March 28, 2005

Barbara R. Hatch, P.E.
Air Pollution Control Engineer III
Air Quality, Southwest Regional Office
Department of Environmental Protection (DEP)
400 Waterfront Drive
Pittsburgh, PA 15222

Re: Cambria Coke Company, Air Quality File PA-11-00513A

Dear Ms. Hatch:

The purpose of this letter is to provide Ohio Environmental Protection Agency (Ohio EPA), Division of Air Pollution Control (DAPC) comments concerning the proposed plan approval for the Cambria Coke Company(CCC) by the Pennsylvania Department of Environmental Protection (PDEP). Ohio EPA became aware of the plan approval through a review of the Pennsylvania Register.

Ohio EPA has spent considerable effort in the past three years or so working on New Source Review (NSR) permits for several new coke facilities in the state. We recently issued a PSD permit for FDS Coke near Toledo, Ohio. We also have issued a PSD permit for Haverhill North Coke Company (a subsidiary of Sun Coke Inc.) in Haverhill, Ohio and are currently working on a revision of that permit to change the plan for their Phase 2 to a revised Phase 1b. Through these permit processes, we have learned a lot about the significant challenges associated with processing NSR permits for these types of facilities. We have learned a lot about how these facilities work, what works for controlling the emissions and about the significant uncertainties associated with expected emissions. We understand the significant difficulties in processing a permit for these facilities in the time frames that permittees expect. The fact that PDEP has gotten to the point of getting the proposed plan issued means that a number of PDEP staff have worked many long hours to get to this point. We appreciate the level of effort.

We are submitting these comments not to criticize PDEP, but to provide you with the benefit of our experience. It is our hope that you will find these comments to be helpful as you continue work on the CCC permit.

As to our comments:

1. Mercury Emission Limits, Testing and Monitoring

As PDEP is no doubt aware, coke facilities have the potential to emit significant quantities of mercury. The amount of mercury expected to be emitted from a facility like CCC is similar to the amount of mercury emitted from a utility boiler. Based on the proposed plan, PDEP expects the CCC facility to have the potential to emit of 538 pounds of mercury per year (0.269 tons per year). Our research indicates that there is virtually no verifiable information concerning the expected emission of mercury from coke plants. We also were unable to find any significant information concerning the expected control efficiency of Flue Gas Desulfurization (FGD) systems concerning mercury removal. It appears that the proposed plan assumed an approximate removal efficiency of 35% with the Flue Gas Desulfurization (FGD) system. We would like to know what is the basis of this removal efficiency?

Considering the mercury emission rates from various other facilities, this emission rate of mercury is still relatively high. For example, Ohio EPA has issued a permit to install (PTI) to FDS Coke Company on June 14, 2004 which will consume approximately 2.06 million tons of wet coal annually and will produce approximately 1.44 millions tons of coke annually. We established best available technology (BAT) limits for mercury. The final permit contained a limit of 36 pounds of mercury per year. Further, we are asking FDS to install, operate, and maintain an activated carbon injection system for the control of mercury emissions. The activated carbon injection system will be designed for a maximum activated carbon injection rate of 2 pounds per million actual cubic feet of waste gas flow. Because of the uncertainties associated with expected emissions and expected mercury removal efficiencies of the carbon injection system, we expect we may need to adjust the allowable for the mercury emission limit based on initial stack testing data and a demonstration that the activated carbon injection control system has been optimized.

We believe it is appropriate to require a new coke facility of the size and type as the CCC facility to install and operate systems to control mercury.

In addition to the pre-construction testing, Ohio EPA is also requiring FDS Coke to do the following concerning mercury:

2. Conduct initial and periodic emissions testing for mercury following precise USEPA approved methods;

3. On an ongoing basis, analyze the coal that is used in the process for mercury and chlorine content. (Some data suggests that the chlorine content may affect the resulting mercury emissions.);

4. Install, calibrate and operate a continuous emissions sampling system (Method 324) for mercury. This device will measure the amount of mercury in the exhaust stack on a weekly basis; and,

5. Initial emissions testing for hydrogen chloride (H-Cl) acid gasses, hydrogen fluorides (HF) acid gasses, dioxin and furans.

It is our belief that the above testing and monitoring should be done at any new coke plant. We think it is especially important to require initial mercury testing. We also believe it is important to require some kind of continuous measuring of the mercury emissions from the main stack.

After talking to you, we found out that PDEP is currently considering a requirement that was not included in the draft Plan Approval to use Powdered Activated Carbon (PAC) at an injection rate of 0.27 lbs/ton of coal charged to control mercury emissions. The proposed injection rate of 0.27 lbs PAC/ton coal charged for CCC is equivalent to 1.2 pounds per million actual cubic feet of waste gas flow. Therefore, the proposed fixed injection rate for CCC is about one-half of the upper PAC injection rate limit of 2 pounds per million actual cubic feet of waste gas flow that is being discussed for the FDS Coke Plant revised PTI. It is our understanding that 2 pounds per million injection rate will be needed in order to optimize the control of mercury. We recommend that you require the same level of carbon injection.

We expect to require all of the above for the proposed modification of Haverhill North Coke Company, Phase 1b.

2. Great Lakes States Air Permitting Agreement

On November 3, 1988, the representatives of the Council of Great Lakes Governors, including Pennsylvania, entered into the Great Lakes States Air Permitting Agreement. This agreement addresses the control of toxic emissions, including mercury, in the Great Lakes Basin to minimize the impact of toxics on the Great Lakes. It was agreed that "Toxic Substances Management in the Great Lakes Basin Through the Permitting Process," requiring that Best Available Control Technology be installed whenever possible on all new and existing sources of persistent air toxic pollutants that have an impact on the Great Lakes, "Great Lakes Toxic Substances Control Agreement." All permit applications in the state will be required to identify and quantify potential emissions of the pollutants identified in Table A as a part of a routine New Source Review permit application.

TABLE A

Mercury
Alkylated Lead Compounds
Total Polychlorinated Biphenyl
Hexachlorobenzene
Benzo-a-pyrene
2,3,7,8-Tetrachlorodibenzo-p-dioxin
2,3,7,8-Tetrachlorodibenzofuran

Furthermore, it was agreed "To insure consistency in the type of information which will be considered on permit reviews, and in the implementation of Best Available Control Technology, clear communications and informational exchanges between Great Lakes States, and clarification of issues which EPA needs to take the lead on in order to assure effective implementation of the air provisions of the governor's and environmental administrators' agreements."

Although the Great Lakes States Air Permitting Agreement is somewhat dated and is in need of updating, we still believe it an important agreement that all signers should continue to follow. Please confirm that PDEP is adhering to the Great Lakes States Air Permitting Agreement concerning the CCC permit.

3. HRSG By-pass Venting

Based on the draft Plan Approval, HRSG by-pass venting is permitted to occur for fourteen days annually for operation and maintenance on each of the seven HRSGs planned for CCC. However, FDS Coke Company and Haverhill North Coke Company have both indicated to us that they can accept eight days of by-pass venting for each of their HRSG annually for operation and maintenance.

Therefore, we are requesting that PDEP should reconsider CCC for eight days of by-pass venting for each of their HRSG annually for operation and maintenance.

4. PSD Increment Consumption

PDEP review of the draft Plan Approval indicates that the PSD Class II increment consumption for 24-hour SO2 emissions during HRSG by-pass venting (worst case emissions) will be 93%. 93% increment consumption is a very large percentage and has the effect of severely limiting future expansion of the CCC plant or other plants in the area. It

is Ohio EPA's policy to restrict any single project not to consume more than one-half of the available PSD increments to promote future growth. PDEP may want to reconsider allowing this much of the increment to be consumed.

5. Coke Pushing Particulate Emission Limit

PDEP needs to be aware that there is a technology available to reduce coke pushing emissions to below 0.04 lb PM-10/ton of coke pushed. This technology involves the use of a cooling chamber / baghouse combination. The cooling chamber consists of a box with steel plates that act as a cooling mass. The hot pushing gas first goes through the cooling chamber and then is routed to the baghouse. We believe FDS Coke will agreed to a 0.03 lb PM-10/ton of coke limit in their revised permit. It is our understanding that this system can achieve control levels of well below 0.03 lb PM-10/ton of coke pushed. Did PDEP consider this technology and, if so, why was it not chosen?

You should also know that our U.S. EPA NSR contact told us they would not accept 0.04 as a BACT limit.

6. SO2 Emissions

We do not understand why SO2 emissions are so high. For example, for FDS Coke with an annual throughput of 2.06 million tons of wet coal, SO2 emissions are less than 1300 tons/yr including by-pass emissions. In your case, for CCC with an annual throughput of 2.55 million tons of wet coal, SO2 emissions are 3535 tons/yr including by-pass emissions. Please explain.

The above comments are what we have generated in the short time we have had to review the Plan Approval. These permits are complex and difficult to review in a short time. We believe that given more time, we are likely to be able to provide you with more comments that can be helpful to you. Therefore, we are asking you to extend the comment period for an additional two weeks so that we can provide additional comments.

If you have any questions about any of our comments, please don't hesitate to contact us. We will be glad to provide you with any information we have concerning permitting these facilities. If you have any questions, please contact Sudhir Singhal of my staff at (614) 644-3684.

Sincerely,

Michael E. Hopkins, P.E.
Assistant Chief, Permitting
Ohio EPA, Division of Air Pollution Control

cc: Bob Hodanbosi, Chief, DAPC
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