



Environmental Protection Agency

Division of Air Pollution Control

Response to Comments

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

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Ohio EPA held a public hearing on September 2, 2009, regarding a Middletown Coke Company draft PTI for the installation of a coke oven heat recovery coke making facility and associated processes. This document summarizes the comments and questions received at the public hearing and during the associated comment period, which ended on September 9, 2009.

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

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

Expressions of Support and Opposition

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

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

Emissions Calculations

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

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

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

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

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

The Sinter plant windbox is actually emissions unit P908 not F908. The condensable particulate matter 10 microns or less (PM₁₀) 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 PM₁₀ emissions now only include the filterable PM₁₀ portion. The particulate matter (PM) windbox emission factor was changed from pounds per hour to pounds per ton because the production rate exceeded the rated maximum of 125 tons/hour during the test. Based upon citizen comments concerning the leak check, Hamilton County Department of Environmental Services' (HCDOES) Monitoring and Analysis Group re-reviewed the October 12, 1998 particulate stack test. Upon review, the Agency agreed that the leak check was outside the acceptable range and the first test run is not valid. Using the values from the two acceptable runs, the pound per ton value was reduced from 0.31 to 0.29. Since the emission credit reduction period is from 1999-2001 this test is the closest period which would best represent the actual emissions. Ohio EPA's guidance is to use the most recent available stack test to the emission credit reduction period to best quantify the actual emissions.

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

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

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

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

Ohio EPA reviewed the PM₁₀ and particulate matter 2.5 microns or less (PM_{2.5}) emission factors used in the application and believes they are the correct factors. The September 29, 1995 test contains no sizing data for PM from the exhaust of the scrubber so the AP-42 emission factor was used.

Concerning the September 29, 1995 stack test AK Steel provided a production rate of 125 tons/hour in a letter dated June 24, 2008. AK Steel stated they no longer have the daily production records. As outlined in their Title V permit, they are only required to maintain this information for five years. The average emissions rate for the three runs was 588 pounds/hour. Since a pound/ton emission factor was used if the production was less than 125 tons/hour then the emission factor would be higher. During the October 12, 1998 PM test the sinter plant did have a maximum production rate of 144 tons/hour. Using this maximum value you obtain 4.0 pounds of SO₂/ton.

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

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

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

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

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

Comment 5: **A commenter stated that SO₂ emissions reductions from the Sinter Plant wind box were miscalculated, as a lack of information on the sulfur in the raw materials means SO₂ emissions cannot be properly evaluated.**

Response 5: Ohio EPA and HCDOES reviewed the 1995 SO₂ stack test and various information on the sulfur content of raw materials used in the sinter plant and determined that the SO₂ emission credit is consistent with the information reviewed. Ohio EPA also developed a material balance which supports the use of the 1995 SO₂ stack test value.

Comment 6: **A commenter believes Ohio EPA should have used a material balance instead of instrumentation, human observation, estimated flow volumes and old data to determine actual monthly SO₂ emissions.**

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

In addition, according to U.S. EPA, the use of continuous emissions monitoring systems (CEMS) is the best mechanism for determining on-going compliance with emission limitations. Therefore, Ohio EPA believes that a material balance is not an appropriate way to determine monthly SO₂ emissions.

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

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

Comment 8: A commenter would like all hourly emissions rates to be based on the annual emissions rate because Illinois calculates SO₂ emissions at the Gateway plant that way.

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

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

Response 9: SO₂ control efficiencies of 92 percent are considered BACT for nonrecovery coke batteries.

Emissions Offsets

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Sufficient offsets:

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

As for PM_{2.5} condensable emissions, Ohio EPA will follow what is prescribed in U.S. EPA's final rule, "Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5})". U.S. EPA states that, "In this final NSR rule, EPA will not require that States address condensable PM in establishing enforceable emissions limits for either PM₁₀ or PM_{2.5} in NSR permits until the completion of a transition period, as described herein" (73 Fed. Reg. at page 28334). Ohio EPA believes our rules are consistent with federal regulation. Therefore, the Agency does not plan to incorporate PM_{2.5} condensable emissions until receiving further guidance from U.S. EPA on accurate, reliable test methods and allowable emission rates.

Availability of emission offsets:

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

Credibility of emission offsets:

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

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

Emission offset verification:

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

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

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

Proper quantification:

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

Net air quality benefit:

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

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

Reporting and Compliance

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

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

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

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

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

Response 21: The main stack serving the coke battery will have a continuous SO₂ emissions monitor and will also be monitored for mercury emissions. Commenters asked for a continuous opacity monitor; however, there is no state or federal requirement for such a monitor for this type of operation and Ohio EPA cannot require more in a permit than the law allows. Commenters would also like CEMs to be placed on the waste gas bypass stacks, but there is also no requirement for placement there. In addition, CEMS cannot be used on the waste gas stacks because the temperature of the gas is too high (2000 degrees F.) The bypass stacks will emit emissions that are uncontrolled, but Ohio EPA knows what the uncontrolled emissions will be and they were factored into the air quality modeling analysis.

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

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

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

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

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

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

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

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

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

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

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

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

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

Response 26: The draft permit requires the installation of two particulate matter 10 microns and smaller in diameter (PM₁₀) monitors, four particulate matter 2.5 microns and smaller in diameter (PM_{2.5}) monitors and two volatile organic hazardous air pollutant (HAP) monitors in the vicinity of the proposed plant. In the final permit the requirement to install one sulfur dioxide (SO₂) monitor was added. Middletown Coke Company is required to purchase the monitors. The monitors will then be installed and operated by the Hamilton County Department of Environmental Services, which already operates various air monitors in Middletown. These monitors will be placed at two different sites near the proposed plant. The requirement to install air monitors, except for the SO₂ monitor, was also part of the final permit to install (netting permit) issued to Middletown Coke Company on November 25, 2008. On June 25, 2009, Ohio EPA and HCDOES held a public meeting to accept feedback on where the two monitoring sites would be located. When locating monitoring sites the agency must meet certain siting criteria established by U.S. EPA and receive permission from the property owner. The agency is in the process of narrowing down potential sites at this time. Both Amanda Elementary School and Garden Manor Nursing Home are two sites that have been evaluated.

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

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

Control/BACT/LAER

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

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

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

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

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

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

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

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

Comment 29: **The draft PTI does not comply with lowest achievable emission rates (LAER) for SO₂ or PM_{2.5}.**

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

To document that MCC will comply with LAER for SO₂ and PM_{2.5}, Ohio EPA reviewed regulations and achieved limits in states with byproduct and nonrecovery coke plants as well as MACT standards and U.S. EPA's RACT/BACT/LAER Clearinghouse with contains case-specific information on the "best available" air pollution technologies (<http://cfpub.epa.gov/RBLC/htm/bl02.cf>).

This review confirmed that MCC will have SO₂ and PM_{2.5} limits that meet or exceed LAER for controlled emissions. The spray dryer baghouse at MCC will have limits reflective of 92% SO₂ and will employ a filter material demonstrated to provide greater than a 99.9% reduction in emissions of filterable PM_{2.5}.

Comment 30: **A commenter stated that Ohio EPA did not use correct information and did not properly evaluate available cost-effective options to reduce SO₂ and PM/PM_{2.5} emissions during MCC BACT analysis.**

Response 30: MCC is required to install the Best Available Control Technology (BACT) as one of the rules to ensure that it meets air quality standards. Ohio EPA reviewed the BACT analysis provided by MCC and determined that SO₂ and particulate emissions, taking into account energy, environmental impact and economic impacts, would have the maximum degree of reduction achievable. This meets the rule.

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

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

Comment 31: **A commenter states that Ohio EPA is required by the Clean Air Act's BACT provisions to regulate CO₂ emissions from the SunCoke plant.**

Response 31: Currently, there are no federal or state rules in place that require Ohio to regulate CO₂ emissions. However, the director of Ohio EPA believes that climate change is an issue that must be addressed.

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

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

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

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

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

Permit Requirements

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

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

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

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

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

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

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

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

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

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

For example:

FDS: stack particulate emissions (PE) are 0.17 ton per year and fugitive emissions are 2.78 ton per year; stack PM₁₀ emissions are 0.17 ton per year and fugitive are 0.83 ton per year. MCC's stack particulate matter/PM₁₀ emissions are 3.4 and fugitive PE are 1.23 tons per year and fugitive PM₁₀ are 0.37 ton per year; stack particulate matter emissions less than 2.5 microns are 3.4 tons per year and fugitive are 0.18 ton per year.

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

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

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

Comment 35: A commenter would like Ohio EPA to require SunCoke to install three additional heat recovery steam generators (HRSGs) in order to reduce SO₂ and other emissions during maintenance. The commenter believes that the additional HRSGs are necessary to satisfy BACT and LAER.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Public Notification

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

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

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

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

National Ambient Air Quality Standards/ Attainment

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

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

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

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

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

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

Comment 50: **A commenter stated that allowing one hundred percent main stack waste gas bypass emissions for SO₂ and PM₁₀ during annual FGD spray dryer absorber and baghouse inspection and maintenance does not comply with the Ohio SIP.**

Response 50: Manufacturer recommended maintenance of the FGD SDA/baghouse will be performed on an annual basis. MCC will need to shut down the FGD SDA/baghouse to do this work. While the emissions controls are shut down, MCC will need to open the bypass stacks and PM and SO₂ will be emitted without going through the control system. During these periods, the SO₂ emissions will potentially exceed pollution limits found in Ohio's rules; however, the rules allow such activities as long as MCC notifies Ohio EPA in advance.

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

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

Health Effects

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

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

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

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

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

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

Modeling

Comment 53: **A commenter is concerned that Ohio EPA did not model sulfuric acid (H₂SO₄) emissions for this permit.**

Response 53: The commenter is correct that H₂SO₄ was not modeled and that Ohio EPA has the authority to request such information. However, Ohio law states that if an air toxic pollutant goes thru BACT and/or non-attainment review, then that pollutant is not modeled against Ohio EPA's air toxic policy. Furthermore, there is no federal standard for PSD air dispersion modeling requirements so there would not be a standard to compare the information against.

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

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

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

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

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

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

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

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

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

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

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

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

Other Concerns

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

SunCoke and AK Steel should be required to certify compliance.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Comments from U.S. EPA

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

The first sentence reads as though the permittee has to perform the LAER review in the future, when it should be done already. Although this language may have been used in previous permits, it should be clarified.

The second sentence, referring to OAC rule 3745-31-21 through 27 in the chart, should refer to the chart with more precise citation (e.g. Part C.1.b.1.c. for the LAER emission limits for unit F001).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Comment 71: MCC is using PM₁₀ as a surrogate for PM_{2.5}. Please note USEPA's decision regarding the surrogate policy in a recent response to petitions to object. This response is available at: <http://www.epa.gov/region07/programs/artd/air/title5/petitiondb>

[/petition s/lq&e 2nddecision2006.pdf](#). The discussion of the surrogate policy begins on p. 42. It states that a source must provide an adequate rationale to support the use of PM₁₀ as a surrogate for PM_{2.5}, and provides examples of how this rationale can be provided. MCC must either provide a rationale for using PM₁₀ as a surrogate for PM_{2.5} or base its LAER analysis directly on PM_{2.5}.

Response 71: The comment allows for two options. One option is to provide a rationale for using PM₁₀ as a surrogate for PM_{2.5} and the other is to base the LAER analysis directly on PM_{2.5}.

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

The main control device is a baghouse with enhanced fabric filters which constitutes LAER for PM_{2.5}. This control device is equivalent to the controls at Gateway Energy and Coke Company in Granite City, IL which was determined to be LAER for PM_{2.5}. All emission controls were analyzed based on PM_{2.5} emissions, and PM₁₀ was not used as a surrogate.

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

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

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

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

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

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

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

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

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

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

Response 75: Please see response #7.

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

Response 76: Please see Response #2.

Comments from SunCoke/Middletown Coke Company

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

This is a redundant listing of PSD limitation.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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