not exceed 10% opacity as a 6-minute average. Visible particulate emissions of fugitive dust from charging operations shall not exceed 20% opacity, as an average of five consecutive charges. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-17-07(B), 3745-17-08(B) and 40 CFR Part 63, Subpart L.
c.	Coal charging operations with baghouse and traveling hood OAC rules 3745-31-21 through 27 (LAER) OAC rule 3745-31-05(A)(3) (these limits are the same as the LAER limits)	Filterable particulate matter emissions 2.5 microns and less in diameter (PM2.5) shall not exceed 0.0081 pound per ton of dry coal charged, 3.7 pounds per hour and 3.4 tons per year (TPY) as a rolling, 12-month summation from the charging baghouse. Fugitive PM2.5 emissions from charging shall not exceed 0.20 pound per hour and 0.18 TPY as a rolling, 12-month summation. Sulfur dioxide (SO2) emissions from the charging baghouse shall not exceed 0.0003 pound per ton of coal charged, 0.15 lb/hr and 0.14 TPY as a rolling, 12-month summation. Visible particulate emissions from the charging baghouse stack shall not exceed 10% opacity as a 6-minute average.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Visible particulate emissions of fugitive dust from charging operations shall not exceed 20% opacity, as an average of five consecutive charges. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-17-07(B), 3745-17-08(B) and 40 CFR Part 63, Subpart L.
d.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-17-07(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-17-08(B)	The permittee shall minimize visible emissions of fugitive dust.
g.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
h.	OAC rule 3745-21-08(B)	See b)(2)f.
i.	40 CFR Part 63, Subpart L (40 CFR 63.300 -313) [In accordance with 40 CFR 63.300(b), this emissions unit is a greenfield coke oven battery subject to the emission limitations/control measures specified in this section.]	Particulate matter (PE) emissions from the charging baghouse stack shall not exceed 0.0081 pound per ton (lbs/ton) of dry coal charged as determined by the procedures in 40 CFR 63.309(k). For each day of operation, the permittee shall implement the work practices specified in 40 CFR 63.306(b)(6) and record the performance of the work practices as required in 40 CFR 63.306(b)(7). Except as provided in 40 CFR 63.304, the permittee shall observe the exhaust stack each charging emissions control device at least once each day of operation during charging to determine if visible emissions are present and shall record the results of each daily observation or the reason why conditions did not permit a daily observation. If any visible emissions are

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		observed, the permittee must following the procedures specified in 40 CFR 63.303(d)(3). The permittee shall develop and implement written procedures for adjusting the oven uptake damper to maximize oven draft during charging and for monitoring the oven damper setting during each charge to ensure that the damper is full open. See b)(2)h through b)(2)j.
j.	Coking operations with heat recovery steam generators and lime spray dryer/baghouse system. These limits are applicable during normal operation (non bypass of the lime spray dryer/baghouse system) and apply to the exhaust from the main stack[1] OAC rules 3745-31-10 through 20 (BACT) OAC rule 3745-31-05(A)(3) (these limits are the same as the BACT limits)	Filterable PM and PM10 shall not exceed 0.0050 gr/dscf, 10.7 pounds per hour and 46.9 TPY as a rolling, 12-month summation. SO2 emissions shall not exceed 300 lbs/hr (based on a 3-hour block average); 192.0 lbs/hr (based on a 24-hour block average); and 700.8 TPY (1.54 lbs of SO2/wet ton of coal) as a rolling, 12-month summation. CO emissions shall not exceed 20 ppm, 21.81 lbs/hr and 95.54 TPY as a rolling, 12-month summation. NOx emissions shall not exceed 1 pound per ton of coal, 104.2 lbs./hr and 456.25 TPY as a rolling, 12-month summation. The annual emission limitation shall include NOx emissions from the main stack after passing through the lime spray dryer/fabric filter and during maintenance of the lime spray dryer/fabric filter, combined. Sulfuric acid mist (H2SO4) emissions shall not exceed 0.024 pound per ton of coal, 2.5 lbs/hr and 11.13 TPY as a rolling 12-month summation. Visible particulate emissions from the

[1] The "main stack" is the lime spray dryer/baghouse main stack. During normal operations the emissions have been controlled by the lime spray dryer/baghouse system. During maintenance of the lime spray dryer/baghouse system, the lime spray dryer/baghouse system is bypassed, but a portion of the exhaust is still routed to the "main stack".

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		main stack shall not exceed 10% opacity as a 6-minute average. No visible emissions shall be permitted from the common battery tunnel or its associated piping. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-08(B), 40 CFR Part 63, Subparts L and CCCCC. See b)(2)b through b)(2)e, b)(2)n, b)(2)p, b)(2)q, and c)(1) through c)(13).
k.	Coking operations with heat recovery steam generators and bypassing of the lime spray dryer/baghouse system. These limits are applicable during bypass of the lime spray dryer/baghouse system and apply to the exhaust from the main stack and the HRSG bypass stacks. OAC rules 3745-31-10 through 20 (BACT) OAC rule 3745-31-05(A)(3) (these limits are the same as the BACT limits)	Filterable PM and PM10 shall not exceed 0.049 gr/dscf and 6.3 TPY as a rolling, 12-month summation from the main stack when the lime spray dryer/baghouse is bypassed. SO2 emissions shall not exceed 1794 lb/hour and 107.64 TPY as a rolling, 12-month summation when the lime spray dryer/baghouse is bypassed. CO emissions shall not exceed 20 ppm and 1.31 TPY as a rolling, 12-month summation from the main stack when the lime spray dryer/baghouse is bypassed. NOx emissions shall not exceed 1 lb/ton of coal and 6.25 TPY as a rolling, 12-month summation from the main stack when the lime spray dryer/baghouse is bypassed. Sulfuric acid mist (H2SO4) emissions shall not exceed 91.5 lb/hour and 5.49 TPY as a rolling 12-month summation the main stack when the lime spray dryer/baghouse is bypassed. Visible particulate emissions from the main stack shall not exceed 20% opacity as a 6-minute average when the lime spray dryer baghouse/baghouse is bypassed.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		No visible emissions shall be permitted from the common battery tunnel or its associated piping. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-21-08(B), 40 CFR Part 63, Subparts L and CCCCC. See b)(2)b through b)(2)e, b)(2)n, b)(2)p, b)(2)q, and c)(1) through c)(13).
l.	Coking operations with heat recovery steam generators and lime spray dryer/baghouse system. These limits are applicable during normal operation (non bypass of the lime spray dryer/baghouse system) and apply to the exhaust from the main stack. OAC rules 3745-31-21 through 27 (LAER) OAC rule 3745-31-05(A)(3) (these limits are the same as the LAER limits)	Filterable PM2.5 shall not exceed (0.005 gr/dscf), 10.7 pounds per hour and 46.9 TPY as a rolling, 12-month summation. SO2 emissions shall not exceed 300 lbs/hr (based on a 3-hour block average); 192.0 lbs/hr (based on a 24-hour block average); and 700.8 TPY as a rolling, 12-month summation (1.54 lb/wet ton of coal as an annual average). NOx emissions shall not exceed 1 pound per ton of coal, 104.2 lbs./hr and 456.25 TPY as a rolling, 12-month summation. The annual emission limitation shall include NOx emissions from the main stack after passing through the lime spray dryer/fabric filter and during maintenance of the lime spray dryer/fabric filter, combined. Visible particulate emissions from the lime spray dryer baghouse stack shall not exceed 10% opacity as a 6-minute average. No visible emissions shall be permitted from the common battery tunnel or its associated piping. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-08(B), 40 CFR Part 63, Subparts L and CCCCC. See b)(2)a, b)(2)n, b)(2)p, b)(2)q, and c)(1) through c)(13).
m.	Coking operations with heat	Filterable PM2.5 shall not exceed 0.049

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	recovery steam generators and bypassing of the lime spray dryer/baghouse system. These limits are applicable during bypass of the lime spray dryer/baghouse system and apply to the exhaust from the main stack and the HRSG bypass stacks. OAC rules 3745-31-21 through 27 (LAER) OAC rule 3745-31-05(A)(3) (these limits are the same as the LAER limits)	gr/dscf and 6.3 TPY as a rolling, 12-month summation from the main stack when the lime spray dryer/baghouse is bypassed. SO2 emissions shall not exceed 1794 lb/hour and 107.64 TPY as a rolling, 12-month summation when the lime spray dryer/baghouse is bypassed. NOx emissions shall not exceed 1 lb/ton of coal and 6.25 TPY as a rolling, 12-month summation from the main stack when the lime spray dryer/baghouse is bypassed. Visible particulate emissions from the main stack shall not exceed 20% opacity as a 6-minute average when the lime spray dryer/baghouse is bypassed. No visible emissions shall be permitted from the common battery tunnel or its associated piping. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-21-08(B), 40 CFR Part 63, Subparts L and CCCCC. See b)(2)a, b)(2)n, b)(2)p, b)(2)q, and c)(1) through c)(13).
n.	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
o.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
p.	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
q.	OAC rule 3745-21-08(B)	See b)(2)f. below.
r.	40 CFR Part 63, Subpart L (40 CFR 63.300 -313) [In accordance with 40 CFR	See b)(2)h through b)(2)j.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	63.300(b), this emissions unit is a greenfield coke oven battery subject to the emission limitations/control measures specified in this section.]	
s.	40 CFR Part 63, Subpart CCCCC (40 CFR 63.7280 -7352) [In accordance with 40 CFR 63.7282(b), this emissions unit is a coke oven battery subject to the emission limitations/control measures specified in this section.]	See b)(2)l.
t.	Waste gas from the coking process HRSG bypass stacks[2]. OAC rules 3745-10 through 20 (BACT) OAC rule 3745-31-05(A)(3) (these limits are the same as the BACT limits)	Filterable PE and PM10 emissions shall not exceed 21.0 pounds per hour from each individual waste gas bypass stack (0.049 gr/dscf) and 10.1 TPY from all waste gas bypass stacks as a rolling, 12-month summation. SO2 emissions shall not exceed 498.33 pounds per hour from a single HRSG bypass stack as a 3 hour block average (23.92 lb/ton of coal) and 239.2 TPY from all the HRSG bypass stacks as a rolling, 12-month summation. NOx emissions shall not exceed 20.8 pounds per hour from a single HRSG bypass stack (1 lb/ ton of coal). Annual emissions shall not exceed 10.0 TPY from all HRSG bypass stacks combined as a rolling, 12-month summation. Carbon monoxide (CO) emissions shall not exceed 4.36 pounds per hour from a single HRSG bypass stack (20 ppm) and 2.09 TPY as a rolling, 12-month summation from all HRSG bypass stacks. Sulfuric acid mist (H2SO4) emissions shall not exceed 25.4 lbs/hr from a single HRSG bypass stack and 12.20 TPY as a rolling 12-month summation.

[2] The "HRSG bypass stacks" are the stacks located just prior to the HRSGs. These stacks are used during maintenance of the HRSGs or are used to safely vent gasses under an emergency situation. Under normal operation, they are closed such that no gas is vented.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-21-08(B), 40 CFR Part 63, Subparts L and CCCCC.
u.	Waste gas from the coking process HRSG bypass stacks OAC rules 3745-21 through 27 (LAER) OAC rule 3745-31-05(A)(3) (these limits are the same as the LAER limits)	Filterable PM2.5 emissions shall not exceed 21.0 pounds per hour from each individual HRSG bypass stack (0.049 gr/dscf) and 10.1 TPY from all HRSG bypass stacks as a rolling, 12-month summation. SO2 emissions shall not exceed 498.33 pounds per hour from a single HRSG bypass stack as a 3 hour block average (23.92 lb/ton of coal) and 239.2 TPY from all the HRSG bypass stacks as a rolling, 12-month summation. NOx emissions shall not exceed 20.8 pounds per hour from a HRSG bypass stack (1 lb/ ton of coal). Annual emissions shall not exceed 10.0 TPY from all HRSG bypass stacks combined as a rolling, 12-month summation. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1), 3745-21-08(B), 40 CFR Part 63, Subparts L and CCCCC.
v.	OAC rule 3745-17-07(A)	Visible particulate emissions from each HRSG bypass stack serving this emissions unit shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.
w.	OAC rule 3745-17-11(B)	The emission limitation specified by this rules is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
x.	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rules is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
y.	OAC rule 3745(B)	See b)(2)f. below.
z.	40 CFR Part 63, Subpart L (40 CFR 63.300 -313) [In accordance with 40 CFR 63.300(b), this emissions unit is a	See b)(2)h through b)(2)j.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	greenfield coke oven battery subject to the emission limitations/control measures specified in this section.]	
aa.	40 CFR Part 63, Subpart CCCCC (40 CFR 63.7280 -7352) [In accordance with 40 CFR 63.7282(b), this emissions unit is a coke oven battery subject to the emission limitations/control measures specified in this section.]	See b)(2)l.
bb.	Pushing operations with flat push hot car vented to multiclone dust collector OAC rules 3745-31-10 through 20 (BACT) OAC rule 3745-31-05(A)(3) (these limits are the same as the BACT limits)	Filterable PE and PM10 emissions shall not exceed 0.04 pound per ton of coke pushed, 14.3 pounds per hour and 13.09 TPY as a rolling, 12-month summation. SO2 emissions shall not exceed 0.098 pound per ton of coal charged, 49.0 pounds per hour and 44.71 TPY as a rolling, 12-month summation. NOx emissions shall not exceed 0.019 pound per ton of coal charged, 9.5 pounds per hour and 8.67 TPY as a rolling, 12-month summation. CO emissions shall not exceed 0.063 pound per ton of coal charged, 31.5 pounds per hour and 28.74 TPY as a rolling, 12-month summation. Sulfuric acid mist (H2SO4) emissions shall not exceed 0.005 pound per ton of coal charged, per 2.5 lbs/hr and 2.28 TPY as a rolling 12-month summation. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-07(B), 3745-17-08(B) and 3745-21-08(B) and 40 CFR Part 63, Subpart CCCCC.
cc.	Pushing operations with flat push hot car vented to multiclone dust collector OAC rules 3745-31-21 through 27 (LAER)	Filterable PM2.5 emissions shall not exceed 0.04 pound per ton of coke pushed, 14.3 pounds per hour and 13.09 TPY as a rolling, 12-month summation. SO2 emissions shall not exceed 0.098 pound per ton of coal charged, 49.0

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-31-05(A)(3) (these limits are the same as the LAER limits)	pounds per hour and 44.71 TPY as a rolling, 12-month summation. NOx emissions shall not exceed 0.019 pound per ton of coal charged, 9.5 pounds per hour and 8.67 TPY as a rolling, 12-month summation. The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-07(B), 3745-17-08(B) and 3745-21-08(B) and 40 CFR Part 63, Subpart CCCCC.
dd.	OAC rule 3745-17-07(A)	Visible particulate emissions from the flat push hot car vented to multiclone dust collector stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
ee.	OAC rule 3745-17-08(B)	The permittee shall minimize visible emissions of fugitive dust.
ff.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
gg.	OAC rule 3745-21-08(B)	See b)(2)f. below.
hh.	40 CFR Part 63, subpart CCCCC (40 CFR 63.7280 -7352) [In accordance with 40 CFR 63.7282(b), this emissions unit is a coke oven battery at a coke oven plant subject to the emission limitations/control measures specified in this section.]	Particulate emissions from the flat push hot car vented to multiclone dust collector exhaust shall not exceed 0.04 lb of PE/ton of coke per 40 CFR 63.7290(a)(4). Maintain daily average fan motor amperes at or above minimum motor amperes establish during the initial performance test per 40 CFR 63.7290(b)(3)(i) or maintain the daily average volumetric flow rate at the inlet of the control device at or above the minimum level established during the initial performance test per 40 CFR 63.7290(b)(3)(ii). Maintain the daily average pressure drop of the multiclone at or below the minimum level established during the initial performance test per 40 CFR 63.7290(b)(4).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)l.
ii.	Coal charging operations with baghouse and traveling hood OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions from the charging baghouse shall not exceed 1.0 lb/hr and 0.91 TPY. The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 20, OAC rules 3745-31-21 through 27, OAC rule 3745-17-08(B) and 40 CFR Part 63, Subpart L.
jj.	Coking operations with heat recovery steam generators and lime spray dryer - main stack OAC rule 3745-31-05(A)(3)	VOC emissions shall not exceed 4.67 lbs/hr and 20.47 TPY. VOC emissions shall not exceed 0.28 TPY from the main stack when the lime spray dryer is bypassed. Hydrochloric acid (HCl) emissions shall not exceed 14.8 lbs/hr and 64.79 TPY. Hydrochloric acid (HCl) emissions shall not exceed 17.75 TPY from the main stack when the lime spray dryer is bypassed. Hazardous air pollutants (HAP), excluding HCl from emission units P001 and P901 combined, shall not exceed 3.6 TPY. The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 20, OAC rules 3745-31-21 through 27 and OAC rule 3745-17-08(B) and 40 CFR Part 63, Subparts L and CCCCC. See b)(2)g, b)(2)m and b)(2)o.
kk.	Waste gas from the coking process HRSG bypass stacks OAC rule 3745-31-05(A)(3)	Volatile organic compound (VOC) emissions shall not exceed 0.93 pound per hour from a single HRSG bypass stack and 0.45 TPY from all HRSG bypass stacks. Hydrochloric acid (HCl) emissions shall not exceed 59.17 pounds per hour from a single HRSG bypass stack and 28.4 TPY from all HRSG bypass stacks. Lead (Pb) emissions shall not exceed

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		0.055 TPY from all HRSG bypass stacks. Mercury (Hg) emissions shall not exceed 0.0069 pound per hour from a single HRSG bypass stack. Mercury emissions shall not exceed 12.4 pounds per year from all HRSG bypass stacks and from the main stack during bypass of the lime spray dryer/fabric filter, combined. The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 20, OAC rules 3745-31-21 through 27 and OAC rule 3745-17-08(B) and 40 CFR Part 63, Subparts L and CCCCC.
II.	Pushing operations with flat push hot car vented to multiclone dust collector OAC rule 3745-31-05(A)(3)	VOC emissions shall not exceed 10.0 pounds per hour and 9.13 TPY. The requirements of this rule also include compliance with the requirements of OAC rules 3745-31-10 through 20, OAC rules 3745-31-21 through 27, OAC rule 3745-17-08(B) and 40 CFR Part 63, Subpart CCCCC.

(2) Additional Terms and Conditions

a. The permittee has performed a Lowest Achievable Emission Rate (LAER) review for PM2.5, SO2 and NOx. The emission limitations based on the LAER requirements are listed under OAC rules 3745-31-(21) through (27) in b)(1)c., b)(1)l., b)(1)m., b)(1)u. and b)(1)cc. above. The controls and practices that constitute LAER also meet the BAT requirements of 3745-31-05(A)(3).

i. It has been determined that the following control measures constitute LAER for PM2.5 from this emissions unit.

(a) PM2.5 emissions from the main stack shall be control with a fabric filter. The filter material in the filter system for the main stack shall be a membrane material, micro-fiber material, micro-fiber capped composite material or other similar filter material that has enhanced performance for collection of fine particulate.

(b) PM2.5 emissions from coking during Heat Recovery Steam Generator (HRSG) maintenance shall be minimized by limiting the HRSG maintenance to one HRSG at a time, except during the annual shut down of the spray dryer/fabric filter when the permittee shall perform preventive maintenance of up to two

HRSG during the same maintenance period as for the spray dryer/fabric filter; by limiting the time when coking gases are not controlled by the spray dryer/fabric filter system to 1560 stack-hours[3] per 12-month rolling period; and by following good work practices defined as the combustion of flue gases in sole flues and the common tunnel afterburner.

(c) PM2.5 emissions from coking during lime spray dryer/fabric filter control maintenance shall be minimized by limiting the annual maintenance to no more than five days per year; and by following good work practices defined as the combustion of flue gases in sole flues and the common tunnel afterburner.

(d) PM2.5 emissions from coke pushing shall be controlled through a flat pushing operation controlled by a multiclone.

PM2.5 emissions from coal charging shall be controlled by the use of a travelling hood and a fabric filter.

ii. It has been determined that the following control measures constitute LAER for SO2 emissions from this emissions unit.

(a) SO2 emissions from the main stack shall be controlled with the use of a lime spray dryer/fabric filter with a manufacturer's design control efficiency of 92% on a 24-hour basis for SO2 control.

(b) SO2 emissions from coking during Heat Recovery Steam Generator (HRSG) maintenance shall be minimized by limiting the HRSG maintenance to one HRSG at a time, except during the annual shut down of the spray dryer/fabric filter when the permittee shall perform preventive maintenance of up to two HRSGs during the same maintenance period as for the spray dryer/fabric filter; and by limiting the time when coking gases are not controlled by the spray dryer/fabric filter system to 1560 stack-hours per 12-month rolling period. The SO2 emissions from the coke ovens affected by the shutdown of a HRSG during planned HRSG maintenance shall be reduced by 28 percent consistent with the facility's Startup Shutdown and Malfunction (SSM) plan for the spray dryer/fabric filter maintenance.

(c) SO2 emissions from coking during lime spray dryer/fabric filter control maintenance shall be minimized by limiting the annual maintenance to no more than five days per year; and by following good work practices defined as minimizing coal sulfur and reducing production which shall reduce SO2 emissions by 28 percent of design capacity as detailed in the facility's Startup Shutdown and Malfunction (SSM) plan.

[3] One stack-hour is equivalent to the exhaust from one HRSG being emitted to the atmosphere without being controlled by the scrubber/baghouse control system for one hour.

(d) SO2 emissions from coke pushing shall be minimized through work practices as described in 40 CFR 63.7293(a).

(e) SO2 emissions from coal charging shall be minimized through work practices as described in 40 CFR 63.303(d).

iii. It has been determined that the following control measure constitutes LAER for NOx emissions from this emissions unit.

(a) NOx emissions from the main stack shall be controlled through the battery design which includes staged combustion.

(b) NOx emissions from coking during Heat Recovery Steam Generator (HRSG) maintenance shall be controlled through the battery design which includes staged combustion.

(c) NOx emissions from coking during lime spray dryer/fabric filter control maintenance shall be controlled through the battery design which includes staged combustion.

(d) NOx emissions from coke pushing shall be minimized through work practices as described in 40 CFR 63.7293(a).

b. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the following control measures constitute BACT for PE and PM10 from this emissions unit.

i. The waste gas from coking shall be processed by the use of a lime spray dryer with a baghouse for PE/PM10 control.

ii. Combustion during the coking process shall be optimized by monitoring the temperature in each oven crown and sole flue and adding air as needed through dampers in each oven.

iii. The flat car for coke pushing shall be equipped with a multiclone for PE control.

iv. The charging machine shall be equipped with a traveling hood and fabric filter for PE/PM10 control.

v. PE/PM10 emissions from coking during Heat Recovery Steam Generator (HRSG) maintenance shall be minimized by limiting the HRSG maintenance to one HRSG at a time, except during the annual shut down of the spray dryer/fabric filter when the permittee shall perform preventive maintenance of up to two HRSG during the same maintenance period as for the spray dryer/fabric filter; by limiting the time when coking gases are not controlled by the spray dryer/fabric filter system to 1560 stack-hours per 12-month rolling period; and by following good work practices defined as the combustion of flue gases in sole flues and the common tunnel afterburner.

vi. PE/PM10 emissions from coking during lime spray dryer/fabric filter control maintenance shall be minimized by limiting the annual maintenance to no more than five days per year; and by following good work practices defined as the combustion of flue gases in sole flues and the common tunnel afterburner.

The emission limits based on the BACT requirements are listed under OAC rules 3745-31-10 through 3745-31-20 in b)(1)b., b)(1)j., b)(1)k., b)(1)t. and b)(1)bb above. The controls and practices that constitute BACT also meet the BAT requirements of 3745-31-05(A)(3).

c. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the following control measures constitute BACT for SO2 and H2SO4 from this emissions unit.

i. SO2 and H2SO4 emissions from the main stack shall be controlled with the use of a lime spray dryer/fabric filter with a manufacturer's design control efficiency of 92% on a 24-hour basis for SO2 control and greater than 95% on a 24-hour basis for H2SO4 control.

ii. SO2 and H2SO4 emissions from coking during Heat Recovery Steam Generator (HRSG) maintenance shall be minimized by limiting the HRSG maintenance to one HRSG at a time, except during the annual shut down of the spray dryer/fabric filter when the permittee shall perform preventive maintenance of up to two HRSG during the same maintenance period as for the spray dryer/fabric filter; and by limiting the time when coking gases are not controlled by the spray dryer/fabric filter system to 1560 stack-hours per 12-month rolling period. The SO2 emissions from the coke ovens affected by the shutdown of a HRSG during planned HRSG maintenance shall be reduced by 28 percent consistent with the facility's Startup Shutdown and Malfunction (SSM) plan for the spray dryer/fabric filter maintenance.

iii. SO2 and H2SO4 emissions from coking during lime spray dryer/fabric filter control maintenance shall be minimized by limiting the annual maintenance to no more than five days per year; and by following good work practices defined as minimizing coal sulfur and reducing production which shall reduce SO2 emissions by 28 percent of design capacity as detailed in the facility's Startup Shutdown and Malfunction (SSM) plan.

iv. SO2 and H2SO4 emissions from coke pushing shall be minimized through work practices as described in 40 CFR 63.7293(a).

v. SO2 and H2SO4 emissions from coal charging shall be minimized through work practices as described in 40 CFR 63.303(d).

The emission limits based on the BACT requirements are listed under OAC rules 3745-31-10 through 3745-31-20 in b)(1)b., b)(1)j., b)(1)k., b)(1)t. and b)(1)bb above. The controls and practices that constitute BACT also meet the BAT requirements of 3745-31-05(A)(3).

d. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the following control measures constitute BACT for CO from this emissions unit.

i. Combustion during the coking process and during maintenance of the HRSG and lime spray dryer/fabric filter shall be optimized by monitoring the temperature in each oven crown and sole flue and adding air as needed through dampers in each oven.

ii. CO emissions from coke pushing shall be minimized through work practices as described in 40 CFR 63.7293(a).

The emission limits based on the BACT requirements are listed under OAC rules 3745-31-10 through 3745-31-20 in b)(1)b., b)(1)j., b)(1)k., b)(1)t. and b)(1)bb above. The controls and practices that constitute BACT also meet the BAT requirements of 3745-31-05(A)(3).

e. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that the following control measures constitute BACT for NOx from this emissions unit:

i. NOx emissions from the main stack shall be controlled through the battery design which includes staged combustion.

ii. NOx emissions from coking during HRSG maintenance shall be controlled through the battery design which includes staged combustion.

iii. NOx emissions from coking during lime spray dryer/fabric filter control maintenance shall be controlled through the battery design which includes staged combustion.

iv. NOx emissions from coke pushing shall be minimized through work practices as described in 40 CFR 63.7293(a).

f. The permittee shall satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B) by committing to comply with the best available technology (BAT) requirements established pursuant to OAC rule 3745-31-05(A)(3) in this permit to install. The design of the emissions unit and the technology associated with the current operating practices satisfy the BAT requirements.

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

g. Lead emissions shall not exceed 0.28 ton per year as a rolling, 12-month summation for emissions units P901 and P001 combined.

h. The emission limitations set forth in 40 CFR Part 63, Subpart L shall apply at all times except during a period of startup, shutdown, or malfunction. The startup period shall be determined by the Administrator and shall not exceed 180 days. [40 CFR 63.300(e)]

i. The coke oven emissions from the nonrecovery coke oven batteries shall not exceed 0.0 percent leaking coke oven doors, as determined by the procedures in 40 CFR Part 63, Section 63.309(d)(1); or

The permittee shall monitor and record, once per day of operation, the pressure in each oven or in a common battery tunnel to ensure that the ovens are operated under a negative pressure. [40 CFR 63.303(b)(1)]

j. For charging operations, the permittee shall install, operate and maintain an emission control system for the capture and collection of emissions in a manner consistent with good air pollution control practices for minimizing emissions from the charging operation. [40 CFR 63.303(b)(2)]

k. As required by §63.6(e)(1)(i), the permittee must always operate and maintain your affected source, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart.

l. The permittee must prepare and operate at all times according to a written operation and maintenance plan for each capture system and control device applied to pushing emissions from a new or existing coke oven battery. Each plan must address at a minimum the elements in paragraphs (i) and (ii) below.

   i. Monthly inspections of the equipment that are important to the performance of the total capture system (e.g., pressure sensors, dampers, and damper switches). This inspection must 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). The operation and maintenance plan must also include requirements to repair any defect or deficiency in the capture system before the next scheduled inspection.

   ii. Preventative maintenance for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.

[40 CFR 63.7300(c)(1) through (3)]

m. Hazardous Air Pollutant (HAPs) emissions (not including HCl) shall not exceed 3.6 tons per year for emissions units P001 and P901, combined. HCl emissions for emissions units P001 and P901 shall not exceed 118.04 tons per year.

n. When coking coal having a sulfur content greater than or equal to 1.3 weight percent sulfur, the permittee shall either:

i. adjust operating parameters of the lime spray dryer as needed to increase the control efficiency for SO_2 emissions to comply with the pound per hour and rolling 12-month SO_2 emission limitations; or

ii. reduce production as needed to comply with the pound per hour and rolling 12-month SO_2 emission limitations.

The sulfur content (per cent) shall be determined in accordance with the most recent version of the following ASTM methods: ASTM method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods. Alternative, equivalent methods may be used upon written approval from the appropriate Ohio EPA District Office or local air agency.

o. Control of Mercury Emissions

i. The Permittee shall install, operate, and maintain an activated carbon injection system on the main stack for control of mercury emissions, which system shall be operated to comply with the following requirements for control of mercury emissions from the main stack. This system shall be designed to inject up to 10 pounds of activated carbon per million actual cubic feet of exhaust gases.

ii. This activated carbon injection system shall be operated at all times when the spray dryer/fabric filter system is operated (except during periods of routine maintenance on the carbon injection system), either at a maximum activated carbon injection rate of 10 pounds per million actual cubic feet of exhaust gases or to achieve an overall mercury control efficiency equivalent to 50 percent, in conjunction with other control measures for the batteries. That is, the Permittee may operate the system at an activated carbon injection rate lower than 10 pounds per million actual cubic feet when the system is used to comply with an emission rate equivalent to 90 percent control. Once such an emission rate has been established, the Permittee may also elect to meet such rate by a combination of carbon injection and other measures including injection of other sorbents or additives, coal specifications, and operational practices for the spray dryer.

The requirement to operate the carbon injection system and mercury emission limit(s) established under this section shall not apply during periods of routine maintenance on the carbon injection system.

Mercury emission limitations will be set by the Ohio EPA once initial testing and monitoring for emissions of mercury are completed and at least six months worth of data for mercury emissions and mercury content of coal are collected.

p. The filter material in the filter system for the main stack shall be a membrane material, micro-fiber material, micro-fiber capped composite material or other similar filter material that has enhanced performance for collection of fine particulate as compared to conventional woven or felt filter material.

q. The pound per hour SO2 emission limitation and minimum 92% SO2 control efficiency requirement do not apply during maintenance of the lime spray dryer as per example during atomizer replacement.

r. The hourly emissions of VOC outlined above are based on the emission unit's potential to emit. Therefore no hourly records are required to demonstrate compliance with these limitations.

s. For the purpose of assuring compliance with the amount of NOx emissions offsets required under this permit, the total NOx emissions from all permitted operating scenarios for this emissions unit, including normal coking operations, pushing operations, lime spray dryer/fabric filter maintenance, and emissions from the HRSG bypass stack(s) during heat recovery steam generator(s) maintenance, shall not exceed 477.4 TPY as a rolling, 12-month summation.

t. Emission limit clarification

i. The emission limits listed under paragraphs b)(1)k, b)(1)m, and b)(1)jj in the above table apply to all emissions associated with bypassing the lime spray dryer/baghouse system. These include any emissions emitted from the HRSG bypass stacks and emissions emitted from the dryer/baghouse system main stack during bypassing of the lime spray dryer/gashouse system.

ii. Emissions from the HRSG bypass stacks during bypassing of the lime spray dryer/baghouse shall be excluded when determining compliance with the limits under paragraphs b)(1)t, b)(1)u, and b)(1)kk in the table above.

c) Operational Restrictions

(1) The emissions from this emissions unit shall be vented to the waste gas exhaust baghouse at all times the emissions unit is in operation, except during bypassing of the lime spray dryer and heat recovery steam generators as allowed in this permit.

(2) The emissions from this emissions unit associated with charging of coal operations shall be vented to the charging baghouse at all times the emissions unit is in operation.

(3) The maximum hourly charging and pushing rate for this emissions unit shall not exceed 10 ovens charged per hour and 10 ovens pushed per hour.

(4) The maximum annual wet coal usage rate for shall not exceed 912,500 tons, based upon a rolling, 12-month summation of the wet coal usage rates.

To ensure enforceability during the first 12 calendar months of operation, the permittee shall not exceed the wet coal usage levels specified in the following table:

Month	Maximum Allowable Cumulative Wet Coal Usage
1	77,500
1-2	152,083

1-3	228,125
1-4	304,167
1-5	380,208
1-6	456,250
1-7	532,292
1-8	608,333
1-9	684,375
1-10	760,417
1-11	836,458
1-12	912,500

After the first 12 calendar months of operation, compliance with the annual wet coal usage rate limitation shall be based upon a rolling, 12-month summation of the wet coal usage rates.

(5) The lime spray dryer and baghouse associated with the battery waste gas exhaust shall begin operation within forty (40) days after start-up of this emission unit.

(6) See applicable sections of 40 CFR Part 63, Subpart L (40 CFR 63.300-313).

(7) See applicable sections of 40 CFR Part 63, Subpart CCCCC (40 CFR 63.7280-7352).

(8) Combustion gases from the coking process shall be routed to the HRSGs controlled by the spray dryer/fabric filter system, except (1) during inspection and maintenance of HRSGs; (2) during inspection and maintenance of the spray dryer/fabric filter system, the combustion gases will be routed directly to the main stack after passing through the HRSGs; and (3) monthly verification of operability of the lids for the HRSG bypass stacks. The total duration of the venting, with coking gases not controlled by the spray dryer/fabric filter system, shall not exceed 1560 stack-hours per 12-month rolling period and shall not exceed 960 stack-hours per 12-month rolling period for HRSG maintenance (excluding time when HRSG maintenance is performed during lime spray dryer maintenance). These bypass periods and appropriate operation during periods of bypass shall also be addressed by the Startup Shutdown and Malfunction (SSM) Plan required for the plant by 40 CFR 63.6 (e). The SSM Plan shall contain provisions that the permittee shall implement during the maintenance bypass of the lime spray dryer/fabric filter periods which will result in a 28 percent of design capacity reduction of SO2 emissions.

(9) The permittee shall ensure that the common battery tunnel(s), oven exhaust ductwork, waste heat ductwork, heat recovery steam generators, ductwork from the heat recovery steam generators to the lime spray dryer, lime spray dryer, baghouse and fan capacity are designed and installed to handle peak gassing periods.

(10) It is recognized that soot formation can occur on the heat transfer surfaces of the heat recovery steam generators and reduce the heat transfer efficiency. The permittee shall implement maintenance procedures that allow for removal of soot from the heat transfer surfaces of the heat recovery steam generators without shutdown of the heat recovery steam generator(s). These maintenance procedures can include, but are not limited to, installation of sootblowers on the heat recovery steam generators to allow for periodic cleaning of the heat transfer surfaces.

(11) Each continuous SO_2 monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. At least 45 days before commencing certification testing of the continuous SO_2 monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of SO_2 emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO_2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

(12) The permittee shall operate and maintain common duct temperature at a minimum of 1400° F to ensure emissions limits for the waste gas exhaust are not exceeded.

(13) In accordance with OAC rule 3745-15-06, the permittee shall submit requests to Ohio EPA at least two weeks prior to the scheduled maintenance of the lime spray dryer and fabric filter.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly install and, except during bypass of the lime spray dryer and heat recovery steam generators as allowed in this permit, operate and maintain equipment to continuously monitor the pressure drop, in inches of water, across the fabric filter following the lime spray dryer when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the fabric filter on once per shift basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). Whenever the monitored value for the pressure drop deviates from the limit or range specified in this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

a. a description of the corrective action;

b. the date corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the pressure drop readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The range or limit of 3 to 12 inches of water on the pressure drop across fabric filter serving the lime spray dryer is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

(2) The permittee shall properly install, operate and maintain equipment to continuously monitor the pressure drop, in inches of water, across each charging baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across each charging baghouse on once per shift basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). Whenever the monitored value for the pressure drop deviates from the limit or range specified in this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

a. a description of the corrective action;

b. the date corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the pressure drop readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The range or limit of 3 to 12 inches of water on the pressure drop across each charging baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

(3) The permittee shall maintain hourly records of the charging/pushing rate, in number of charges/pushes per hour, for this emissions unit.

(4) The permittee shall maintain monthly records of the following information:

a. the wet coal usage rate for each month;

b. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the wet coal usage rates;

c. the rolling, 12-month summation of the PM, PM10, PM2.5, SO2, CO, NOx and H2SO4 emission, except as denoted in d)(14); and

d. the VOC, lead, HCl and HAP emission rates.

Also, during the first 12 calendar months of operation, the permittee shall record the cumulative wet coal usage rate for each calendar month.

(5) Prior to the installation of the continuous SO_2 monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2. The Ohio EPA, Central Office shall approve the proposed sampling site and certify that the continuous SO_2 monitoring system meets the requirements of Performance Specifications 2 and 6. Once received, the letter(s)/document(s) of certification shall be maintained on-site and shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

Each continuous monitoring system consists of all the equipment used to acquire and record data in units of all applicable standard(s), and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data processing hardware and software. [40 CFR 60.13] and [40 CFR Part 60, Appendix B]

(6) The permittee shall install, operate, and maintain equipment to continuously monitor and record SO_2 emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the applicable requirements specified in 40 CFR Part 60.

The permittee shall maintain records of data obtained by the continuous SO_2 monitoring system including, but not limited to:

a. emissions of SO_2 in parts per million on an instantaneous (one-minute) basis;

b. emissions of SO_2 in pounds per hour and in all units of the applicable standard(s) in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous SO_2 monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO_2 monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO_2 monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

(7) See applicable sections of 40 CFR Part 63, Subpart L (40 CFR 63.300 -313).

(8) See applicable sections of 40 CFR Part 63, Subpart CCCCC (40 CFR 63.7280 -7352).

(9) The permittee shall maintain records for each waste gas by-pass event of the date and time each event began, an identification of the stack venting, and the duration in hours.

(10) The permittee shall collect monthly composite samples of the coal charged in this emissions unit. The permittee shall also collect a composite sample of the coal charged in this emissions unit each time the coal blend is changed. The individual samples for each monthly composite shall be collected from the primary conveyor belt that feeds the coke battery batteries or other location mutually agreeable by the permittee and Ohio EPA. A sufficient number of individual samples shall be collected so that each composite sample is representative of the average quality of coal charged in this emissions unit during each calendar month. The coal sampling shall be performed in accordance with ASTM method D2234, Collection of a Gross Sample of Coal.

Each monthly composite sample of coal shall be analyzed for sulfur content (percent), mercury content (percent) and chlorine content (percent). The analytical methods for sulfur content, mercury content and chlorine content shall be: ASTM method D3177, Total Sulfur in the Analysis Sample of Coal and Coke or ASTM method D4239, Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods; D6722-01 Standard Test Method for Total Mercury in Coal and Coal Combustion Residues by Direct Combustion Analysis; D6721-01 Standard Test Method for Determination of Chlorine in Coal by Oxidation Hydrolysis Microcoulometry. Alternative, equivalent methods may be used upon written approval from the appropriate Ohio EPA District Office or local air agency.

(11) The permittee shall maintain monthly records of the results of the analyses for sulfur content, mercury content, and chlorine content of the coal charged.

(12) All HRSG bypass stacks shall be equipped with sensors that detect when the HRSG bypass stacks are open, or partially opened, either due to relieving system pressure or manual opening of the HRSG bypass stacks by the operator. These sensors shall be instrumented to the operator and an alarm indicated when there is stack gas flow to any of the HRSG bypass stacks. The permittee shall record and maintain daily records for each HRSG bypass stack the time periods that there was flow through the HRSG bypass stack(s).

(13) The Permittee shall install, calibrate, operate and maintain a monitoring system for mercury emissions from the main stack.

a. This monitoring shall be conducted with a mercury sorbent trap monitoring system in accordance with 40 CFR 75.15 (as adopted by USEPA, even if subsequently vacated) or, alternatively, with an approved continuous mercury emissions monitoring system in accordance with 40 CFR 75.81 (as adopted by USEPA, even if subsequently vacated). In addition to other applicable requirements of 40 CFR Part 75, the Permittee shall submit semi-annual monitoring reports to the Ohio EPA for this monitoring in accordance with relevant reporting requirements of 40 CFR Part 75.

b. After the initial period of data collection needed to set emission limits for mercury, this monitoring system shall continue to be operated to verify compliance with such limit unless the Ohio EPA determines either that this monitoring system would still provide accurate, reliable data to verify compliance with the applicable limits for mercury emissions if operated on a periodic basis, or, if monitoring was initially conducted with sorbent traps, for ongoing monitoring to verify compliance with mercury emission limits to be effective, such monitoring should be conducted with a continuous emissions monitoring system in accordance with 40 CFR 75, Subpart H.

In the event that adverse weather conditions prohibit timely change-out of the mercury sorbent traps, the permittee shall meet the following conditions:

i. The permittee shall document the dates when it was determined that adverse weather conditions prohibited safe access to the stack platform for mercury sorbent trap change-out. These dates shall be documented in the semi-annual monitoring report. The sorbent traps shall be changed-out as soon as possible after weather conditions improve; and

ii. The mercury sorbent trap monitoring plan shall include provisions for alternate tube change-out procedures in the event of adverse weather conditions that pose safety concerns for plant personnel.

c. After completion of initial monitoring for emissions of mercury but not later than nine months after certification of the monitoring system, the Permittee shall apply for a revision to this permit to include limits for mercury emissions, which limits reflect emission rates that are achievable with effective control by the combination of the spray dryer, carbon injection system and baghouse and are based on the emission data that has been collected and relevant information about the mercury content of the coal supply to the plant and operation of control devices, including the activated carbon injection system. With this application, the Permittee shall submit a detailed report to the Ohio EPA that provides an assessment of the mercury emissions of the plant and the effectiveness of the control system that at a minimum includes: the data that has been collected for mercury emissions; information confirming proper design of the activated carbon injection system for control of mercury; information confirming proper operation of the control system for effective control of mercury emissions while emission data was being collected; the results of the analyses of coal for mercury content required by d)(11), with estimates of the theoretical emissions of mercury in the absence of any control; and other information that the Permittee considers relevant, together with the Permittee's recommended emission limits for mercury, with the specific data, calculations and the rationale for those limits.

d. The Permittee may inject activated carbon at a rate less than 10 pounds per million actual cubic feet, provided that such operation occurs in accordance with an evaluation plan that the Permittee has provided to the Ohio EPA at least 30 days in advance and the data and findings from such operation are included in the above report.

(14) The permittee shall maintain monthly records of all the following information for all periods when waste gas emissions are vented to the HRSG bypass stacks:

a. the date, time, and duration of each bypass event;

b. the identification of each HRSG bypass stack in use;

c. the reason for the bypass event;

d. the rolling, 12-month summation of the number of bypass hours;

e. the rolling, 12-month summation of the PM, PM10, PM2.5, SO2, CO, NOx and H2SO4 emissions; and

f. the VOC, lead, HCl and HAP emission rates.

(15) The permittee shall monitor and record the temperature of the common battery tunnel on a once per shift basis.

(16) The permittee shall properly install and, except during bypassing of the lime spray dryer and heat recovery steam generators as allowed in this permit, operate and maintain a Bag Leak Detector System (BLDS) to continuously monitor the coke oven baghouse vented to the main stack when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The BLDS shall be installed, operated and maintained in a manner that is consistent with the facility's Ohio EPA-approved CAM plan and the manufacturer's recommendations.

a. The bag leak detection system shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 0.005 grain per actual cubic foot or less.

b. The bag leak detection system sensor shall produce an output of relative particulate emissions.

c. The bag leak detection system shall be equipped with an alarm system that will activate automatically when an increase in relative PM emissions over a preset level is detected and the alarm shall be located such that it can be seen or heard by the appropriate plant personnel.

d. The bag leak detection system shall be installed downstream of the lime spray dryer baghouse.

e. Initial adjustment of the system shall at a minimum consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

f. Following the initial adjustment, the permittee shall not adjust the range, averaging period, alarm setpoints or alarm delay except as detailed in the operations, maintenance and monitoring plan. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official certifies by written report the baghouse has been inspected and found to be in good operating condition.

The permittee shall maintain, and make available to agency personnel, records of any bag leak detection system alarms, including the date and time of the alarm, when

corrective actions were initiated, the cause of the alarm, an explanation of the corrective action taken and when the cause of the alarm was corrected.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

e) Reporting Requirements

(1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the waste gas baghouse during the operation of the emissions unit(s), except during bypassing of the lime spray dryer and heat recovery steam generators as allowed in this permit:

a. each period of time when the pressure drop was outside of the permitted range as specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;

b. an identification of each incident of deviation described in "a" (above) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in "a" where prompt corrective action, that would bring the unit into compliance with the acceptable range, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s).

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

(2) The permittee shall submit quarterly reports that identify the following information concerning the operation of each charging baghouse during the operation of the emissions unit(s):

a. each period of time when the pressure drop across the baghouse was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;

b. an identification of each incident of deviation described in "a" (above) where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s).

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

(3) The permittee shall submit deviation (excursion) reports which identify all exceedances of the hourly charging/pushing rate limitation.

(4) The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month wet coal usage rate, the permitted bypass limitation, PE, PM10, PM2.5, SO2, CO, NOx and H2SO4 mass emission limitations; annual Hg and lead mass emission limitations; and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative wet coal usage levels.

(5) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO_2 monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO_2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s). If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect.

b. These quarterly reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous SO_2 and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER), i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total SO_2 emissions for the calendar quarter (tons);

vi. the total operating time (hours) of the emissions unit;

vii. the total operating time of the continuous SO_2 monitoring system while the emissions unit was in operation;

viii. results and date of quarterly cylinder gas audits;

ix. unless previously submitted, results and date of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

x. unless previously submitted, the results of any relative accuracy test audit showing the continuous SO_2 monitor out-of-control and the compliant results following any corrective actions;

xi. the date, time and duration of any/each malfunction* of the continuous SO2 monitoring system;

xii. the date, time and duration of any/each malfunction of the emissions unit and/or control equipment that causes the emission of air contaminants in violation of any applicable limit; and

xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* SO2 monitoring system downtime attributed to permit-allowed main stack bypass events shall not be counted against the facility for enforcement purposes, but must be reported.

(6) The permittee shall submit common battery tunnel temperature deviation (excursion) reports that identify all periods of during which the temperature in the common battery tunnel did not comply with the allowable range specified above. These reports shall include the time of the temperature deviation, the duration of the exceedance and the corrective action taken.

(7) See 40 CFR Part 63, Subpart L (40 CFR 63.300 -313).

(8) See 40 CFR Part 63, Subpart CCCCC (40 CFR 63.7280 -7352).

(9) The permittee shall submit semi-annual written reports which identify the date, time, and duration of each waste gas bypass event.

(10) These reports are due by the date described in the Standard Terms and Conditions of this permit.

(11) The permittee shall submit to the Local Air Agency quarterly deviation (excursion) reports that identify all periods during which visual inspections of the enclosed flat push hot car identified areas potentially needing repair to minimize visible emissions of fugitive dust. The report shall include the repair methods of each attempt to repair, and the date of successful repair. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during the quarter. These reports are due by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

(12) The permittee shall submit to the Local Air Agency quarterly reports concerning the quality and quantity of the coal in this emissions unit. These reports shall include the following information for the emissions unit for each day during the calendar quarter:

a. the total quantity of wet coal charged (tons);

b. the average mercury content (percent) of the coal charged;

c. the average chlorine content (percent) of the coal charged; and

d. the average sulfur content (weight percent) of the coal charged.

These reports are due by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

The permittee shall submit to the Local Air Agency quarterly deviation (excursion) reports that identify all exceedances of the HRSG bypass stack usage limitations. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during the quarter. These reports are due by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

f) Testing Requirements

(1) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate but no later than 180 days after initial startup of the emissions unit for: the HRSG bypass stacks, charging baghouse stacks and the pushing multiclone stack. The emission testing for the HRSG bypass stacks shall be conducted during one of the first four scheduled by-passes of a heat recovery steam generator for purposes of the annual heat recovery steam generator inspection and maintenance. The HRSG bypass stack initial testing is only required on one of the five stacks.

b. The emission testing shall be conducted to demonstrate compliance with the following allowable limitations.

i. Main stack: PE, SO2, NOx, CO, VOC*, Lead, and mercury.

ii. Charging baghouse stack(s): PE.

iii. Pushing multiclone stack(s): PE, SO2, NOx, CO, VOC*, Lead.

iv. HRSG bypass stacks: PE, SO2, Lead and Mercury

c. The emission testing shall be conducted to determine the emissions of dioxins, furans, and acid gases from the main stack.

d. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

Pollutant	Method of 40 CFR Part 60, Appendix A
Particulate	Methods 1 through 4 and 5
PM10	Methods 1 through 4 and 5
SO_2	Methods 1 through 4 and 6C
NOx	Methods 1 through 4 and 7E
CO	Methods 1 through 4 and 10
VOC	Methods 1 through 4, 25 or 25A, and if necessary Method 18
Lead	Methods 1 through 4 and 12 or 29
Mercury	Method 101 A of 40 CFR Part 61, Appendix B or Method 29 of 40 CFR Part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

*Test Methods shall be selected to consider all species of organics in the gas stream. The results shall be total VOC.

Pollutant	Method under 40 CFR
Dioxins and furans	Method 23 of 40 CFR Part 60, Appendix A
Acid gas emissions	Method 26 of 40 CFR Part 60, Appendix A

(include HCl, HF, Cl_2, etc.)

e. The following additional information shall be documented during all emission testing for PE, SO2, NOx, CO, VOC, Lead, mercury, dioxins and furans, acid gases, and flow rate:

i. Hourly wet coal charge rates, in tons/hr and the number of charges per hour to allow a determination of an emission factor in pounds of pollutant per ton of coal processed;

ii. Hourly coke push rates, in tons/hr and the number of pushes per hour to allow a determination of an emission factor in pounds of pollutant per ton of coke produced;

iii. Pressure drop readings approximately every 15 minutes during the test(s) for:

(a) each charging baghouse when charging emissions are being tested;

(b) the lime spray dryer baghouse when the main stack emissions are tested;

(c) each pushing multiclone when pushing emissions are being tested;

iv. lime spray dryer operating parameters when the main stack emissions are being tested; and

v. main stack baghouse cleaning cycle.

f. The permittee shall provide, or cause to be provided, performance testing facilities as follows for the outlet duct for charging baghouse, the outlet duct for the main stack, and the outlet duct for the pushing multiclone:

i. Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

ii. Safe sampling platform(s).

iii. Safe access to sampling platform(s).

iv. Utilities for sampling and testing equipment.

g. The outlet duct for the charging baghouse, the outlet duct for the main stack, and the outlet duct for the pushing multiclone shall be designed in a manner that allows for emissions sampling ports to be installed according to criteria specified in Method 1 of 40 CFR Part 60, Appendix A.

h. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Hamilton County Department of Environmental Services. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the refusal to accept the results of the emission test(s).

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services

(2) Certification

Within 60 days after achieving the maximum production rate, the permittee shall conduct certification tests of the continuous SO_2 monitoring system in units of the applicable standard(s) to demonstrate compliance with 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6; and ORC section 3704.03(I).

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office and pursuant to OAC rule 3745-15-04, within 30 days after the test is completed.

Certification of the continuous SO_2 monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6; and ORC section 3704.03(I).

Ongoing compliance with the SO_2 emission limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

(3) Compliance with the emission limitation(s) in b) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

Visible particulate emissions from the charging baghouse stack shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9.

b. Emission Limitation:

Visible particulate emissions of fugitive dust from charging operations shall not exceed 20% opacity as an average of five consecutive charges.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR 63.309(j).

c. Emission Limitation:

Particulate emissions (PE), particulate matter emissions 10 microns and less in diameter (PM10) and particulate matter emissions 2.5 microns and less in diameter (PM2.5) shall not exceed 0.0081 lb/ton of coal and 3.7 pounds per hour from the charging baghouse.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the emission limitation through emission testing performed in accordance with Method 5 of 40 CFR Part 60, Appendix A and the procedures in 40 CFR 63.309(k).

Subpart L, section 63.303(d)(2) restricts particulate matter emissions from a charging emissions control device to 0.0081 pound per ton of dry coal charged.

The permittee estimates that filterable PE/PM10 is 0.0081 lb/ton of dry coal charged.

The hourly rate from the baghouse is determined by multiplying the controlled emission factor of 0.0081 pound per ton of coal charged times the hourly tons of coal. The PE emission factor was used as a surrogate for PM10 and PM2.5 where PM10 and PM2.5 emission factors were not available.

d. Emission Limitation:

PE/PM10/PM2.5 emissions shall not exceed 3.4 tons per year as a rolling, 12-month summation from the charging baghouse.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the PM emission factor, in pounds/ton dry coal, by the tons coal charged per month. The PM emission factor was obtained from 40 CFR Part 63, Subpart L, section 63.303(d)(2), dated April 15, 2005. The PE emissions factor was used as a surrogate for PM10 and PM2.5 where PM10 and PM2.5 emissions factors were not available.

Subpart L, Section 63.303(d)(2) restricts particulate matter emissions from a charging emissions control device to 0.0081 pound per ton of dry coal charged.

The permittee estimates that filterable PE/PM10 is 0.0081 lb/ton. The annual maximum volume of dry coal charged will be 839,500 tpy. Monthly maximum tons of coal charged will be 69958.3 tons.

For example: (69958.3 tons charged X 0.0081 lb/ton = 566.66 lbs or 0.28 ton), then

(0.28 ton per month X 12 months per year = 3.4 tpy).

e. Emission Limitation:

PE fugitive emissions shall not exceed 1.35 lbs/hr from charging.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor of 0.027 pound/ton coal charged times the maximum tons of wet coal charged per hour (500 tons) times the capture factor of 0.1 (90 % capture rate). The PE emission factor was obtained from AP-42, Section 12.2, Table 12.2-21, dated 05/2008.

f. Emission Limitation:

PE fugitive emissions shall not exceed 1.23 tpy from charging.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor of 0.027 pound/ton coal charged times the maximum tons of wet coal charged per year times the capture factor of 0.1 (90% capture rate), divided by 2,000 pounds/ton. The PM emission factor was obtained from AP-42, Section 12.2, Table 12.2-21, dated 05/2008.

g. Emission Limitation:

PM10 fugitive emissions shall not exceed 0.41 lb/hr from charging.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor of 0.027 pound/ton coal charged, times the tons of wet coal charged per hour by the capture factor of 0.1 (100 % - 90% capture rate) by 0.30 the fraction of TSP estimated to be PM10. The emission factor was obtained from AP-42, Section 12.2, Table 12.2-21, dated 05/2008.

h. Emission Limitation:

PM10 fugitive emissions shall not exceed 0.37 tpy as a rolling, 12-month summation from charging.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the emission factor of 0.027 pound/ton coal charged, times the tons of wet coal charged per month by the capture factor of 0.1 (90% capture rate) by 0.30 the fraction of TSP estimated to by PM10, divided

by 2,000 pounds/ton. The emission factor was obtained from AP-42, Section 12.2, Table 12.2-21, dated 05/2008.

i. Emission Limitation:

PM2.5 fugitive emissions shall not exceed 0.20 lb/hr from charging.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor of 0.027 pounds/ton coal charged, times the tons of wet coal charged per hour by the capture factor of 0.1 (100% - 90% capture rate) by 0.15 the fraction of TSP estimated to be PM2.5. The emission factor was obtained from AP-42, Section 12.2, Table 12.2-21, dated 05/2008.

j. Emission Limitation:

PM2.5 fugitive emissions shall not exceed 0.18 tpy as a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the emission factor of 0.027 pound/ton coal charged, times the tons of wet coal charged per month by the capture factor of 0.1 (90% capture rate) by 0.15 the fraction of TSP estimated to be PM2.5, divided by 2,000 pounds/ton. The emission factor was obtained from AP-42, Section 12.2, Table 12.2-21, dated 05/2008.

k. Emission Limitation:

SO2 emissions shall not exceed 0.0003 pound per ton of coal charged and 0.15 lb/hr from the charging baghouse.

Applicable Compliance Method:

If required, compliance with the lb/ton limit shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60 Appendix A, Method 1 through 4 and 6C.

Compliance with the lb/hr limitation was established by multiplying the emission factor of 0.0003 pound/ton wet coal charged, times the tons of wet coal charged per hour. The SO2 emission factor was calculated from the results of an October 1989 emission stack test at Jewell Coal and Coke Company located in Vansant, Virginia.

l. Emission Limitation:

SO2 emissions shall not exceed 0.14 ton per year as a rolling, 12-month summation from charging baghouse.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the emission factor of 0.0003 pound/ton wet coal charged, times the tons of wet coal charged per month, divided by 2,000 pounds/ton. The SO2 emission factor was calculated from the results of an October 1989 emission stack test at Jewell Coal and Coke Company located in Vansant, Virginia.

m. Emission Limitation:

CO emissions shall not exceed 0.0028 pound per ton of coal charged and 1.4 lb/hr from the charging baghouse.

Applicable Compliance Method:

If required, compliance with the lb/ton limit shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60 Appendix A, Method 1 through 4 and 10.

Compliance with the lb/hr limit was established by multiplying the emission factor of 0.0028 pound/ton wet coal charged times the wet tons of coal charged per hour. The CO emission factor was calculated from the results of an October 1989 emission stack test at Jewell Coal and Coke Company located in Vansant, Virginia.

n. Emission Limitation:

CO emissions shall not exceed 1.28 tpy as a rolling, 12-month summation from the charging baghouse.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the emission factor of 0.0028 pound/ton wet coal charged, times the wet tons of coal charged per month, divided by 2,000 pounds/ton. The CO emission factor was calculated from the results of an October 1989 stack test at Jewell Coal and Coke Company located in Vansant, Virginia.

o. Emission Limitation:

VOC emissions shall not exceed 1.0 lb/hr from the charging baghouse.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor of 0.0020 lb VOC/wet ton coal charged, times the wet tons of coal charged per hour. The VOC emission factor was calculated from the results of an October 1989 emission stack test at Jewell Coal and Coke Company located in Vansant, Virginia.

p. Emission Limitation:

VOC emissions shall not exceed 0.91 tpy from the charging baghouse.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the monthly emissions over the calendar year. Monthly emissions shall be determined by multiplying the emission factor of 0.0020 lb of VOC/wet ton coal charged, times the wet tons of coal charged per month, divided by 2,000 pounds/ton. The VOC emission factor was calculated from the results of an October 1989 emission stack test at Jewell Coal and Coke Company located in Vansant, Virginia.

q. Emission Limitation:

Filterable PE/PM10/PM2.5 emissions shall not exceed 0.0050 gr/dscf and 10.7 pounds per hour from the coking operation main stack.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60 Appendix A, Method 5.

The 10.7 pound per hour limit for PE was determined by multiplying the emission factor (grain loading) of 0.0050 gr/dscf times 1 pound divided by 7000 grains times the airflow of 250,000 scfm times 60 minutes per hour. The emission factor for PE was used as a surrogate for PM10 and PM2.5 where PM10 and PM2.5 emission factors were not available. The 0.0050 gr/dscf emissions factor for PE is a controlled emission factor considered Best Available Control Technology for the Gateway Energy and Coke Company, Granite City, Illinois, Permit to Construct issued March 13, 2008.

r. Emission Limitation:

PE/PM10/PM2.5 emissions shall not exceed 46.9 TPY as a rolling, 12 month summation from the coking operation main stack when the lime spray dryer is employed; and 0.049 gr/dscf and 6.3 TPY when the lime spray dryer is bypassed.

Applicable Compliance Method:

The 46.9 TPY limit was determined by multiplying the hourly particulate emissions rate by 8760 hours.

The 6.3 TPY limit was determined by multiplying the hourly uncontrolled particulate emission rate by 120 hours, the number of hours that flue gases are routed around the FGD system to allow for inspection/maintenance of the spray dryer/baghouse. The spray dryer bypass limit includes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

If required, compliance with the grain loading limitation shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60 Appendix A, Method 5.

s. Emission Limitation:

SO2 emissions shall not exceed 300 lbs/hr (based on a 3-hour block average); 192.0 lbs/hr (based on a 24-hour block average) from the coking operation main stack.

Applicable Compliance Method:

Compliance shall be demonstrated by the use of a continuous SO2 emissions monitor.

t. Emission Limitation:

SO2 emissions shall not exceed 700.8 TPY as a rolling, 12 month summation from the coking operation main stack (1.54 lb/wet ton of coal as an annual average); and 1794 lb/hour and 107.64 TPY when the lime spray dryer is bypassed.

Applicable Compliance Method:

Compliance for the 700.8 TPY as a rolling, 12 month summation from the coking operation main stack shall be demonstrated by the use of a continuous emissions monitor. If required, compliance with the lb/ton emission limitation shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60 Appendix A, Methods 1 through 4 and 6.

Compliance for the 107.64 TPY limit when the lime spray dryer is bypassed shall be demonstrated by multiplying the uncontrolled emission rate of 2491.7 pounds per hour times 120 hours, the number of hours that flue gases are routed around the FGD system to allow for inspection/maintenance of the spray dryer/baghouse and then by 1 minus 28%, the reduction effected by reduction of charge size and/or coal sulfur in the coal charge per the SSM plan. The spray dryer bypass limit includes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

The uncontrolled hourly rate is calculated by multiplying tons of coal charged times the emissions factor of 23.92 pounds of SO2 per ton of coal charged as determined by material balance calculations, times 1 minus 28%.

u. Emission Limitation:

CO emissions shall not exceed 20 ppm and 21.81 pounds per hour from the coking operation main stack.

Applicable Compliance Method:

Compliance with the ppm limitation shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60 Appendix A, Methods 1 through 4 and 10.

The pounds per hour emission limit was derived by multiplying the CO emission rate of 20 ppm, times 28, the molecular weight of CO, divided by the 385,100,000 conversion factor, times the maximum waste gas flow through the coking operation main stack, in dscf/min, times 60 minutes/hour. The CO emission rate of 20 ppm, was based on Haverhill North Coke Company, Franklin Furnace, Ohio emission test data provided by the permittee in a permit application submitted 2/13/2008.

v. Emission Limitation:

CO emissions shall not exceed 95.54 TPY as a rolling, 12 month summation from the coking operation main stack and 1.31 TPY from the main stack when the lime spray dryer is bypassed.

Applicable Compliance Method:

The emission limits were derived by multiplying the CO emission rate of 20 ppm, times 28, the molecular weight of CO, divided by the 385,100,000 conversion factor, times the maximum waste gas flow through the coking operation main stack, in dscf/min, times 60 minutes/hour, times the total hours/year of coal coking, divided by 2000 pounds/ton. Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. The CO emission rate of 20 ppm, was based on Haverhill North Coke Company, Franklin Furnace, Ohio test data provided by the permittee in a permit application submitted 2/13/2008. The spray dryer bypass limit includes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

w. Emission Limitation:

VOC emissions shall not exceed 4.67 pounds per hour from the coking operation main stack.

Applicable Compliance Method:

The emission limit was derived by multiplying the VOC emission rate of 10 ppm, times 12, the molecular weight of carbon, divided by the 385,100,000 conversion factor, times the maximum waste gas flow through the coking operation main stack, in dscf/min, times 60 minutes/hour. The VOC emission rate of 10 ppm, was based on Haverhill North Coke Company, Franklin Furnace, Ohio emission test data provided by the permittee in a permit application submitted 2/13/2008.

x. Emission Limitation:

VOC emissions shall not exceed 20.47 TPY from the coking operation main stack and 0.28 TPY from the coking operation main stack when the lime spray dryer is bypassed.

Applicable Compliance Method:

The emission limit was derived by multiplying the VOC emission rate of 10 ppm, times 12, the molecular weight of carbon, divided by the 385,100,000 conversion

factor, times the maximum waste gas flow through the coking operation main stack, in dscf/min, times 60 minutes/hour, times the total hours/year of coal coking, divided by 2000 pounds/ton. The VOC emission rate of 10 ppm, was based on Haverhill North Coke Company, Franklin Furnace, Ohio emission test data provided by the permittee in a permit application submitted 2/13/2008. The spray dryer bypass limit includes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

y. Emission Limitation:

NOx emissions shall not exceed 1 pound per ton of coal and 104.2 pounds per hour from the coking operation main stack.

Applicable Compliance Method:

Compliance with the lb/ton limitation shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60 Appendix A, Method 1 through 4 and 7E.

Compliance shall be demonstrated by multiplying the NOx emission factor of 1 pound/ton times the tons of coal processed. The 1 pound/ton emission factor was provided by the permittee with their permit to install application submitted February 13, 2008.

z. Emission Limitation:

NOx emissions shall not exceed 456.3 TPY as a rolling, 12 month summation from the coking operation main stack and 6.25 as a rolling, 12 month summation from the coking operation main stack when the lime spray dryer is bypassed.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the NOx emission factor of 1 pound/ton times the tons of coal processed divided by 2000 pounds per ton. Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. The spray dryer bypass limit includes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

aa. Emission Limitation:

Hydrochloric acid (HCl) emissions shall not exceed 14.8 pounds per hour from the coking operation main stack.

Applicable Compliance Method:

Compliance will be demonstrated in accordance with the requirements of 40 CFR Part 60, Appendix A, Method 26.

bb. Emission Limitation:

Hydrochloric acid (HCl) emissions shall not exceed 64.79 TPY from the coking operation main stack and 17.75 TPY from the coking operation main stack when the lime spray dryer is bypassed.

Applicable Compliance Method:

Compliance with the 64.79 TPY from the coking operation main stack shall be demonstrated by multiplying the HCl controlled emission factor in lbs/ton coal times the tons of coal processed divided by 2000 lbs/ton. The controlled HCl emission factor shall be calculated from the results of the most recent performance test which demonstrated compliance.

Compliance with the 17.75 TPY from the coking operation main stack while the spray dryer is bypassed shall be demonstrated by multiplying the HCl uncontrolled emission factor in lbs/ton coal times the tons of coal processed divided by 2000 lbs/ton. The spray dryer bypass limit includes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

cc. Emission Limitation:

Sulfuric acid mist (H2SO4) emissions shall not exceed 0.024 pound per ton of coal and 2.5 pounds per hour from the coking operation main stack.

Applicable compliance method:

Compliance with the lb/ton limit shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60 Appendix A, Methods 1 through 4 and 8 or alternate method approved by Ohio EPA.

Compliance with the pound per hour limit shall be determined by multiplying the H2SO4 emission factor of 1.22 lb per ton of coal processed times the tons of coal processed per hour and then multiplying by 1 minus the H2SO4 control efficiency of 98% for the lime spray dryer with fabric filter. The H2SO4 emissions factor was based on emission testing done at the Haverhill North Coke Plant in Franklin Furnace, Ohio provided by the permittee in a permit application 2/13/08.

dd. Emission Limitation:

Sulfuric acid mist (H2SO4) emissions shall not exceed 11.13 tons as a rolling 12-month summation from the coking operation main stack; and 91.5 lb/hour and 5.49 TPY as a rolling 12-month summation from the main stack when the lime spray dryer is bypassed.

Applicable compliance method:

Compliance with the 11.13 tons per year shall be determined by multiplying the H2SO4 emission factor of 1.22 lb per ton of coal processed times the tons of coal processed per year and then multiplying by 1 minus the H2SO4 control efficiency of 98% for the lime spray dryer with fabric filter. Compliance shall be

demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months.

Compliance with the 5.49 tons per year shall be determined by multiplying the H2SO4 emission factor of 1.22 lb per ton of coal processed times the tons of coal processed per hour and then multiplying times the hours of flue gas bypassing the baghouse with fabric filter during inspection/maintenance of the spray dryer/baghouse. Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. The spray dryer bypass limit includes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

The H2SO4 emission factor was based on emission testing done at the Haverhill North Coke Plant in Franklin Furnace, Ohio provided by the permittee in a permit application 2/13/08.

ee. Emission Limitation:

Hazardous Air Pollutant (HAP) emissions (excluding HCl) for emissions units P001 and P901 shall not exceed 3.6 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated by calculating the sum of i through iv below:

i. Coking emission control system - Main Stack:

Compliance shall be demonstrated by multiplying the summation of the individual HAP pollutant pound per ton emission factors [Table 12.2-20 of AP-42 Section 12.2 dated May 2008] by the maximum annual coal charge rate divided by 2000 lbs/ton. Metals excepting mercury are then multiplied by 5% to reflect the 95% control efficiency of the main stack spray dryer. Results of the mercury assessment report will determine the mercury control efficiency of the main stack spray dryer.

ii. Pushing Stack:

Compliance shall be determined by multiplying the emission factor of 0.00024 lb of total combined HAPs/wet ton coal charged, multiplying the emission factor of each of the following: 0.00021 lb of Benzene Soluble Compounds (BSO)/wet ton coal charged, 0.000012 lb of arsenic/wet ton coal charged, 0.000015 lb of lead/wet ton coal charged, and 0.0000021 lb of manganese/wet ton coal charged, (emission factors from October 1989 Jewell emission stack test) by the wet tons of coal charged per year divided by 2000 lbs per ton.

iii. Charging control system -baghouse stack:

Compliance shall be demonstrated by multiplying the emission factor, in pounds/ton, times the maximum tons of coal charged per year, divided by 2,000 pounds/ton. The HAPs emission factor was obtained from AP-42, Section 12.2, Table 12.2-21, dated May 2008.

iv. Quench Tower:

Compliance shall be determined by multiplying the summation of the HAP emission factor, in pounds/ton, times the wet tons of coal charged per year, and divide by 2000 pounds/ton. The HAPs emission factor shall be calculated from the results of the most recent quench water analysis which demonstrated compliance.

v. HRSG bypass stacks:

Compliance shall be demonstrated by multiplying the summation of the individual HAP pollutant pound per ton emission factors [Table 12.2-20 of AP-42 Section 12.2 dated May 2008] by the tons of coal charged per day multiplied by the percentage of total waste gas venting through the 5 vent stacks divided by 2,000 lbs/ton.

ff. Emission Limitation:

Visible particulate emissions from the main stack shall not exceed 10% opacity as a 6-minute average.

Visible particulate emissions from the main stack during permitted lime spray dryer/fabric filter maintenance bypass periods shall not exceed 20% opacity as a 6-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(1).

gg. Emission Limitation:

PE, PM10 and PM2.5 shall not exceed 21.0 pounds per hour (0.049 gr/dscf) from any single HRSG bypass stack during bypass of the lime spray dryer and the heat recovery steam generator.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 - 5.

The 21.0 pound per hour limit for PE was determined by multiplying the emission factor (grain loading) of 0.049 gr/dscf times 1 pound divided by 7000 grains times the airflow of 250,000 scfm times 60 minutes per hour to show hourly emissions from all five HRSG bypass stacks and dividing by five to show hourly emissions from a single HRSG bypass stack. The emission factor for PE was used as a surrogate for PM10 and PM2.5 where PM10 and PM2.5 factors were not available. The 0.049 gr/dscf emission factor for PE is an uncontrolled emissions factor provided as an engineering estimate by the permittee.

hh. Emission Limitation:

PE, PM10 and PM2.5 emissions shall not exceed 10.1 tpy as a rolling, 12-month summation from the HRSG bypass stacks during bypass of the lime spray dryer.

Applicable Compliance Method:

The annual emissions limit was determined by multiplying the hourly emissions limit from a single HRSG bypass stack times the number of allowable bypass hours (960) divided by 2000 lbs per ton. This limit excludes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

ii. Emission Limitation:

SO2 emissions shall not exceed 498.33 lbs/hr (23.92 lb/ton of coal) from any one HRSG bypass stack during bypass of the lime spray dryer.

Applicable Compliance Method:

Compliance with the allowable emission limitations shall be demonstrated by the emission testing as described in f).

jj. Emission Limitation:

239.2 tpy SO_2 as a rolling, 12-month summation from the bypass HRSG bypass stacks.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the hourly SO2 emission rate by the cumulative annual hours of operation of the bypass HRSG bypass stacks divided by 2000 lbs per ton. This limit excludes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

kk. Emissions limitation:

NOx emissions shall not exceed 20.8 lbs/hr (1 lb/ton of coal) from any single HRSG bypass stack during bypass of the lime spray dryer.

Applicable Compliance Method:

Compliance shall be determined by multiplying the NOx emission factor of 1 pound/ton times the tons of coal processed per hour multiplied by an estimated 20% of total gas venting. The uncontrolled NOx emission factor of 1 pound/ton of coal shall be verified through emission testing of the main stack.

ll. Emission Limitation:

NOx emissions shall not exceed 10.0 tons per year as a rolling, 12-month summation from the HRSG bypass stacks during bypass of the lime spray dryer.

Applicable Compliance Method:

Compliance shall be determined by multiplying the NOx emission factor of 1 pound/ton times the tons of coal charged per year multiplied by an 2.19% of total gas bypass (an average of 192 hours allowed of control device bypass for each stack divided by 8760 hours/year) and then dividing by 2000 lb/ton. This limit excludes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

mm. Emission Limitation:

Hydrochloric acid (HCl) emissions shall not exceed 59.17 lbs/hr from any single HRSG bypass stack during bypass of the lime spray dryer.

Applicable Compliance Method:

Compliance shall be demonstrated by material balance based on the amount of coal charged and the coal chlorine concentration using the records of tons of coal processed and coal analysis.

nn. Emission Limitation:

Hydrochloric acid (HCl) emissions shall not exceed 28.4 tons per year from HRSG bypass stacks during bypass of the lime spray dryer.

Applicable Compliance Method:

Compliance shall be demonstrated by material balance based on the amount of coal charged and the coal chlorine concentration using the records required in d) [12 month summation of coal charged] and [coal analysis]. This limit excludes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

oo. Emission Limitation:

CO emissions shall not exceed 4.36 lbs/hr (20 ppm) from any single HRSG bypass stack during bypass of the lime spray dryer and the heat recovery steam generator.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the CO emission rate of 20 ppm times 28, the molecular weight of CO, divided by the 385,100,000 conversion factor, times the maximum waste gas flow, in dscf/min, times 60 minutes/hour, times 0.20, the fraction of the total waste gas expected to be vented from any single HRSG bypass stack. The uncontrolled CO emission factor of 20 ppm shall be verified through emission testing of the main stack.

pp. Emission Limitation:

CO emissions shall not exceed 2.09 tons per year as a rolling, 12-month summation from HRSG bypass stacks during bypass of the lime spray dryer.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the CO emission rate of 20 ppm times 28, the molecular weight of CO, divided by the 385,100,000 conversion factor, times the maximum waste gas flow, in dscf/min, times 60 minutes/hour, times 0.20, the fraction of the total waste gas expected to be vented from any single HRSG bypass stack, times the total hours/year of all by-pass events, divided by 2,000 pounds/ton. This limit excludes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

qq. Emission Limitation:

VOC emissions shall not exceed 0.93 lb/hr from any single HRSG bypass stack during bypass of the lime spray dryer.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the VOC emission rate of 10 ppm times 12, the molecular weight of carbon, divided by the 385,100,000 conversion factor, times the maximum waste gas flow in dscf/min, times 60 minutes/hour times 0.20, the fraction of the total waste gas expected to be vented from any single HRSG bypass stack.

rr. Emission Limitation:

VOC emissions shall not exceed 0.45 ton per year from HRSG bypass stacks during bypass of the lime spray dryer.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the VOC emission rate of 10 ppm times 12, the molecular weight of carbon, divided by the 385,100,000 conversion factor, times the maximum waste gas flow in dscf/min, times 60 minutes/hour times 0.20, the fraction of the total waste gas expected to be vented from any single HRSG bypass stack, times the total hours/year of all by-pass events, divided by 2000 pounds/ton. This limit excludes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

ss. Emission Limitation:

Lead (Pb) emissions from HRSG bypass stacks shall not exceed 0.055 ton per year.

Applicable Compliance Method:

The emission limitation for HRSG bypass stacks was derived by multiplying the uncontrolled emission factor of 4.56E-03 pounds of lead per ton of wet coal charged (from the Haverhill April 2006 emission stack test) times the maximum volume in tons of wet coal charged annually during bypass (20,000 tons). This

limit excludes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

tt. Emission Limitation:

Mercury emissions from any single HRSG bypass stack shall not exceed 0.0069 pound per hour.

Applicable Compliance Method:

US EPA method 29 shall be used to demonstrate compliance with this emissions limit. An alternative method may be employed if approved by Ohio EPA.

uu. Emission Limitation:

Mercury emissions shall not exceed 12.4 pounds per year from all HRSG bypass stacks and from the main stack during bypass of the lime spray dryer/fabric filter, combined.

Applicable Compliance Method:

The hourly mercury emissions rate as determined using US EPA method 29 multiplied by the total hours use of each HRSG bypass stack shall be used to demonstrate compliance with this emissions unit. An alternative method may be employed if approved by Ohio EPA.

vv. Emission Limitation:

Sulfuric acid mist (H2SO4) emissions from any single HRSG bypass stack shall not exceed 25.4 pounds per hour.

Applicable Compliance Method:

Compliance shall be determined by multiplying the H2SO4 emission factor of 1.22 lb per ton of coal processed times the amount of coal processed during HRSG maintenance and then dividing by the number of HRSG bypass stacks and then dividing by the number of hours of bypass. The H2SO4 emission factor was based on emission testing done at the Haverhill North Coke Plant in Franklin Furnace, Ohio provided by the permittee in a permit application 2/13/08.

ww. Emission Limitation:

Sulfuric acid mist (H2SO4) emissions from all HRSG bypass stacks shall not exceed 12.20 tons per year as a rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be determined by multiplying the H2SO4 emission factor of 1.22 lb per ton of coal processed times the amount of coal processed during HRSG maintenance and then dividing by 2000. Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. The H2SO4 emission factor was based on emission testing done at the Haverhill North Coke Plant in Franklin Furnace,

Ohio provided by the permittee in a permit application 2/13/08. This limit excludes emissions from the HRSG bypass stacks that occur during maintenance of the lime spray dryer/baghouse.

xx. Emission Limitation:

Visible particulate emissions from the HRSG bypass stacks shall not exceed 20% opacity as a 6-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(1).

yy. Emission Limitation:

PE/PM10/PM2.5 emissions shall not exceed 0.04 pound per ton of coke pushed and 14.3 lbs/hr from the flat push hot car (FPHC) multiclone outlet.

Applicable Compliance Method:

If required, compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Methods 1 – 5 and 40 CFR 63.7322.

The 14.3 pounds per hour limit for PE was determined by multiplying the uncontrolled emission factor (0.04) times the maximum tons of coke charged per charge (35.9 tons) times the maximum number of charges per hour (10). The 0.04 lb/ton emission factor for PE is a controlled emission factor provided as an engineering estimate by the permittee.

The emission factor for PE was used as a surrogate for PM10 and PM2.5 where PM10 and PM2.5 factors were not available.

zz. Emission Limitation:

PE/PM10/PM2.5 emissions shall not exceed 13.09 tons/yr as a rolling, 12-month summation from the flat push hot car vented to multiclone dust collector.

Applicable Compliance Method:

The 13.09 TPY emission limitation was determined by multiplying the emission factor of 0.04 lb PE/ton by the annual dry tons pushed and dividing by 2000. The emission factor for PE was used as a surrogate for PM10 and PM2.5 where PM10 and PM2.5 factors were not available. The 0.04 lb/ton emission factor for PE is a controlled emission factor provided as an engineering estimate by the permittee.

aaa. Emission Limitation:

SO2 emissions shall not exceed 0.098 pound per ton of coal charged and 49.0 lbs/hr from the flat push hot car vented to multiclone dust collector

Applicable Compliance Method:

If required, compliance with the lb/ton limit shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60 Appendix A, Methods 1 through 4 and 6C.

Compliance with the lbs/hr limit shall be demonstrated by multiplying the emission factor, in pounds/ton wet coal charged, times the maximum tons of wet coal charged per hour. The emission factor shall be calculated from the results of the most recent emission test which demonstrated compliance.

bbb. Emission Limitation:

SO2 emissions shall not exceed 44.71 tpy as a rolling, 12-month summation from the flat push hot car vented to multiclone dust collector

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the SO2 emission factor, in lb/ton coal, times the tons of coal charged per month, divided by 2,000 pounds/ton. The SO2 emission factor shall be calculated from the results of the most recent performance test which demonstrated compliance.

ccc. Emission Limitation:

NOx emissions shall not exceed 0.019 pound per ton of coal charged and 9.5 lbs/hr from the flat push hot car vented to multiclone dust collector.

Applicable Compliance Method:

If required, compliance with the lb/ton limit shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60 Appendix A, Methods 1 through 4 and 7E.

Compliance with the hourly emission rate shall be demonstrated by multiplying the emission factor, in pounds/ton wet coal charged, times the maximum tons of wet coal charged per hour. The emission factor shall be calculated from the results of the most recent emission test which demonstrated compliance.

ddd. Emission Limitation:

NOx emissions shall not exceed 8.67 tpy as a rolling, 12-month summation from the flat push hot car vented to multiclone dust collector.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the NO_X emission factor, in lb/ton coal, times the tons of coal charged per month, divided by 2,000 pounds/ton. The NO_X

emission factor shall be calculated from the results of the most recent performance test which demonstrated compliance.

eee. Emission Limitation:

CO emissions shall not exceed 0.063 pound per ton of coal charged and 31.5 lbs/hr from the flat push hot car vented to multiclone dust collector.

Applicable Compliance Method:

If required, compliance with the lb/ton limit shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60 Appendix A, Methods 1 through 4 and 10.

Compliance with the hourly emission limitation shall be demonstrated by multiplying the emission factor, in pounds/ton wet coal charged, times the maximum tons of wet coal charged per hour. The emission factor shall be calculated from the results of the most recent emission test which demonstrated compliance.

fff. Emission Limitation:

CO emissions shall not exceed 28.74 tpy as a rolling, 12-month summation from the flat push hot car vented to multiclone dust collector

Applicable Compliance Method:

Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. Monthly emissions shall be determined by multiplying the CO emission factor, in lb/ton coal, times the tons of coal charged per month, divided by 2,000 pounds/ton. The CO emission factor shall be calculated from the results of the most recent emission test which demonstrated compliance.

ggg. Emission Limitation:

VOC emissions shall not exceed 10.0 lbs/hr from the flat push hot car vented to multiclone dust collector.

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor, in pounds/ton wet coal charged, times the maximum tons of wet coal charged per hour. The emission factor shall be calculated from the results of the most recent emission test which demonstrated compliance.

hhh. Emission Limitation:

VOC shall not exceed 9.13 tpy from the flat push hot car vented to multiclone dust collector.

Applicable Compliance Method:

Compliance shall be demonstrated by adding the monthly emissions for the calendar year. Monthly emissions shall be determined by multiplying the VOC emission factor, in lb/ton coal, times the tons of coal charged per month, divided by 2,000 pounds/ton. The VOC emission factor (as carbon) shall be calculated from the results of the most recent emission test which demonstrated compliance.

iii. Emission Limitation:

Sulfuric acid mist (H2SO4) emissions shall not exceed 0.005 pound per ton of coal charged and 2.5 pounds per hour from the flat push hot car vented to multiclone dust collector.

Applicable Compliance Method:

If required, compliance with the lb/ton limit shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60 Appendix A, Methods 1 through 4 and 8 or an alternate method as approved by Ohio EPA.

Compliance with the lb/hr limit shall be demonstrated by multiplying the emission factor, in pounds/ton of coal, times the maximum tons of coal processed per hour. The emission factor shall be calculated from the H2SO4 emission factor of 0.005 lb per ton of coal based on the estimated H2SO4/SO2 ratio of 0.051 from the spray dryer inlet data at Haverhill provided by the permittee in a permit application 2/13/08.

jjj. Emission Limitation:

Sulfuric acid mist (H2SO4) emissions shall not exceed 2.28 tpy as a rolling 12-month summation from the flat push hot car vented to multiclone dust collector.

Applicable Compliance Method:

Monthly emissions shall be determined by multiplying the H2SO4 emission factor, in lb/ton of coal, times the tons of coal processed per month, divided by 2,000 pounds/ton. Compliance shall be demonstrated by adding the current month's emissions to the emissions for the preceding eleven calendar months. The H2SO4 emission factor shall be calculated from the H2SO4 emission factor of 0.005 lb per ton of coal based on the estimated H2SO4/SO2 ratio of 0.051 from the spray dryer inlet data at Haverhill provided by the permittee in a permit application 2/13/08.

kkk. Emission Limitation:

Visible particulate emissions from the flat push hot car vented to multiclone dust collector stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

Compliance shall be demonstrated in accordance with the requirements specified in 40 CFR Part 60, Appendix A, Method 9 and the procedures and methods required in OAC rule 3745-17-03(B)(1).

lll. Emission Limitation:

The coke oven emissions from the nonrecovery coke oven batteries shall not exceed 0.0 percent leaking coke oven doors, as determined by the procedures in 40 CFR Part 63, Section 63.309(d)(1); or

The permittee shall monitor and record, once per day of operation, the pressure in each oven or in a common battery tunnel to ensure that the ovens are operated under a negative pressure.

Applicable Compliance Method:

Should the permittee elect not to monitor and record, once per day of operation, the pressure in each oven or in a common battery tunnel to ensure that the ovens are operated under a negative pressure compliance with the limit 0.0 per cent leaking coke oven doors compliance will be demonstrated in accordance with the procedures and requirements of method 303 or 303A in appendix A of 40 CFR Part 63, Section 63.309.

mmm. Operational Limitation:

The maximum hourly charging and pushing rate for this emission unit shall not exceed 10 ovens charged per hour and 10 ovens pushed per hour.

Applicable Compliance Method:

Compliance with this operational restriction shall be demonstrated by the recordkeeping maintained in d)(3) Monitoring and/or Recordkeeping Requirements.

nnn. Operational Limitation:

The maximum annual wet coal usage rate for this emissions unit shall not exceed 912,500 tons, based on a rolling 12-month summation of the wet coal usage rates.

Applicable Compliance Method:

Compliance with this operational restriction shall be demonstrated by the recordkeeping maintained in d)(4) Monitoring and/or Recordkeeping Requirements.

ooo. Operational Limitation:

The total duration of the waste gas emissions venting, with coking gases not controlled by the spray dryer/fabric filter system, shall not exceed 1560 stack-hours per 12-month rolling period and shall not exceed 960 stack-hours per 12-

month rolling period for HRSG maintenance (excluding the time when HRSG maintenance is performed during lime spray dryer maintenance).

Applicable Compliance Method:

Compliance with this operational restriction shall be demonstrated by the recordkeeping maintained in d)(14) of Monitoring and/or Recordkeeping Requirements.

ppp. Operational Limitation:

The permittee shall operate and maintain common duct temperature at a minimum of 1400°F to ensure emission limitations for the waste gas exhaust are not exceeded.

Applicable Compliance Method:

Compliance with this operational restriction shall be demonstrated by the recordkeeping maintained in d)(15) of Monitoring and/or Recordkeeping Requirements.

g) Miscellaneous Requirements

(1) None.