



## Response to Comments

**Project: Middletown Coke Company; draft air permit-to-install (PTI)  
Ohio EPA ID #: 14-06023**

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Ohio EPA held a public hearing on August 21, 2008, 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 4, 2008.

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 cannot consider the number of people for or against a site when evaluating permit applications.

Netting

**Comment 2:** A commenter believes that Ohio is not an authorized state for administration of the federal Prevention of Significant Deterioration (PSD) and non-attainment New Source Review (NSR) programs because Ohio has not received U.S. EPA approval of recent State Implementation Plan (SIP) revisions.

Response 2: U.S. EPA approved Ohio's PSD program October 10, 2001, (see the October 10, 2001, Federal Register, page 51570) and it has been fully approved ever since that time. U.S. EPA approved Ohio's non attainment NSR program on April 22, 1996, (see the April 22, 1996, Federal Register, page 17576) and it has been a fully approved program since that time. Since that time, U.S. EPA has issued multiple modifications to the rules states must follow to develop PSD and non attainment NSR programs. Ohio has submitted revised rules to U.S. EPA to reflect these changes. However, due to nationally significant issues not related to Ohio's program, U.S. EPA has not yet acted on these submissions. The fact that U.S. EPA has failed to act upon these submissions does not cause Ohio's program to become an unapproved program. On the contrary, Ohio's program continues to this day to be a fully approved program, and we continue to have the authority to implement and enforce the PSD and non attainment NSR programs.

**Comment 3:** Concerns were raised about the netting demonstration listed in Section B – Facility –Wide Terms and Conditions in paragraph 3 and the supporting calculations and emissions. Also, commenters recommended that Ohio EPA review AK Steel's emission reduction calculations, believing them to be incorrect. Commenters are also concerned that Ohio EPA may not be using proper emissions factors and stack test data for netting purposes.

Response 3: Ohio EPA has reviewed the documents supplied by the commenter. The Sinter plant windbox is actually emissions unit P908 not F908. The condensable particulate matter 10 microns or less (PM<sub>10</sub>) 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<sub>10</sub> emissions now only include the filterable PM<sub>10</sub> portion. The particulate matter (PM) Windbox emission factor was changed from pounds per hour to pounds per ton due to the production rate exceeding 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 this agency agrees that the leak check is outside the acceptable range, therefore the first test run is not valid. Using the values from the two acceptable runs, the pound per ton value is now reduced from 0.31 to 0.29. Since the netting period is from 1999-2001 this test is the closest in time period which would best represent the actual emissions. Ohio EPA's guidance is to use the most recent available stack test to the netting 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 which was used. A 50 percent control efficiency for the use of watering as a control measure has been added to 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 Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Table 12.5-1(AP-42). You can read this document online at [www.epa.gov/ttn/chief/ap42](http://www.epa.gov/ttn/chief/ap42). 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 use of a 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 permit. 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 Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition (AP-42), Table 12.5-4 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. RACM Table 2.2.2-2 states a 50 percent control efficiency is used for watering.

Ohio EPA reviewed the PM<sub>10</sub> and particulate matter 2.5 microns or less (PM<sub>2.5</sub>) 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<sub>2</sub>/ton.

The HCDOES Monitoring and Analysis Group re-evaluated the November 23, 1993 stack test to ensure the nitrogen oxides (NO<sub>x</sub>) testing followed the approved U.S. EPA test methods. Based upon their review, the NO<sub>x</sub> 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 Department of Environmental Services 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. This agency agrees with the citizen 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 Department of Environmental Services Monitoring and Analysis Group as noted in their summary are the values which should be used.

**Comment 4:** **Commenters believe that it is not legal for Middletown Coke Company (MCC) to use emissions credits from AK Steel since they are two separate companies. Specifically, commenters request that Ohio EPA state whether MCC and AK Steel are independent companies or affiliates of a larger parent company, and if independent companies, present the regulatory justification to show how emissions decreases at an unaffiliated facility can be used in a netting analysis.**

**Response 4:** SunCoke, the applicant in the MCC project, and AK Steel are two separate and independent companies, not affiliates. However, Ohio law does contain a mechanism for allowing emissions credits to be shared between two unaffiliated companies that are considered one source. In the case of unaffiliated companies, some of the criteria that may be used to determine if the facilities would be considered one source include whether the company properties are contiguous and/or the companies are joined in some way. AK Steel and MCC own contiguous properties and are joined by a 20 year contract where MCC will sell coke exclusively to AK Steel. By

fulfilling these criteria, AK Steel is allowed to provide emissions credits to MCC under Ohio law.

**Comment 5: Commenters would like to know how Ohio EPA will ensure that the Sinter Plant credits are no longer available to AK Steel for future permitting or other Clean Air Act requirements.**

Response 5: Ohio EPA considers the emissions from the sinter plant shutdown permanent because the sinter plant has been dismantled.

**Comment 6: Commenters are concerned that the emissions credits that SunCoke is claiming from the shutdown of the AK Steel Sinter Plant are invalid because the plant was shut down more than five years before the start of construction of MCC. Citizens further request an exact date of the Sinter Plant shut-down.**

Response 6: The rule states that the contemporaneous window begins five years before construction on the particular change commences (see OAC paragraph 3745-31-01(TTT) "Net emissions increase"). Since the actual date of beginning construction cannot be known when a permit is being processed (because construction has not started), Ohio EPA has historically relied on the receipt of a complete application as the date "construction" commences. In this case, however, and, in order to be more conservative, Ohio EPA used the date Middletown Coke Company indicated in their permit application that they want to begin construction if they get their permit in time.

In MCC's original permit application received February 13, 2008, MMC indicated they expected to start construction in June 2008. Five years before June 2008 is June 2003. Since the sinter plant shut down in mid June 2003, the shutdown clearly occurred within the contemporaneous period. Ohio EPA believes using the expected start of construction from the original application as the key to deciding on the beginning of the contemporaneous period is the correct reading of the current rule.

However, after deciding to relocate a good portion of the plant away from populated areas to address citizen concerns, MCC submitted a revised application in July 2008. In this application, they indicated that construction was then not

scheduled to start until October 2008. Ohio EPA does not believe the beginning of the contemporaneous period should shift when a revised application is submitted nor do we believe the beginning of the contemporaneous period should shift when other events cause a shift in the start of construction. However, if the contemporaneous period were to shift, then the actual date the sinter plant ceased operation would be outside the shifted contemporaneous period and we would have to determine if the sinter plant shutdown credits would be viable.

The sinter plant ceased operation June 16, 2003. This date is outside the shifted contemporaneous window described above. However, Ohio EPA does not consider sources to be permanently shutdown unless the shutdown has become enforceable as a practical matter. Over the years we have run into multiple cases where facilities wanted to restart a source that had not been operating for some time. We have historically allowed sources to restart without obtaining a new installation permit if:

- They did not need to make major expenditures to get the source up and running (i.e. had the equipment deteriorated so much that it had to be rebuilt)
- They planned to continue operating the source without making any physical changes or changes in the method of operation such that a modification would be triggered

In addition to the above criteria, Ohio EPA would also review other U.S. EPA criteria including making sure the emissions from the source were not counted as part of Ohio plan to bring an area into attainment (the SIP), making sure many years had not passed (evaluated on a case-by-case basis), and determining if a permit action had been done to remove the source.

Based on all of the above, it is the opinion of Ohio EPA that the Sinter Plant was not “permanently shutdown” until the demolition of the plant began. The demolition of the Sinter Plant began sometime in April, 2004. Before that time, AK Steel could have returned the Sinter Plant back to operation because they continued to have an enforceable permit that allowed it to operate.

Based on this analysis, it is the opinion of Ohio EPA that the Sinter Plant shutdown credits fall within the contemporaneous

period (either one) and can be used as shutdown credits for the MCC permit.

**Comment 7:** A commenter points out that a decision by the First Circuit Court of Appeals (Puerto Rican Cement Case) held that permit application date is irrelevant for determining the netting period.

Response 7: Please see Response number 6.

**Comment 8:** Commenters would like to know if the shut down of the AK Steel Sinter Plant was the result of a previous enforcement or permitting action. If so, the citizens believe that the emissions credits would not be creditable according to federal regulations.

Response 8: The shutdown of AK Steel's Sinter Plant was not the result of any enforcement or permitting action requiring the shutdown of the plant, and the emissions credits are creditable.

**Comment 9:** Citizens would like to ensure that emissions decreases relied upon in the netting calculations reflect actual versus allowable emissions.

Response 9: Actual emissions were used in the emissions netting based on actual production levels for the baseline time periods.

**Comment 10:** Commenters request that, if the emissions credits from AK Steel are found to be invalid, MCC be treated as a major new source/major modification under the Clean Air Act.

Response 10: Commenters are correct in that if the emissions credits were deemed invalid, Ohio EPA would require MCC to submit a new application for a major modification or major new source. However, Ohio EPA has accepted the emission credits (see Response 6); therefore the MCC installation is not a major modification at a current major stationary source requiring a major new source review.

**Comment 11:** Citizens request that Ohio EPA re-evaluate the netting analysis taking into consideration both condensable and filterable particulate matter. Commenters believe that Ohio EPA is incorrectly applying the final U.S. EPA PM<sub>2.5</sub> New Source Review rule as well as ignoring Ohio's State Implementation Plan with regard to PM<sub>2.5</sub>.

Response 11: In the Federal Register dated May 16, 2008, U.S. EPA finalized the regulations to implement the NSR program for PM<sub>2.5</sub> (fine particulate matter). At this time, U.S. EPA is only requiring that States evaluate filterable PM<sub>10</sub> and PM<sub>2.5</sub> for NSR permits. The reason for this is due to the uncertainty of the test methods for measuring condensable emissions for fine particulate matter. This permit complies with the May 16, 2008 rule by regulating the filterable PM<sub>10</sub> and PM<sub>2.5</sub> emissions.

**Comment 12: Citizens would like to know why MCC was able to use enclosures as control devices in the calculation of fugitive emissions in the coal and coke handling devices when their reading of U.S. EPA policy and information from Ohio EPA representatives is that enclosures cannot be used as emission control devices in the calculation of emissions. The commenters would like to see revised calculations.**

Response 12: U.S. EPA has previously communicated to Ohio EPA that a control efficiency cannot be assigned for emissions captured by building. The agency is unaware of a policy which states that a control efficiency cannot be assigned for emissions captured by an enclosure.

**Comment 13: Commenters believe that coke quenching calculations are incorrect and that PM<sub>10</sub> emissions must be listed as both Total and Filterable.**

Response 13: The coke quenching emission limitation in the draft permit is incorrect. Ohio EPA has decided the coke quenching emission calculation in the application contains enough documentation to support the increased particulate matter (PM) removal efficiency based on the redesigned baffle system in the quench tower. Therefore Ohio EPA has revised the PM emissions calculations and emission limitation for this emission unit.

The following is how the particulate matter pollutants are defined:

- PM – PM emissions only include the filterable portion per OAC rule 3745-17 (Method 5 which only measures the filterable PM).

- $PM_{10}$  –  $PM_{10}$  emissions include the filterable emissions, based on the U.S. EPA Test Method. This is based on the  $PM_{2.5}$  NSR guidance recently published by U.S. EPA. Please see Response 11 for more information.
- $PM_{2.5}$  –  $PM_{2.5}$  only includes filterable emissions at this time. This is based on the  $PM_{2.5}$  NSR guidance recently published by U.S. EPA. Please see Response 11 for more information.

**Comment 14:**      **Citizens believe that the emissions calculations done for the quench tower are inaccurate because they assume that quenched coke is completely quenched and the baffles are always clean.**

Response 14:      The emissions from the quench tower are based on the best available data. It is the permit holder's responsibility to operate the equipment in the manner in which it was designed. This includes equipment maintenance, such as cleaning the baffles. If the equipment is operated properly, the emissions calculations will be accurate.

**Comment 15:**      **Citizens believe that the  $SO_2$  emissions from the coke battery were incorrectly calculated because MCC cannot use coal with a sulfur content of 1.3 percent and still make an acceptable product for AK Steel. Therefore, the netting calculations should use 1.1 percent sulfur content and the calculations re-done.**

Response 15:      A coal sulfur content of 1.3 percent corresponds to an emission factor of 23.92 lbs  $SO_2$ /ton wet coal charged. This is the correct emission factor for the maximum amount of sulfur in the coal charged to the ovens.

Note that:

50-60 percent of the sulfur in the coal stays in the coke, and 1 pound of sulfur (molecular weight = 32) produces two pounds of sulfur dioxide ( $SO_2$ ) (molecular weight = 64).

To be conservative, assume 50 percent of the sulfur in the coal goes to the flue gas.

Sulfur to flue gas/wet ton coal =  $23.92 \times 0.5 = 11.96$  lbs sulfur to flue gas/wet ton coal

$SO_2$  to flue gas/wet ton coal =  $11.96 \times 2 = 23.92$  lbs  $SO_2$ /ton wet coal

Therefore, 23.92 lbs SO<sub>2</sub>/ton wet coal is correct and is coincidentally the same as the value for lbs sulfur/wet ton coal.

This limit is the same as for SunCoke's Haverhill facility. The Middletown facility will buy coal from similar sources as the Haverhill facility which is currently using coal with a sulfur content >1.0 percent. When setting permit limits, Ohio EPA tries to look at worst case scenarios to ensure that, even in the worst case, emissions will stay below levels that could be harmful to human health. Because MCC might use coals with a higher sulfur content, this establishes the maximum potential emissions for the facility. Whether coal with greater than 1.1 percent sulfur content would make an acceptable product for AK Steel is an internal MCC business decision and not relevant for setting permit limits.

**Comment 16:** **A commenter is concerned that rail cars carrying coal will be open to the atmosphere with no dust suppression and requests that these fugitive emissions be added to fugitive emissions calculations.**

Response 16: Railcars are mobile units, not storage units, so fugitive emissions were calculated for unloading but not storage.

**Comment 17:** **A comment was made that condition B.3 of the draft permit purports to place emissions limitations on AK Steel, even though this permit would be issued to SunCoke. All aspects of Draft Permit Condition B.3 of the Middletown Coke Company Draft Permit that are supposed to be binding on AK Steel must be reflected in a permit issued to AK Steel.**

Response 17: AK Steel's operating permit will be modified to account for the changes at the No. 2 Boilerhouse flame safety management system.

**Comment 18:** **A commenter believes that AK Steel did not account for the emission increase of SO<sub>2</sub> from the hydrogen sulfide scrubbers which were shut down sometime between 2002 and 2006 and that these emissions must be included in the netting calculations.**

Response 18: Ohio EPA requested additional information from AK Steel to answer this question. AK Steel had previously operated a sulfuric acid plant as part of the coke oven by-products plant at

the Middletown site. The sulfuric acid plant was used to remove sulfur from the coke oven gas. In late 2000, AK Steel shut down the sulfuric acid plant. Although they shut down the sulfuric acid plant, they were still able to comply with the hydrogen sulfide limit for the coke oven gas. AK Steel does an analysis of the coke oven gas to ensure it complies with the hydrogen sulfide limit in its permit.

The hydrogen sulfide scrubbers referenced in the comment letter were shut down in 2002. While they did remove hydrogen sulfide gas, the hydrogen sulfide removed was vented back to the primary cooler and ended up back in the coke oven gas. This coke oven gas was fired at the Wilputte Battery, slab reheat furnaces and flare. Since the hydrogen sulfide removed by the scrubbers ended up back in the gas stream, the shutting down of the scrubbers did not lead to any increase in sulfur dioxide emissions.

**Comment 19:** **A commenter believes that the netting analysis is invalid because it does not take into consideration emissions increases at AK Steel during the past five years.**

Response 19: A review of Ohio EPA's records revealed that there were only two minor increases in VOC emissions over the last five years. These increases do not impact the netting analysis.

**Comment 20:** **Commenters believe that AK Steel's emission decreases from the sinter plant shut down and the boiler house flame safety management project cannot be used for netting purposes because the decreases are not federally enforceable. They wish a demonstration of how these decreases will be "permanent and enforceable" as required by federal regulations.**

Response 20: Please see Responses 5 and 6. Also, the AK Steel operating permit will be modified to account for the No. 2 Boilerhouse flame safety management system used for emissions credits in this permit, and so will be enforceable.

**Comment 21:** **Commenters are concerned that AK Steel and MCC will be considered one facility for the purposes of netting, but that past permit violations by AK Steel will not be considered during the permitting process.**

Response 21: While it is true that AK Steel and MCC will be considered one facility for the purposes of netting, Ohio's rules do not require

that past permit violations by AK Steel be considered during the permitting process.

**Comment 22:** **A citizen is concerned that SunCoke's Haverhill permit uses supplemental natural gas in the waste gas collection system, while the application by MCC does not mention the use of natural gas in this system. The citizen requests that Ohio EPA confirm if MCC will use natural gas in this system, and if so, account for the emissions from this system in the permit and the netting analysis.**

Response 22: SunCoke will not use supplemental natural gas in the waste gas collection system at the Middletown Coke Company.

**Comment 23:** **A citizen is concerned that the proposed SunCoke plant will emit significant amounts of hydrogen sulfide and total reduced sulfur. Specifically, emissions of these pollutants would be expected from charging and pushing operations, as well as from the hot car stack. Without appropriate Best Available Control Technology (BACT) and/or Lowest Achievable Emission Rate (LAER) limits and offsets for hydrogen sulfide and total reduced sulfur, the draft permit does not comply with the Clean Air Act.**

Response 23: The plant design is such that no hydrogen sulfide and total reduced sulfur are emitted since gases that are generated travel through the system and are retained for a comparatively long residence time during which they are combusted.

Also, BACT and LAER are both associated with major new or modified sources. The installation by MCC is not considered a major modification at a current major stationary source due to the netting process.

**Comment 24:** **Commenter states that the PM<sub>2.5</sub> and SO<sub>2</sub> emissions emitted from AK Steel's sintering plant were not included in Ohio EPA's 2005 emission inventory.**

Response 24: The rules governing the use of shutdown credits contains a prohibition that states that shutdown credits cannot be used to net out a new source if the director has relied on the same shutdown credits to demonstrate attainment or to bring an areas into attainment. Ohio has submitted a plan to bring the Cincinnati area into attainment with the PM<sub>2.5</sub> standard. As part of that plan, an inventory of air pollution sources was included. The inventory submitted did not include emissions

from the sinter plant because it had already shut down. This plan and inventory is currently under review by U.S. EPA and has not yet been approved.

If U.S. EPA approved the plan as is, Ohio could not use the sinter plant shutdown credits for the MCC permit. However, since the plan has not been approved, SunCoke can still use the credits for the MCC permit as long as Ohio EPA submits a revision of the plan to U.S. EPA that adds the sinter plant emissions back into the inventory. Ohio will and can do this because the additional emissions from the sinter plant will not impact Ohio's ability to bring the area into attainment.

**Comment 25:** **Commenter states that the emission reductions of the sinter plant are not creditable based on increased adverse public health impacts from the MCC plant since Butler County is in non-attainment of the particulate matter standard. Another commenter would like to know whether any air quality modeling of the sinter plant shutdown has been done to show that the decreases have the same qualitative significance for public health as the increased emissions from the new facility.**

**Response 25:** As the commenters have pointed out, in order to be creditable, "impacts must have approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change." In other words, the pollution credits must be used to offset pollutants with the same public health impact. In the comment about particulate matter concentrations, the commenter is comparing the air quality today with air quality in the future when the plant is in operation. According to the rule, however, the comparison must be made between the netting period and when the plant is in operation. Ohio EPA modeled adding pollutants from the new coke oven battery against subtracting pollutants from the sintering plant shutdown to determine what the net impact of MCC would be. The modeling analysis showed decreases in all emissions except NOx.

**Comment 26:** **Commenter states that MCC should have used the last two years of production from the sinter plant for netting purposes.**

**Response 26:** The applicant is not required to use that specific period in the netting analysis. Instead, the rule allows any two-year period in the ten years prior to the shutdown of the source.

**Comment 27:** Commenter states that newer emission factors are available for sinter production and should be used for the netting analysis.

Response 27: Ohio EPA used source test data from the actual emissions unit in the netting analysis. It is more appropriate to use actual test data when calculating emissions rather than a general emissions factor.

**Comment 28:** Commenter states that the impact of new Maximum Achievable Control Technology (MACT) controls should have been used to lower the credits available.

Response 28: MACT controls do not apply to this project because they were not in effect at the time of the sinter plant's operation.

**Comment 29:** A citizen requests a formal administrative hearing for Mr. Robert Snook to present his netting calculations before the Director makes a final decision.

Response 29: Representatives from Ohio EPA and Hamilton County Department of Environmental Services (HCDOES) met with Mr. Snook at HCDOES on August 5, 2008. At this meeting, Mr. Snook presented his views to the Agency and was able to ask questions. Mr. Snook also submitted extensive written comments which were reviewed by staff at both HCDOES and Ohio EPA. The Director has no plans to meet with Mr. Snook at this time.

#### Middletown Coke/FDS Coke Permit Differences

**Comment 30:** Citizens believe that the emissions limitations imposed in a recent permit-to-install issued to the FDS Coke facility in Toledo, Ohio should be considered Best Available Technology (BAT) and that emissions limits should be applied on an industry-wide basis. If MCC's process and equipment cannot meet the standard already set by FDS, they should either amend their facility design or the permit should be denied.

Response 30: Best Available Technology (BAT) is determined by a case-by-case basis considering the design and size of the equipment to be installed. Differences in design and size of equipment can, and do, make a difference in the resulting BAT

requirements. This is why the BAT limits and requirements for the MCC facility do not look exactly like the BAT limits and requirements for the FDS Coke facility. In determining the appropriate BAT requirements, Ohio EPA reviewed the FDS Coke facility, the Sun Coke Haverhill facility along with other coke manufacturing facilities. Based on this detailed evaluation, Ohio EPA believes the BAT limits and requirements contained in the final permit meet the rule requirements.

**Comment 31: Citizens believe that indoor coal storage should be required at MCC since it is required by the FDS Coke permit.**

Response 31: Based on the MCC application, the size of the FDS coal piles would be much smaller than the proposed size of MCC's coal storage piles. Therefore, 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 fugitive dust.

**Comment 32: Several citizens commented that the lime spray control efficiency for SO<sub>2</sub> is different than the control efficiency for FDS Coke and/or Haverhill Coke. They would like to see the efficiency set above the current 90 percent level.**

Response 32: The FDS Coke and Haverhill Coke permits differ from the MCC permit in that the former permits are PSD permits and the MCC permit, because of netting, is a minor modification permit. This difference may result in differing levels of control requirements contained in the permits.

Ohio EPA considered the operational experience gained from the Haverhill plant when setting the SO<sub>2</sub> emission limitation for the MCC plant. The Agency used a review of the continuous monitoring data for SO<sub>2</sub> at Haverhill to set the proper level of control for MCC, based upon realistic operational characteristics of the control device's performance. While the percent control is slightly lower at MCC (90 vs. 92 percent), the averaging period at MCC is tighter in that compliance is required over a 3-hour time frame instead of the 24-hour period at Haverhill. This level of control was determined to be the best available technology for the MCC permit.

**Comment 33:** Commenter requests that the draft permit set limits on the number of coke ovens charged and pushed within an hour. These limits should be set to three ovens per hour as contained in the permit issued to FDS Coke.

Response 33: There are such limits in the draft permit; the draft permit limits the number of charges and pushes to ten each per hour. The FDS Coke equipment is of different design than MCC. The MCC equipment has been designed to operate at this level.

**Comment 34:** Citizens are concerned that the draft PTI does not contain control efficiency requirements for mercury emissions from the main stack. They further point out that the permit for FDS Coke contains a mercury control efficiency of 90 percent, which should be considered best available technology and required in the MCC PTI. Finally, there was some confusion as to whether mercury would be emitted through the main stack or bypass stacks only, as the permit only includes limits on the bypass stacks.

Response 34: MCC will be emitting mercury from both the main stacks during normal operation and the bypass stacks when needed. Due to the current technology limitations associated with controlling mercury emissions, Ohio EPA is requiring MCC to conduct mercury emission testing if the facility is built. If the draft PTI is issued final, and once the mercury emission testing has been completed, MCC will submit a new air permit-to-install application to Ohio EPA. Ohio EPA will then modify the final issued air permit to install to incorporate a control efficiency for mercury.

It is important to note that MCC submitted an air dispersion modeling analysis of potential mercury emissions, and this analysis used a very low control efficiency in order to model the potential worst case scenario. This modeling analysis showed that even worst-case mercury emissions would not exceed the safe levels established by U.S. EPA to protect public health. The safe standards are designed to protect the most vulnerable members of society, including children and the elderly, in both short-term and long-term exposure situations.

**Comment 35:** Citizens request that the method for charging coal be changed from loose coal charging to a flat coal carrier car with stamped coal cake in order to meet the emissions limits permitted for FDS Coke in Toledo.

Response 35: 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<sub>10</sub> emissions are 0.17 ton per year and fugitive are 0.83 ton per year. MCC's stack particulate matter/PM<sub>10</sub> emissions are 6.72 and fugitive PE are 1.23 tons per year and fugitive PM<sub>10</sub> 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 36:** A citizen requests that Ohio EPA provide the modeled pollutant loads for Amanda Elementary School, Monroe K-12 School and Garden Manor Nursing Home. The citizen further requests that the answer include the most likely and worst case scenarios showing, by pollutant, the most likely daily load and the maximum worst case load.

Response 36: The applicant performed air quality modeling of the proposed plant. The modeling examined the impacts from several scenarios. The impacts were calculated using a U.S. EPA-approved model and impacts were calculated at a large number of points surrounding the plant, including the locations specified by the commenter. In all scenarios, the impact of the emissions at all receptor locations was less than the National Ambient Air Quality Standards, which is determined to be protective of public health. Ohio EPA has approved the submitted modeling analyses for this permit. The results of these analyses, while too lengthy to be included here, are available by appointment at the office of HCDOES in Cincinnati, OH. Interested parties should contact HCDOES at (513) 946-7777 for more information.

**Comment 37:** A citizen is concerned that the final main stack height will be less than 20 feet above roadways and at Monroe K-12 on the west side of the site and that this was not taken into consideration during the modeling process.

Response 37: The main stack from the coke oven battery is over 200 ft. high. Ohio EPA believes that the commenter is referring to the shorter oven bypass stacks. These stacks are limited to less than 15 days use per year. In the case of all stacks, air dispersion modeling was based on the final grade of the site and demonstrated compliance with the National Ambient Air Quality Standards (NAAQS).

**Comment 38:** A citizen would like to know if Ohio EPA's model takes into consideration thermal inversions when stack gasses are prevented from rising and dispersing normally by a higher layer of air and instead from a horizontal stream.

Response 38: Air dispersion modeling of the proposed plant's emissions used real meteorological data monitored at a representative location near the proposed site. These data would include any influences caused by thermal inversions or any other meteorological phenomena. Typically, when a thermal

inversion occurs, the plume gasses are hot enough to “punch” through the inversion layer and continue to rise and disperse.

**Comment 39:** **Commenter states the air modeling fails to demonstrate compliance with the NAAQS due to improper representation of several emission sources, including coal and coke storage piles and fugitive emissions of PM and SO<sub>2</sub>.**

**Response 39:** (a) Improper Representation of Coal and Coke Storage Piles Emissions:

There are a number of fugitive emission points associated with materials handling at the planned MCC operations. Suppression of particulate emissions from these locations is important to reduce likely entrainment and downwind impacts. As shown in Table 3-1 of the application, control strategies have been developed to mitigate emissions including the use of wet suppression on coal and coke storage piles.

Suppression techniques such as these applied to an entire storage pile limit wind erosion and entrainment effects reducing emissions. The crusted pile surfaces effectively make the pile dormant except when wind speeds exceed friction velocities which effectively increase based on the type of suppression technique used, precipitation amount and frequency and pile usage rates.

There are many ways to represent the emissions of material from fugitive sources including storage piles. A pile can be considered to emit as an area source, a volume source or even a point source. The objective is not so much as to the characterization but rather if the characterization used is appropriately protective. Just as different models are applied in a hierarchical manner to assess air quality impacts, so too are different source characterizations. Beginning with more conservative models and approaches, refinements can be applied to inject more specificity to the source characterization or to the model assumptions and algorithms.

For example, storage pile emissions can be assumed to occur each hour of the day even though conservative, or could also be characterized as emitting only when sufficient wind speeds are attained to disturb the pile or when the pile being used – which would not occur each hour of the day. These wind blown storage pile emissions would be based on hourly wind

speeds and a typical pile orientation and specific wind speed related emission rates, and a pseudo-point source (volume source) could be used.

MCC decided to conservatively model the pile as a point source with emissions occurring every hour of the day from a single location with very little initial dispersion. The piles are many meters in effective diameter but were modeled with less than a meter diameter. Because there is a small vertical component the velocity was set to a nominal value of 0.1 m/s. Together with an ambient exhaust temperature the effect of the model characterization is to put all the pile emissions in a small spot at about half the pile height in the atmosphere and then let it be subject to dispersion each and every hour of the day. This approach should yield a conservative assessment of the impacts from storage pile fugitive emissions.

#### (b) Improper Representation of Fugitive Particulate Emission Sources

As noted above, MCC decided to use conservative assessments and allow for some flexibility in design and construction. Material handling emissions typically occur over a small range of distances and heights depending on the process. For example, covered conveyor transfer stations allow for material from one conveyor to drop onto another and this occurs within an enclosure. The emissions are released to the atmosphere passing through openings.

To characterize these many different types of processes MCC selected a uniform approach, using a generic and conservative set of characteristics set at release heights associated with the physical heights of the modeled activity. While MCC understands that each of the processes may have different physical dimensions, MCC believes the modeled representation and use of the modeled parameters provides an adequately conservative assessment of impacts on air quality from these source types and planned activity levels at MCC.

#### (c) Improper Representation of Fugitive SO<sub>2</sub> emissions

Firstly, charging emissions will be enclosed by a close-capture hood that is expected to capture 90 percent of the emissions from charging. Assuming 100 percent of the SO<sub>2</sub> emissions

from charging are emitted from the baghouse stack is reasonable.

Secondly, SO<sub>2</sub> emissions from charging are extremely small. Three operating cases were evaluated for dispersion modeling with charging emissions ranging from 0.03 to 0.05 lb/hour. Considering the distribution of charging emissions, charging emissions ranged from 0.002 percent to 0.008 percent of the total SO<sub>2</sub> emissions for the three cases. Modeling a small portion of the SO<sub>2</sub> charging emissions as fugitive would make no difference in the results.

**Comment 40: A commenter would like to know if a Class I modeling analysis was required for this project.**

Response 40: Class I modeling was not required because of the netting analysis performed. An e-mail dated June 9, 2008 from Andrea Stacy, Federal Land Manager, confirms "the NPS [National Park Service] does not feel that a Class I analysis is necessary".

#### Permit Limits and Requirements

**Comment 41: A citizen believes that the MCC permit should be re-written and restructured to resemble that of Gateway Energy and Coke Company, owned by SunCoke. In the citizen's opinion, the terms and conditions are more realistic and the permit is easier to read.**

Response 41: The Gateway Energy permit was issued by the State of Illinois and does not use the same formatting standards as Ohio EPA. Furthermore, the Gateway permit was prepared for a major source requiring both PSD and NSR, so these two permits would have major differences.

**Comment 42: A citizen is concerned that by allowing the Applicant to avoid the required PSD and Non-attainment NSR permitting, Ohio EPA would be permitting the SunCoke plant to release considerably more pollution than the Clean Air Act permits. Ohio EPA should instead require cleaner process equipment and more stringent emission limitations, and additional emission reductions in the area in the form of emission offsets.**

Response 42: The citizen is correct in saying that MCC would have been held to a different standard if they were required to undergo

PSD and NSR. However, MCC has submitted emissions credits to more than offset most of the pollutants that it plans to emit. Ohio law allows these credits to be used to classify this permit as a minor modification of a major source. This is also consistent with the Clean Air Act. MCC's proposed process equipment meets the BAT standard, which is what is required of a minor modification. Because what MCC has asked in their application is allowable under Ohio law, Ohio EPA does not have the authority to require more stringent emissions limits or additional offsets. Ohio EPA follows Ohio's environmental laws when evaluating permit applications, and these laws guide the permits that the Agency writes.

**Comment 43: A citizen questions the compliance tests upon which the permit limits are based, believing that they did not meet Federal requirements. The citizen believes that Ohio EPA must set permit limits verifiable by compliance testing.**

Response 43: The document cited by the commenter is considered guidance, not a Federal standard. In setting the emissions limitations in the MCC permit, Ohio EPA utilized the best data available. The emission limitations were established and demonstrated to be protective of public health. The MCC permit does contain requirements for compliance testing to assure that the equipment is capable of meeting the limitations once the equipment is operational.

**Comment 44: Citizens are unhappy with the amount of time that MCC is allowed to bypass the spray dryer and points out that the permit for Haverhill Coke contains fewer bypass hours. The citizens further request that during bypass hours MCC be limited to 50 percent of normal production.**

Response 44: The Haverhill permit currently includes time for heat recovery steam generator (HRSG) maintenance but not for flue gas desulfurization (FGD) system maintenance. The annual maintenance activities requested for Middletown Coke Company (MCC) are 10 days for HRSG maintenance and an additional five days for FGD maintenance. Both of these differences result from experience with operating the Haverhill facility (three years of operation) and vendors' (both FGD and HRSG) recommendations.

For the Middletown facility, 10 days were requested for the required HRSG annual maintenance. This period allows for two 5-day outages to accommodate the manufacturer-

recommended preventative maintenance and inspections. This recommendation comes from operating knowledge obtained at SunCoke's Haverhill facility where they found that proper preventative maintenance cannot always be achieved with one single annual outage. The increase to 10 days (from 8 days at Haverhill) is to accommodate the two individual 5-day outages and allow a day and half to cool the HRSGs down to allow safe entry for inspection, a day to perform necessary work and repairs, and the remaining two days to bring the HRSGs back online and proper checks by the State Inspector.

MCC requested a 5-day period for FGD annual maintenance in which they will route all gases to the waste heat stacks while work and inspections are in progress on the spray dryer and baghouse. This is a recommendation from the FGD manufacturer on required preventative maintenance periods to properly operate the unit and meet their guarantees.

Technically, MCC is a minor modification of a major source and the requirement is to install Best Available Technology (BAT) as required by Ohio law. Allowing 15 days instead of 8 days, considering experience at Haverhill, meets the BAT requirement as long as the facility limits emissions below the major modification threshold.

**Comment 45:** **A citizen is concerned that the process flow diagrams show coal being crushed before it is stored in piles. The commenter would like to see the crushing process done after the coal is stored, since storing crushed coal will create more dust than storing coal before it is crushed.**

Response 45 The plant layout provided with the permit application shows coal crushing after coal storage and immediately before coal silo bins.

**Comment 46:** **The fugitive PM emission limit from charging is based on an emissions factor of 0.027 lb PM/ton coal charged, but then assumes a capture and control efficiency of 90 percent by traveling hood and baghouse. In the same table in the draft permit (12.2-21) includes a controlled efficiency of only 70 percent. Citizens would like an explanation of the use of the 90 percent efficiency versus the 70 percent efficiency figure found in Compilation Of Air Pollutant Emission Factors, AP-42, Fifth Edition (AP-42).**

Response 46: AP-42 emissions factors are used in the absence of superior data. Although table 12.2-21 assumes 70 percent control efficiency for filterable PM, tests run on the Haverhill traveling hood and baghouse have shown the efficiency of the system to be 90 percent.

**Comment 47: Citizens are concerned that MCC will be allowed to bypass pollution control devices a total of 1,800 hours a year (360 hours per waste gas stack). They are especially concerned that the Haverhill Coke facility permit assumes only 192 hours/ 8 days per stack. A citizen also requests that a back-up pollution control system be required during those bypass periods.**

Response 47: There will be five bypass (waste gas) stacks serving the 100-oven coke battery. Each bypass stack is dedicated to a 20-oven segment. Operational records from Haverhill Coke and documentation from the pollution control vendor require maintenance work and annual inspections for a period of up to 15 days. This will ensure that the equipment is operating properly for the remainder of the year.

MCC demonstrated to Ohio EPA's satisfaction that a back-up pollution control system would be cost-prohibitive.

Note that even during a bypass event, computer modeling shows that public health will still be protected.

**Comment 48: Multiple commenters believe that the proposed fencing for the coal piles is insufficient to control dust and request covers for the coal piles/fully enclosed coal piles be added to any final permit.**

Response 48: There is no fencing requirement in the permit for the coal piles. The piles will be too large to fully enclose or cover but the permit requires the piles to be kept moist enough to ensure compliance with visible dust emission limitations

**Comment 49: Commenters request that Ohio EPA modify the draft permit to include limits on emissions of hydrogen sulfide or total reduced sulfur.**

Response 49: The plant design is such that no hydrogen sulfide and total reduced sulfur are emitted since gases that are generated travel through the system and are retained for a comparatively

long time during which they are combusted. Because they are not emitted, no limit is set for them in the permit.

**Comment 50:** A commenter is concerned that the draft PTI includes uncontrolled bypassing of the SO<sub>2</sub> control system during HRSG maintenance and inspection activities and would like further explanation of Ohio EPA's stance that the bypass would be too costly, in light of existing Ohio EPA policy requiring a cost effectiveness study for sources proposing to emit greater than 80 tons per year of SO<sub>2</sub> before controls.

Response 50: The applicant performed cost effectiveness studies and found that the additional control systems would not be cost effective. Ohio EPA agrees with this assessment.

**Comment 51:** A citizen requests that MCC be required to maintain an e-mail contact list of interested citizens.

Response 51: 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 52:** A citizen requests that MCC be required to provide notification to interested citizens, Amanda Elementary, Monroe K-12 and Garden Manor 72 hours before a scheduled equipment shut-down and as soon as possible when an unplanned release occurs, as well as detailed information about the type and quantities of the discharges.

Response 52: Ohio EPA is limited in what can be required in a permit, and cannot add this provision. Ohio EPA recommends that the commenter explore opportunities to join or form a citizens' panel to work directly with the permit holder. With regard to unplanned releases, these are considered malfunctions and are regulated under Ohio law. The type and quantities of these discharges must be reported to Ohio EPA and will be available to citizens upon request. In order to request these documents, citizens should contact HCDOES at (513) 946-7777.

**Comment 53:** A citizen asks that MCC be required to maintain an unobstructed pre-designated area along the perimeter fence so that residents can monitor and record facility operations, including at the rail line and coal piles.

Response 53: Please see Response 51.

**Comment 54: A citizen requests that MCC be required to provide interested citizens and others a list of audible emergency signals at the facility and their meanings at least once a year and when changed.**

Response 54: Please see Response 51.

**Comment 55: A citizen requests that MCC be required to provide grants to Middletown and Monroe to purchase air quality monitoring equipment for distribution to citizens.**

Response 55: Please see Response 51.

**Comment 56: Citizens ask that Ohio EPA require MCC to pay for air monitoring equipment at various locations in the area, such as specific citizens' properties, Amanda School, Monroe K-12 and Garden Manor.**

Response 56: While Ohio EPA will not be adding air monitors for particular citizens' properties to the final permit, due to citizen concerns the Agency will be requiring additional air quality monitoring above what was required in the draft permit. The final permit will require SunCoke to purchase PM<sub>10</sub>, PM<sub>2.5</sub> and Hazardous Air Pollutant (HAPs) monitors to be sited in the vicinity of the plant to determine the ambient air quality concentrations of these pollutants. HCDOES will site and operate these monitors in accordance with all Ohio EPA and U.S. EPA regulations. The following monitoring schedule will be observed:

- Toxics/Hazardous Air Pollutants –every 12 days
- PM<sub>2.5</sub> –every 3 days
- PM<sub>10</sub> –every 6 days

Many factors must be considered prior to actually siting a monitor, including the type of pollutant desired to be monitored (each monitor only measures one pollutant) and the possible locations of the monitor (siting criteria must be met).

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<sub>2.5</sub> 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.

**Comment 57:** **Several commenters requested that MCC be required to install and operate 24-hour video surveillance of coal piles and other production equipment and make such video available via a Web site.**

Response 57: Surveillance cameras are not an Ohio EPA-approved method to monitor emissions. Furthermore, the draft permit contains provisions which are adequate to assure compliance with the permit's emission limitations.

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 applicable sections of the Ohio Administrative Code (e.g., 3745-15-04) in numerous guidelines (e.g., Engineering Guides) and in a facility's air permit.

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

**Comment 58:** **A citizen requests that Ohio EPA require SunCoke work with a community liaison.**

Response 58: Please see Response 51.

**Comment 59:** **A citizen requests that a fund be established for opacity training for citizens so that they can monitor MCC when Ohio EPA inspectors are not on site.**

Response 59: Please see Response 51.

**Comment 60:** **A citizen would like to know how the coke will be stored, who will monitor the coke piles to make sure that they are being stored properly, and if automatic sprayers will be used to spray them down and how often.**

Response 60: MCC plans to routinely transfer coke off site by conveyor to be stored at AK Steel. When the conveyor needs repair, the permit does allow an emergency coke pile. MCC must keep these piles moist enough to stay within permit limits. The permit does not specify frequency of water spraying or type of

spray equipment. Instead Ohio EPA requires MCC to do what is necessary to control dust emissions and comply with permit limits, but does not specify how. Both the permittee and the local air agency will monitor the pile.

**Comment 61:** **A citizen would like to know how the coal will be stored, who will monitor the coal piles to make sure that they are being stored properly, and if automatic sprayers will be used to spray them down and how often.**

Response 61: Coal will be stored in open piles. MCC must keep these piles moist enough to stay within permit limits. The permit does not specify frequency of water spraying or type of spray equipment. Instead, Ohio EPA requires MCC to do what is necessary to control dust emissions and comply with permit limits, but does not specify how. Both the permittee and the local air agency will monitor the pile.

**Comment 62:** **Citizens believe that Ohio EPA should add a minimum allowable coking time and/or maximum charging weight to the MCC PTI.**

Response 62: The permit will require that the operator verify and document the oven is free of visible emissions as required in U.S. EPA's MACT standard prior to pushing the coke which has completed its coking cycle. This is the procedure required by U.S. EPA to ensure that the charged oven has completed its coking cycle. The methods suggested by the citizens do not assure compliance with the permit's emission limitations.

**Comment 63:** **A commenter would like to know why the MCC draft permit uses a factor of 24 pounds of SO<sub>2</sub> per ton of coal charged when the Gateway permit allows only 18 pounds of SO<sub>2</sub>/ton of coal.**

Response 63: This emission limit was established based on current operational experience at similar plants. It also accounts for variability of sulfur in coal charged to the oven battery. These permit levels, while higher than the Gateway permit, were demonstrated to be protective of human health.

**Comment 64:** **Commenter states that Suncoke's Haverhill Phase 1 and 2 and the FDS coke plant permit do not include 100 percent bypass.**

Response 64: The Haverhill permit currently includes time for heat recovery steam generator (HRSG) maintenance but not for flue gas desulfurization (FGD) system maintenance. The annual maintenance activities requested for MCC are 10 days for HRSG maintenance and an additional five days for FGD maintenance. Both of these differences result from experience with operating the Haverhill facility (three years of operation) and vendors' (both FGD and HRSG) recommendations. For more information on this schedule, please see Response 44.

Technically, MCC is a minor modification of a major source and the requirement is to install Best Available Technology (BAT) as required by Ohio law. Allowing 15 days instead of eight days, considering experience at Haverhill, meets the BAT requirement as long as the facility limits emissions below the major modification threshold.

**Comment 65: Commenter states that 100 percent bypass of the flue gas desulfurization unit and fabric filter is not consistent with MACT, BACT and BAT.**

Response 65: The MACT program does not address the bypass issue. This permit does not require BACT due to netting. The emissions limits within this permit have been determined to demonstrate BAT.

**Comment 66: Commenter is concerned that the flue gas desulfurization (FGD) control device can be taken offline without shutdown of the unit.**

Response 66: The FGD system maintenance requires shutdown of the fabric filter to allow for safe entry to the system. This is a requirement of the equipment manufacturer.

**Comment 67: Commenter states that the permit does not meet Ohio's PM and SO<sub>2</sub> State Implementation Plan (SIP) limits when bypassing would occur.**

Response 67: In consideration of the commenter's point, Ohio EPA has decided to revise the final permit to include reference to OAC rule 3745-15-06, which addresses scheduled maintenance periods and procedures for when the operator will bypass the spray dryer and fabric filter. Ohio EPA is aware of precedent

for treatment of similar circumstances at other facilities, and its rule allows bypassing 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 of Ohio EPA to operate under this condition. In contrast, bypassing for the purpose of maintenance on the heat recovery steam generators was determined to be in compliance with the emission limitations in the SIP.

**Comment 68:** **Commenter states that bypass of the HRSG for 10 days, as included in the draft permit, is not consistent with BACT and BAT.**

Response 68: Because of the netting analysis, this permit does not require BACT. Ohio EPA cannot demand more stringent controls than the law requires. The emissions limits within this permit have been determined to demonstrate BAT.

**Comment 69:** **Commenter states that BAT emission limits should be expressed in terms of lbs/ton or parts per million (ppm) similar to how the limits are expressed in the Haverhill and FDS Coke permits.**

Response 69: All emission limitations in the MCC permit are expressed in terms of pounds per hour and tons per year, which is a standard requirement for the application of BAT by Ohio EPA. Had Prevention of Significant Deterioration (PSD) been applicable to this permit, as it was in the case of Haverhill and FDS, then U.S. EPA would have required the emission limits be expressed in terms of lbs/ton or ppm similar to the Haverhill and FDS permits.

**Comment 70:** **Several comments were made regarding adding multiple SO<sub>2</sub> emission limits to the permit, either based on coal sulfur content or during bypass of the HRSG.**

Response 70: Ohio EPA believes that having multiple emissions limits based on the sulfur content of the coal being used at the time would create an unworkable situation where it would not be possible to readily demonstrate compliance.

**Comment 71:** **Commenter asserts that the visible emission limits are inconsistent and less restrictive for BAT and BACT than at Haverhill and FDS.**

Response 71: The Haverhill and FDS permits reflect the requirements of the Prevention of Significant Deterioration regulation which requires BACT and /or major source nonattainment new source review. The MCC permit is not a major source permit so these major source programs do not apply and therefore one would expect differences in the respective permits as a result. However, in comparing the MCC permit to the Haverhill permit, which has the most similar permitted equipment to MCC's, the visible emissions limitations are nearly identical.

**Comment 72: Citizens believe that dampening coal piles is inadequate for dust control, citing photos of the Haverhill facility coal piles.**

Response 72: Citizens provided photos to Ohio EPA showing heavy dust clouds from another Suncoke coke battery. Unfortunately, the photos do not give the Agency enough information to determine the source of the dust. Nothing provided to Ohio EPA demonstrates that coal piles are a source of heavy fugitive dust if adequately watered.

**Comment 73: Commenter suggests permit language for the inclusion of a continuous opacity monitor for PM<sub>2.5</sub>.**

Response 73: Ohio EPA is not aware of any acceptable technique to continuously monitor opacity from PM<sub>2.5</sub>. Also there are no suitable continuous emissions monitors available for PM<sub>2.5</sub>.

**Comment 74: A citizen asserts that since the draft permit limits fugitive charging emissions to 1.23 tons per year, the opacity reading standard for these emissions should be zero.**

Response 74: While 1.23 tons/year would not be visible if the 1.23 tons/year were spread evenly over 365 days/year, 24 hours/day, it would not be correct to limit the opacity to 0 percent. This is because these emissions only happen during charging, a relatively small percentage of the time. The opacity of these emissions may be higher than 0 percent for a very short period during charging.

**Comment 75: A citizen believes that the fugitive emissions for the coal charging operation were incorrectly calculated and that unscientific values were used. The citizen believes that Ohio EPA has no valid information on fugitive charging emissions for non-recovery ovens and that tests**

**conducted at Jewell Coke in Vasant, Virginia are flawed. Because of this, new tests should be conducted.**

Response 75: The emission factor tests referred to in this comment were incorporated by U.S. EPA Office of Air Quality Planning and Standards into their database of accepted emission factors (AP-42). These factors confirm that charging the SunCoke heat recovery ovens represents a small source of criteria and hazardous emissions.

**Comment 76: Commenter suggests the inclusion of a leak detection system for the baghouse.**

Response 76: There are no rule requirements for a separate leak detection system for the baghouse. The Ohio EPA permit requires MCC to monitor the pressure of the baghouse to determine its operational status, including leaks.

**Comment 77: A citizen requests that the permit limit for average waste heat stack emissions opacity be set at 15 percent and those of the spray dryer baghouse stack be set at 10 percent.**

Response 77: The opacity limitations sought by the commenter are based on permits and regulations not applicable to MCC. The commenter 's suggested opacity limits are based on the Maximum Achievable Control Technology (MACT) standard which explicitly states that the opacity limitation applies to a byproduct recovery coke oven, which MCC is not. MCC is a non-recovery coke oven and the opacity standard does not apply. In addition, the commenter suggested standards used at the Granite City, Illinois, SunCoke facility which is a major new source located in a PM<sub>2.5</sub> nonattainment area. While MCC is also located in a PM<sub>2.5</sub> nonattainment area, the MCC permit is not considered a major new source application which would require Lowest Achievable Emission Rate (LAER) technology. Thus, the comparison with the Granite City permit is not applicable. Furthermore there is no other regulatory requirement for more stringent opacity limitations than what was required in the draft MCC permit.

**Comment 78: A citizen suggests continuous mercury monitoring.**

Response 78: Due to the current technology limitations associated with continuous mercury emission monitors, Ohio EPA will not

require MCC to install a continuous mercury monitoring system as suggested by the citizen.

Instead, Ohio EPA will be requiring MCC to conduct emission testing to establish a control efficiency for mercury emissions, as described in Response 34.

Once a control efficiency for mercury emissions has been determined, Ohio EPA will establish monitoring control device parameters, terms and conditions for the control device.

**Comment 79:** **Commenter suggests emissions limitations based on Haverhill testing instead of 1990's emission factors from AP-42.**

Response 79: Ohio EPA relied predominantly on the Haverhill operational experience, including stack tests, when developing the MCC permit. Haverhill data were not used when a valid reason existed, in the judgment of Ohio EPA, to use another source. For instance, in some cases data from Suncoke's Jewell, Virginia facility were used as a better representation of the equipment at MCC. Ohio EPA only used factors from AP-42 when no other better data source existed.

**Comment 80:** **Residents would like to know if there are any restrictions on hours of operation or noise levels contained in the draft permit.**

Response 80: Ohio EPA does not have jurisdiction over noise levels, and so has no authority to regulate them. This permit does not limit time of day when the Middletown Coke plant may operate.

**Comment 81:** **Citizens would like to know if there are any permit provisions to clean up their homes and property should they become contaminated with coal dust.**

Response 81: Ohio EPA does not have the authority to add this requirement to the permit, and the permit does not contain such a provision. Citizens should call HCDOES at (513) 946-7777 or (800) 889-0474 to report odor, smoke, dust or other air quality complaints.

**Comment 82: A citizen would like to know who will monitor mercury emissions.**

Response 82: Ohio EPA will monitor mercury emissions from the stacks. While Ohio EPA will not physically perform the tests, an Agency representative will observe all tests, document whether proper testing procedures were followed and validate test results.

**Comment 83: Concerns were raised about the amount of time allowed in the draft permit for period of inspection, maintenance and verification of operability of the lids for the waste heat stacks.**

Response 83: Ohio EPA also had concerns about the amount of time allowed. During the processing of the draft permit, Ohio EPA had several conversations with the company concerning this issue and as a result the company supplied documentation from manufacturers indicating the time requested in support of the time allowed in the draft permit was justifiable.

**Comment 84: Commenter recommended that material balance reporting be required in the final permit to verify SO<sub>2</sub> emissions from the main stack of the coke oven batteries instead of relying on data from Continuous Emissions Monitoring Systems (CEMS).**

Response 84: 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 and in numerous guidelines (e.g., Engineering Guides) and in a facility's air permit.

In addition, according to U. S. EPA, the use of CEMS is the best mechanism for determining on-going compliance with emission limitations.

**Comment 85: Commenter recommended that Ohio EPA require the installation of a continuous opacity monitor on the main stack of the coke oven batteries as was installed at the SunCoke Granite City, Illinois facility.**

Response 85: The continuous opacity monitor (COM) on the main stack of the Granite City facility was installed because of a legal settlement separate from any state of Illinois air permit requirement. At the request of SunCoke, this requirement was incorporated into a modification of the final Illinois air permit after the legal settlement was issued.

Ohio EPA reviewed this legal settlement and has incorporated some, but not all, of the contents into the MCC draft permit. Ohio EPA chose not to incorporate COM into the final issued MCC permit because COM is not required by federal MACT regulations for a non-recovery coke oven battery operation (it is used for product recovery coke oven battery operation). MCC will use a microfiltration fabric filter within the baghouse as the main particulate control device for the coke oven battery emissions.

Historically, and at certain times by rule, Ohio EPA has chosen not to be stricter than federal standards such as MACT due to their recent promulgation. In addition, the use of microfiltration fabric filters should minimize the amount of opacity emitted from MCC's non-recovery coke oven battery operations; therefore, Ohio EPA believes that the provisions of the final air permit fulfill BAT requirements to minimize opacity in this case.

**Comment 86: Citizens, particularly those who have worked at similar facilities in the past, want to know how Ohio EPA will prevent MCC from violating their permit limits during non-inspection times, nighttime hours, malfunctions and "emergency releases." They cite personal knowledge of intentional exceedances at facilities where they worked.**

Response 86: Compliance with permit limits is monitored by both HCDOES and by self-monitoring by MCC. Specific requirements are listed in the Monitoring and Recordkeeping sections of the draft permit. Anyone with personal knowledge of intentional, unreported violations at permitted air pollution sources should report these violations to Ohio EPA.

**Comment 87: Commenters request that the reporting period for sulfur dioxide emissions be monthly.**

Response 87: Sulfur dioxide emissions will be monitored continuously from the stack at MCC. Ohio EPA requires quarterly reporting of these data. This reporting frequency is the same as required of sources having emissions much greater than MCC.

**Comment 88:** A commenter wishes to know how a 90 percent compliance test can be run on the desulfurization unit can be run when the permit allows 10 ovens to be pushed per hour. Will MCC have the cycle time in order to push nine ovens in an hour for the test?

Response 88: When compliance testing is required it must be performed when an emissions unit is operating at or near its maximum potential to emit. If testing determines that MCC overestimated its ability to push 10 ovens per hour, the permit would be modified to reflect the actual maximum pushes per hour.

**Comment 89:** A citizen requests that Ohio EPA/HCDOES inspectors be on-site 24 hours a day at MCC.

Response 89: Ohio EPA and HCDOES do not have the personnel available to be on-site 24 hours a day at any permitted facilities.

**Comment 90:** Citizens would like to know how Ohio EPA inspectors will be able to distinguish between pollution coming from AK Steel and coming from MCC should an exceedance occur. They further would like to know how these two sources will be distinguished for compliance evaluation, and how the monitors will be able to distinguish between the two similar sources.

Response 90: Some methods currently available for identifying pollutants from AK Steel will not be usable for distinguishing between AK Steel pollutants and MCC pollutants. Alternative methods, like additional visual observations, may be required. Emissions sources at the two facilities will be tested separately. Monitors located offsite will not differentiate between AK Steel and MCC emissions but will provide data valuable in determining the source of pollutants and in quantifying these pollutants.

**Comment 91:** A citizen would like to know how she can trust the third-party consultants hired by MCC to monitor emissions, since they are being paid by MCC.

Response 91: Testing by Ohio EPA is not always feasible or cost effective because the state must comply with competitive bid requirements and simply does not have the staff levels necessary to conduct independent sampling at each permitted facility. Ohio EPA relies on testing data by certified professionals paid for by the regulated facility. In order to

ensure that these certified professionals are providing Ohio EPA with correct data, the Agency conducts random spot-checks of their performance. Falsifying data is fraud and can be a felony. Penalties are severe and can include jail time, restitution and fines.

### Facility Siting

**Comment 92:** **Citizens are concerned that this facility will be located in a non-attainment area and that Butler County does not meet the U.S. EPA guidelines now being considered for PM<sub>2.5</sub>.**

Response 92: Ohio EPA shares the citizens' concerns about the current levels of PM<sub>2.5</sub> in Butler County. It is currently not meeting the federal air quality standard for fine particulate (PM<sub>2.5</sub>). While the state is working to bring Butler County into compliance with the fine particulate standard, the Clean Air Act does allow for economic development, even in nonattainment areas.

**Comment 93:** **Citizens are concerned that the MCC site was previously zoned residential and that the facility should not be sited in a residential community.**

Response 93: While Ohio EPA empathizes with these concerns, we have no authority to consider local zoning issues when we consider applications for air permits. These issues are handled on the local level, and citizens should contact the Middletown Planning Department at (513) 425-7938 for more information.

**Comment 94:** **Citizens are concerned that they will suffer health consequences due to the siting of this plant near their homes.**

Response 94: Before issuing the draft permit, Ohio EPA did extensive air dispersion modeling to make sure that the source's proposed emissions will not violate the National Ambient 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.

Water Quality Concerns

**Comment 95:** A citizen disputes the proposed non-discharge (water) design of MCC. The citizen believes that it is incorrect to say that no process water will be discharged and would like to know where water from the boiler feed water blow-down and backwash water from the zeolite filter system would be discharged. The citizen believes that MCC will also have to have a discharge of sewage from plant restrooms and other areas. The commenter requests that these concerns be added to the draft PTI.

Response 95: While the MCC facility will have some waste water, Ohio EPA considers it a non-discharge facility because it will not discharge to waters of the State. There will be two storm water retention basins to collect drainage from the site, and MCC will use this water during processing as needed. The blow down discharge from the cooling tower associated with the co-generation facility will be directed to a concrete basin and recycled back into the process.

MCC plans to discharge the cooling tower blow down to the City of Middletown's sanitary sewer. Sewage from restrooms and other areas would also go to the City of Middletown's sanitary sewer system.

Ohio EPA cannot add these concerns to the permit because air pollution permits cover only air quality concerns. The only surface water permit needed is a general storm water permit for construction activities. Ohio EPA approved MCC for coverage under the general permit on September 5, 2008. You can learn more about Ohio EPA's general permits by visiting [www.epa.state.oh.us/dsw/permits/gpfact.html](http://www.epa.state.oh.us/dsw/permits/gpfact.html).

**Comment 96:** Citizens are concerned that Dicks Creek and other local water resources, including the Greater Miami Sole Source Aquifer, will be harmed by runoff or airborne deposition from MCC.

Response 96: Citizens are concerned about both surface water and ground water. Ohio EPA does not expect any impacts to surface water from this site because the site is designed to contain rain water and snow melt and use it as process water.

The Great Miami Sole source aquifer is deep beneath the surface and it is highly unlikely that the main products and

ingredients at MCC, including coke, coal and calcium sulfate, would be any more likely to penetrate the ground than farm chemicals that have been used at this site for decades.

Finally, Ohio EPA does not review deposition of contaminants to waters of the state as part of the air permit review process. Air modeling results of potential emissions, however, indicated that emissions from MCC will be within National Ambient Air Quality Standards.

**Comment 97:**      **A citizen would like to know where the calcium sulfate sludge removed from the main stack baghouse will be stored. The citizen is concerned because it is water soluble and could impact ground water supplies. The citizen requests that MCC be required to obtain a solid waste disposal permit, which should include monitoring of ground water and quarterly reporting of the amount of sludge disposed of and its chemical composition.**

Response 97:      The lime injection scrubber of the main stack baghouse uses a wet slurry, but the liquid content evaporates and a dry product collects in the bottom of the spray dryer and in its baghouse. MCC is permitted to re-use the lime that collects in the bottom of the dryer or haul it off site to be reused or disposed of in a landfill. MCC does not need to obtain a solid waste permit because material that is being re-used is not considered waste, and ultimate disposal of the material does not occur on-site.

#### Other Concerns

**Comment 98:**      **Citizens would like to know how/why companies are allowed to emit potentially harmful pollutants.**

Response 98:      In order for industry in Ohio to exist, provide jobs and contribute to Ohio's economy, some pollutants must be emitted to Ohio's air. While many substances can be hazardous in large quantities, Ohio EPA's permits assure that emitters use the most up-to-date equipment to minimize the pollution that enters our air so that human health and the environment are protected.

Ohio's environmental rules and laws are written to allow development and industrial growth while protecting human

health and the environment. Ohio EPA neither promotes nor discourages development, but rather conducts thorough technical reviews of each permit application to ensure that facilities in Ohio are constructed to meet best available technology requirements.

**Comment 99: A citizen wonders how Ohio EPA can be neutral when evaluating a permit since the Agency collects money from sources in the form of application fees and fines for permit violations.**

Response 99: Ohio EPA does not take a position for or against a proposed facility. Our responsibility under Ohio law is to review every application based on its technical merit and to make a determination as to whether it complies with state laws and Agency rules.

Permit fees, tipping fees and other fees are part of the cost of doing business for the regulated community. The alternatives are less oversight by Ohio EPA or higher taxes to pay for programs. Very little Ohio EPA funding comes from Ohio taxpayers, compared to other state agencies. With one exception (the E-Check program in northeast Ohio), Ohio EPA does not currently receive any Ohio General Revenue Fund funding, but instead relies on the statewide Environmental Protection Fee, various other fees and federal grants.

Ohio EPA does not give facilities special privileges because they pay us application fees or fines any more than the highway patrol lets a traffic violation slide by because a motorist has paid license and registration fees.

**Comment 100: Citizens are concerned that SunCoke, the applicant for MCC, has a poor track record with compliance and citizen relations at their Haverhill facility.**

Response 100: The ownership of the proposed source is not something Ohio EPA can consider when deciding if a permit should be issued. For this review, what matters most is if the proposed source complies with all applicable air pollution requirements. Our goal with every permit is to make sure the proposed source complies with all air pollution requirements and that the permit is protective of public health. While Ohio EPA does consider past compliance histories in some types of permitting, such as hazardous waste permits, past compliance history of an applicant is not considered in the air pollution PTI process.

**Comment 101: A citizen would like to know what Governor Strickland and the Director of Ohio EPA doing to improve air quality in our state.**

Response 101: When Ohio EPA was created in 1972, air quality in Ohio was considered to be among the worst in the nation. With the passage of the 1970 Clean Air Act, air quality standards were established for six pollutants: sulfur dioxide, particulate matter, carbon monoxide, lead, nitrogen dioxide and ozone. These standards were the first step in the move toward cleaning up our air.

Ohio EPA now has a network of more than 240 air monitors showing air quality has improved in every major urban area. In fact, Ohio has the most air monitors per capita of any state in the United States. In the past 20 years, Ohio experienced a significant drop in air pollutants; lead levels have decreased by more than 95 percent and carbon monoxide levels have decreased by over 76 percent. Also, the average amount of particulate matter in the air dropped by 45 percent, sulfur dioxide levels fell by more than 52 percent and ozone decreased by 20 percent.

In 2004, Ohio EPA implemented a plan to have regulations in place that require nitrogen oxides (NOx) emissions reductions from utilities and industries. The plan complies with federal requirements, promotes flexibility and innovative technology, and, most importantly, is improving air quality in Ohio. Ohio's plan reduces NOx emissions, a contributor to ozone, by 114,000 tons per year.

Ohio's plan to clean up the air includes new requirements to further improve air quality by reducing volatile organic compound (VOC) emissions in paints, architectural coatings and consumer products and requiring the sale of portable fuel containers such as gas cans that reduce VOC emissions. Nitrogen oxides emissions will be reduced by regulations governing coal-fired power plants, industrial boilers, combustion turbines and internal combustion engines.

In addition, Ohio EPA has replaced the E-Check vehicle emissions testing program in the Cincinnati and Dayton, Ohio areas by new rules requiring low Reid vapor pressure gasoline, implementing emissions controls on auto body paint

shops, and requiring lower VOC solvents at companies with degreasing operations.

Ohio EPA's Division of Air Pollution Control also is working to further reduce the release of hazardous air pollutants into the atmosphere by implementing the federal Maximum Achievable Control Technology (MACT) program in Ohio.

This program reduces the emission of toxic air pollutants by requiring facilities that emit hazardous chemicals, including MCC, to either install advanced control technologies and/or limit the amount of hazardous air pollutants emitted.

The MACT program, along with other state and federal initiatives, has greatly reduced the concentrations of toxic compounds in Ohio's air.

**Comment 102:** **A citizen would like to know if she has to say the words “official complaint” when making a complaint to Ohio EPA /HCDOES, or if all complaints will be considered whether the citizen says the words “official complaint” or not.**

**Response 102:** The words “official complaint” do not need to be used. There is no special language needed to register a complaint with Ohio EPA, but it does help our investigators if the complainant can provide as much of the following information as possible:

- time observed
- location
- material released
- probable source
- volume and duration
- present and anticipated movement of contaminants
- weather condition
- actions initiated
- person to contact on scene

To submit an air quality complaint to Ohio EPA, citizens in the Middletown area should call HCDOES at (513) 946-7777 or (800) 889-0474. For other complaints, please e-mail [web.requests@epa.state.oh.us](mailto:web.requests@epa.state.oh.us) or call (800) 686-8930. Finally, in an emergency or to report a spill, please call the Emergency Hotline at (800) 282-9378.

Ohio EPA believes that the citizen may have been referring to a verified complaint. To submit a more formal complaint regarding an alleged violation of Ohio's environmental laws, citizens may submit a verified complaint to Ohio EPA. Upon receipt of a verified complaint, the director of Ohio EPA must initiate a prompt investigation to determine if the alleged violation has occurred, is occurring or will occur.

The person submitting a verified complaint must claim that he/she has been or will be aggrieved or adversely affected by the alleged violation. The complaint must identify a violation of any law, rule, standard or order, license, permit, variance or plan approval. These violations must relate to air or water pollution, solid or hazardous waste, infectious wastes, construction and demolition debris or a public water supply. Also, alleged violations of a law, rule, standard or order may relate to cessation of chemical handling operations. The complaint must be in writing and labeled VERIFIED COMPLAINT. Ohio Revised Code Section 3745.08 requires the complaint to be verified by the affidavit of the complainant, his agent or attorney. The person before whom the affidavit is taken shall certify that it was sworn to before him/her and signed in his/her presence.

Ohio EPA suggests that the verified complaint identify the alleged violator, give detailed statements of fact, offer documentation of the violation and be mailed to the director of Ohio EPA.

An investigation of the allegations will be conducted. If the director determines a violation is evident, the director may issue an order to the violator to correct the problem or request the Attorney General's Office to begin legal proceedings. The Attorney General will dismiss the complaint if he or she determines that prior violations have terminated and future violations are unlikely to occur, or if there was no violation.

**Comment 103:** **A citizen would like to know if Ohio EPA has ever shut down a source for violations/noncompliance. Further, the citizen wonders how many violations are required before this would occur, and if a company has ever filed their own "official complaint."**

**Response 103:** When Ohio EPA detects a violation of a company's permit, its first priority is to bring the source into compliance in order to

protect human health and the environment. Once that is done, Ohio EPA will decide whether penalties, such as a fine or referral to the Ohio Attorney General's Office, will be assessed. While Ohio EPA has shut down facilities in the past, there is no set number of violations that must occur before a facility is shut down; the decision would be made based on how egregious the violations were and the likelihood that it would occur again in the future.

Ohio EPA is not sure whether the commenter is asking if a company has ever filed a complaint against itself or against another company. A company certainly can make a complaint against another company to Ohio EPA. Also, malfunctions do sometimes occur at companies, and these may cause a facility to violate the terms of its permit. In that instance, the company is required to report both the malfunction to Ohio EPA and how the company plans to make sure that the malfunction does not occur in the future.

**Comment 104: A citizen would like to know if Ohio EPA ever works with legislators to change aspects of Ohio's environmental laws.**

Response 104: Yes. Ohio EPA has worked with the General Assembly since its inception in 1972 to improve and enhance our environmental laws. Ohio EPA employs legislative staff who serve as liaisons to the General Assembly.

**Comment 105: A citizen would like to know if the Martin and Bake farms have actually been sold yet, and if not, how Ohio EPA can permit a facility when the facility design requires land that the company doesn't own yet.**

Response 105: Ohio EPA is required to evaluate the application that we are given based on whether the applicant's plans comply with Ohio's environmental rules and regulations. An applicant who does not yet own the location described in the permit application is submitting that application to the Agency at their own risk, since the air modeling done for an air pollution PTI is location-specific. The status of any land deals that the applicant may be involved in is not part of Ohio EPA's review.

Citizens who are interested in the status of these two properties can contact the Butler County Auditor at [www.butlercountyauditor.org](http://www.butlercountyauditor.org).

- Comment 106:** Commenters believe that Ohio EPA is withholding the following information and request it be turned over to them with an extension of the comment period:
- **AK Steel production records for Sept. 1995 sinter plant windbox SO<sub>2</sub> testing**
  - **Compliance test results on the sinter plant breaker baghouse and actual baghouse engineering specifications and guarantee testing by manufacturer**
  - **No. 2 and No. 3 boiler house daily steam production records and fuels used during netting period**

Response 106: Upon reviewing Agency files, we have no record of a stack test being conducted for the sinter plant breaker baghouse (emissions unit P936). Ohio EPA contacted AK Steel and they confirmed a stack test was not run on the baghouse, possibly because the exhaust ductwork did not meet the requirements outlined in the test methods, thus a valid compliance test could not be conducted. As Ohio EPA does not have this information in our possession, we can not provide the requested records.

All information in Ohio EPA's possession was provided to the commenter. In addition, the commenter was given many opportunities to visit HCDOES offices and ask questions of staff.

Ohio EPA is unable to provide information not in our possession and has no authority to force individuals or companies to make private information public. Ohio EPA believes the information requested by the commenter which could not be provided had no bearing on the draft permit issued to MCC. Therefore, no comment period extension is granted.

- Comment 107:** **A citizen commented that SunCoke had 91 SO<sub>2</sub> violations in 2006 and 2007 at their Haverhill Coke plant and requested that these violations be investigated before Ohio EPA moves forward on issuing another permit to SunCoke.**

Response 107: Any alleged violations at the Haverhill facility will be addressed by Ohio EPA. The violations at Haverhill have no bearing on the draft permit issued to MCC.

- Comment 108:** **Commenter stated that Ohio EPA could not issue a final permit to Middletown Coke Company because Middletown**

**Coke Company has not secured approval from the Public Utilities Commission of Ohio (PUCO) Power Siting Board. The commenter cites Ohio EPA rules that an applicant of the installation of an air contaminant source must secure all permits.**

Response 108: The commenter is correct that the air pollution rule specifies that a potential source must secure all necessary permits. However, when the rule talks about securing all permits, the permits in question are other Ohio EPA permits or certifications. Approvals from other agencies, such as PUCO, are not part of Ohio EPA's permitting process for air permits.

The Ohio Power Siting Board (OPSB) certificate does not cover the coking operations at MCC and only pertains to the electricity co-generation plant that MCC plans to run off of waste heat generated from the coking process. Should the Ohio Power Siting Board deny the generation certificate, MCC could still build the coke plant providing they secure all necessary Ohio EPA permits and certifications.

The OPSB certificate will be conditional on approval of the Ohio EPA air permit, and will not be valid until the applicant has obtained the air permit and all permits required by any State or Federal agency.

#### Comments from Middletown Coke Company

**Comment 109: SunCoke agrees that the emission reductions from the shutdown of the AK Steel sinter plant may be used to "net out" MCC's emissions, and it fully supports the analysis of Ohio EPA. Although SunCoke supports Ohio EPA's analysis, it believes that the analysis is overly conservative and that EPA guidance and applicable regulations provide even more assurance that the netting analysis is authorized. Specifically, Ohio EPA used June 2003 as the starting point for the five-year netting "window," but SunCoke believes that EPA guidance and the applicable regulations suggest that the proper starting point would be no earlier than mid-2004, perhaps as late as mid-2005.**

For an emission decrease to become "creditable," it must, among other things, become "enforceable as a practical matter." See OAC 3745-31-01(TTT)(3)(e)(2). EPA has

suggested that a shutdown becomes "enforceable as a practical matter," when either: (a) the permit is modified to reflect the shutdown, (b) the source's emissions have been removed from the inventory, (c) two years have passed from the ceasing of operations, or (d) when the facility cannot be reactivated except through extensive expenditures of time and money. See e.g., Memorandum from Edward E. Reich to Stephen A. Dworkin entitled: PSD Requirements (September 6, 1978); Memorandum from John S. Seitz to David P. Howekamp entitled: Reactivation of Noranda Lakeshore Mines RLA Plant and PSD Review (May 27, 1987).

In this case, (a) the permit was never modified to reflect the change, (b) the source's emissions were not removed from the inventory until 2005, (c) two years from ceasing of operation did not pass until June 2005, and (d) the facility did not need to expend significant funds to resume operations until its demolition had proceeded apace, or by about mid-2004. Thus the earliest start date for the netting "window" would be mid-2004.

Response 109: Ohio EPA agrees with this analysis; see Response 6.

**Comment 110:** SunCoke requests that the language in permit condition C.6(c)(5) of the MCC Draft PTI be modified to use the same start-up language specified in the Haverhill PTI, Emission Unit P902, which states "*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.*" The Middletown operations will be almost identical to the Haverhill Phase II operations (i.e. HRSGs producing superheated steam for electricity generation). This will make the MCC PTI consistent with the Haverhill PTI.

Response 110: Ohio EPA concurs that the lime spray dryer and baghouse associated with the battery waste gas exhaust system would be inaccessible during initial startup. The permit will be revised as requested.

**Comment 111:** SunCoke requests that the emission limits and testing requirements for Emission Unit P001, Quench Tower, related to filterable particulate emissions (PE) be modified to the PE emission factors specified in our application for permit to install dated February 2008 and again in the

**revised application dated July 2008. We believe that these PE emission factors are representative of our current enhanced baffle design. They have been accepted in all of our latest permit applications, and we have received no adverse comment from the state agency, EPA regional office, or public. It should also be noted that the PM<sub>10</sub> and PM<sub>2.5</sub> emission factors do not change with this new baffle design.**

Response 111: Ohio EPA has reconsidered this issue and has determined that the testing performed for Compilation of Air Pollutant Emission Factors, AP-42 is based on older quench tower designs and is not comparable to the design proposed by MCC. Recognizing that testing of emissions from quench towers is a difficult undertaking, OEPA believes that calculation of the emissions from the improved design will be the best option to characterize the emissions. Based on the supporting data provided by SunCoke on this improved tower baffle design, Ohio EPA has decided to revise the allowable PE rate as requested. The PM<sub>10</sub> and PM<sub>2.5</sub> emission rates will remain unchanged from the draft permit limitations.

**Comment 112: There is a typographical error under Emission Unit F002, Coal and Coke Storage Piles, Section C.2(b)(2)d which reference a “dome enclosure of enclosed storage pile”. There will not be a dome enclosure for coal storage at Middletown. Please delete “and dome enclosure of enclosed storage pile.”**

Response 112: Ohio EPA agrees that this language was erroneously included and will revise the permit as appropriate.

**Comment 113: Section C.5(e)(4) for Emission Unit P001, Quench Tower, states that the semiannual report must identify all days during which visible emissions of fugitive dust were observed from the egress points serving this emission unit. As allowed by the permit condition specified in Table C.5(b)(1)e ,fugitive emissions must not exceed 20 percent opacity as a three-minute average. Therefore, we request the following clarification to this permit condition:**

**“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 Table C.5(b)(1)e of**

**this permit, and (b) describe any corrective actions taken to minimize or eliminate the visible emissions....”**

Response 113: Ohio EPA agrees that the suggested revision is more appropriate to address emission exceedances and therefore will revise the permit accordingly.

**Comment 114: The references to 40 CFR 63.7296 in the last paragraphs of section C.6(b)(1)c and d apply to by-product coke oven batteries and are not applicable to our facility. Please delete the following sentence from these sections: “The visible emission limitations specified by 40 CFR 63.7296 are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).”**

Response 114: Ohio EPA agrees that 40 CFR 63.7296 does not apply to MCC. The permit will be revised to make this make this point clear.

**Comment 115: Revise the limitation for the main stack in section C.6(b)(1)c. as follows:  
“NOx emissions shall not exceed 104.2 lbs/hr. Annual emissions shall not exceed and 456.25 471.0 TPY when combined with emissions from the waste gas bypass stacks as a rolling, 12- month summation.”**

**Revise limitation for waste gas stack on C.6(b)(1)d as follows:  
“NOx emissions shall not exceed 20.8 pounds per hour. Annual emissions shall not exceed 471.0 TPY from a single waste gas bypass stacks and 18.75 TPY when combined with emissions from the main stack as a rolling, 12-month summation. from all waste gas bypass stacks.”**

Response 115: Ohio EPA agrees to the requested NOx emission limitation change and will revise the permit as necessary. This revision was necessary to reduce the overall NOx emission rate to account for a slight decrease in NOx emissions credits available in the netting analysis due to a change in the AK Steel Boilerhouse No. 2 emissions.

**Comment 116: Permit condition C.3(b)(2)b uses the wording “wet suppression” under the control measure(s) column. Please change this wording to “wet material” as specified in Table 3-1 of our PTI application from February and July 2008.**

Response 116: Ohio EPA agrees that this language better describes the control measure to be implemented and will revise the permit as requested.

Comments from U.S. EPA

**Comment 117: We are uncertain as to whether, for netting purposes, the 5-year contemporaneous time period began with the cessation of the sinter plant's operation in June 2003 or its dismantling in 2004. Because netting policy emphasizes that creditable shutdowns needs to be permanent, the dismantling in 2004 could be the key event. However, an important factor to consider is intent, and it seems from the December 2003 letter the company sent to you as well as the SEC filing the company made in 2003 that its intent was for the shutdown to occur in June 2003. Another factor to consider is how Ohio EPA responded to the company's notice. Could you tell us whether you made the change in the STARS permit tracking system in response to the December 2003 letter or in response to the 2004 dismantling?**

Response 117: In a letter dated December 1, 2003 AK Steel notified the Hamilton County Department of Environmental Services (HCDOES) that the Middletown Works Sinter plant had shut down on June 16, 2003. This shut down involved emissions units F007, F009, P908, and P936. On December 12, 2003 HCDOES sent to Ohio EPA a "Request for Withdrawal/Revocation" form to notify them of the shut down. In reviewing STARS there is corrected/revised Title V application dated February 23, 2004 which does not contain emissions units F007, F009, P908, and P936. The previous corrected/revised Title V application which is dated July 3, 2003 lists emissions units F007, F009, P908, and P936 in the Title V application. Upon reviewing STARS no revocation action was taken by Ohio EPA in reference to the "Request for Withdrawal/Revocation". The draft Title V permit issued August 18, 2003 did not contain emissions units F007, F009, P908, and P936.

Based on a review of this history, Ohio EPA believes the shutdown of the sinter plant did not become practically enforceable until the demolition of the sinter plant began in

April 2004. Therefore, we believe the “shutdown” became effective in April 2004.

**Comment 118: Why does the NOx netting for the sinter plant use a different netting period (1999 to 2001) from the boiler house (2005 to 2007)?**

Response 118: As stated in your comment the baseline period selected for the Sinter Plant is June 1999 - May 2001 and the baseline period selected for the flame safety system is June 4, 2005 - June 3, 2007.

The "net emissions increase" was determined as described in Ohio Administrative Code (OAC) 3745-31-01(TTT). Potential emissions increases from the coke plant were compared with baseline actual emissions from the Sinter Plant and the flame safety system. The baseline actual emissions were determined as described in OAC 3745-31-01 (O) using the average rates during the selected 24-month periods.

OAC 3745-31-01 (O) (2) (d) does state that when a NSR project involves multiple emissions units only one consecutive 24-month period must be used to determine the baseline actual emissions if an emission unit is being changed.

However, this provision is related to changes at an emission unit not for determining the baseline for a netting analysis.

In fact, OAC 3745-31-01 (TTT) (2) specifically excludes the provision for using same 24-month period for multiple emission units when determining a net emissions increase. The specific text is: “Baseline actual emissions for calculating increases and decreases under paragraph (TTT) of this rule shall be determined as provided in paragraph (O) of this rule, except that paragraphs (O)(1)(C) and (O)(2)(d) of this rule SHALL NOT APPLY.” [Capital letters added]

Therefore, it is appropriate to use different consecutive 24-month periods for multiple emission units when determining baseline actual emissions for the purpose of determining a net emissions increase.

**Comment 119: Is it not possible to use NOx sinter plant data more recent than 1993? From the 7/1/08 conference call, we were told that there has been little testing data because there had been no NOx emission limits, but then how is AK Steel**

**Middletown able to use 1991 to 2001 as the netting period for the sinter plant?**

Response 119: The only stack test conducted for the NO<sub>x</sub> emissions from the sinter plant windbox was conducted on November 22 and 23, 1993. As noted in your comment, since the sinter plant was an existing operation, there was no permit allowable for the NO<sub>x</sub> emissions. Based on the actual stack test, the company developed a pound/ton emission rate for the NO<sub>x</sub> emissions. They then used the actual production rate in tons from 1999 to 2001 times the NO<sub>x</sub> emission factor to determine the actual NO<sub>x</sub> emissions.

**Comment 120: For the boiler house, what is the netting reduction for NO<sub>x</sub>? Our understanding from the 8/5/08 conference call is that this is being changed from the application's 100 percent reduction assumption, and that it should really be between 20 percent and 40 percent. The netting analysis for NO<sub>x</sub> relies on the fact that AK Steel's Boiler House No. 2 had 16 pilot burners having a higher BTU rating were replaced with 16 pilot burners having a lower BTU rating. The pilot burners, both before and after the change, are operated continuously every hour that the boiler(s) are in operation. The draft permit contained an emission rate calculated based on the total difference in BTU input of the pilot burners.**

Response 120: It was noted after the issuance of the draft permit that the new smaller pilot burner configuration does however contain an additional larger pilot burner that was not present in the pre-change configuration. This larger pilot was not accounted for in the emissions included in Ohio EPA's draft permit. This larger pilot is only operated for a few minutes during a fuel switch and while the boiler is operated on natural gas, which is less than three percent of the time. Almost all of the time the boilers in Boiler House No. 2 are operated using blast furnace gas and therefore the larger pilot burners are not operating.

AK Steel has subsequently provided an accounting for this fuel use which will be reflected in a revision to the netting table in the final permit and the NO<sub>x</sub> emission limitation from the MCC plant will be adjusted downward to account for this decreased NO<sub>x</sub> emission credit, in order to maintain the permit's synthetic minor status with respect to NO<sub>x</sub> emissions. The NO<sub>x</sub> emissions credits will be reduced from 49.5 TPY to 45.9 TPY.

The MCC permit allowable NO<sub>x</sub> from coking will be revised to 471.0 TPY from 475.0 TPY.

**Comment 121:** From our 7/1/08 conference call, we were told that AK Steel's visual observation-based estimate of 25 percent of TSP being PM-10 would be changed in light of the promulgation of the PM-2.5 rule. Has AK Steel Middletown re-evaluated its estimates?

Response 121: In the original permit application the company estimated the PM<sub>10</sub> and PM<sub>2.5</sub> emissions equaling 25 percent of the TSP for the raw material handling. This was based on the company's visual estimation. After questioning the appropriateness of this factor, the company revised the emission factor. They are now using the emission factors from AP-42 Table 12.5-4 which contains particle sizing information for the "Continuous drop conveyor transfer station sinter".

**Comment 122:** USEPA would like to know why only the limestone emission factor was used. Understanding that particle size distribution analyses are generally unreliable to calculate PM-10/PM-2.5 emissions from Method 5 (Total PM) data, is there a reason why Middletown is using the only limestone emission factor rather than a range of emission factors including limestone and other raw materials?

Response 122: The company has proposed to use the average factor of 0.22 pound/ton from Table 2.2.2-1 of the "Ohio EPA Reasonably Available Control Measures for Fugitive Dust Sources (RACM)" emission factor book. According to AK Steel's previous permit application 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. For example the 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 which was used. AK Steel has applied a 50 percent control efficiency to the emissions factor for the watering of the raw materials.

**Comment 123:** As Robert D. Snook, a former manager at AK Steel, mentioned in his comment letter no. 1, shouldn't the emission factor for baghouse-controlled emissions (0.1) be used instead of the one for uncontrolled emissions

**(6.8) since a baghouse is being used on the breaker and hot screens?**

Response 123: 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 Table 12.5-1. They 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 use of a 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. 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 Mr. Snook. Also the factor proposed by Mr. Snook does not account for the fugitive emissions from the breaker end and cold screen.

**Comment 124: In the portions of the draft permit stating "In accordance with the permittee's permit application, the permittee has committed to...", does this language have the same legal effect as "the permittee is required to..." ?**

Response 124: This particular language comes from a term describing the control measures the company uses to comply with Best Available Control Measures requirement found in OAC rule 3745-17-08(B). This rule and subsequent permit limit required the permittee to minimize or eliminate fugitive emissions from fugitive sources. The "committed to" language describes what the company has indicated they plan to use to comply with the BACM requirement. However, the same term goes on to say that "Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance." Based on this language, the permittee is allowed to employ other control measures not listed as long as the result is compliance with BACM. For instance, if the permittee decided to use a vegetable oil spray instead of water spray on

the conveyed coal, then the permit allows this switch as long as compliance with the BACM requirements continues.

**Comment 125: Page 29 of the draft permit requires total enclosure for coal crushing. What is the nature of the enclosure (e.g. inside a permanent building)?**

Response 125: The applicant has not specified whether the enclosure will be an actual building or some type of shed. The applicant has specified that the crushing operation will be controlled with a total enclosure and maintaining the material in a wet condition. That description would satisfy Ohio EPA's requirement of best available control measures for a fugitive dust emission source.

**Comment 126: Item (k) on p. 65 of the draft permit requires the source to modify its operations if the sulfur content goes beyond 1.3 percent in order to assure compliance with the SO<sub>2</sub> limits. However, Mr. Snook has raised doubts that Middletown will actually be burning 1.3 percent sulfur coal, saying that the percentage should be lower. Although the permit already requires monthly sulfur content analysis, is there any existing documentation, such as contracts or prior coal sampling reports, showing that the sulfur content will be as high as 1.3 percent? The only place in the permit application I see the 1.3 percent figure is the source's BAT proposal (p. 3-5 of the application).**

Response 126: Ohio EPA is not in possession of any coal contract specifications and does not require a contractual document for a permit application. In addition, Ohio EPA does not possess prior coal sampling reports because Middletown Coke Company has not commenced operations. Ohio EPA fails to understand the concern if the issue, as expressed, is a doubt that coal exceeding 1.3 percent will ever be used. This would imply that, if true, the established limitation would not be exceeded. As USEPA correctly points out, the permit requires monthly coal quality sampling and analysis once the plant is operating. In addition, SO<sub>2</sub> compliance will be monitored continuously with a CEM. In way of explanation for the unusually elevated sulfur content, Sun Coke has conveyed to Ohio EPA that current market conditions which have resulted in a shortage of "normal" metallurgical-quality coal, coal with a higher than normal sulfur content was necessary to meet demand.

**Comment 127:**      **Item (c)(3) on p. 66 of the draft permit allows the coke ovens to be charged/pushed 10 times per hour. This seems much higher than what we have observed at other coke plants, and Mr. Snook has commented that 3/hour would be more realistic. Has the company demonstrated an ability and intent to charge/push this frequently, and are the permit's allowable emissions based on 10/hour?**

**Response 127:**      The answer to each question is yes. The company has applied for 10 ovens pushed/ charged per hour, has the capability and intent to do so, and the emission limitations are based on this number.

**End of Response to Comments**