



Architect of the Capitol
U.S. Capitol, Room SB-15
Washington, DC 20515
202.228.1793

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December 17, 2012

Mr. Stephen S. Ours, PE
Chief, Permitting Branch
Air Quality Division
District Department of the Environment
1200 First Street, NE, 5th Floor
Washington, DC 20002

Dear Mr. Ours:

The Capitol Power Plant (CPP) provides these comments on the CPP Proposed Air Quality Permits posted on November 16, 2012 by the District Department of the Environment (DDOE) for public comment. The documents made available by DDOE include the following:

- Plantwide Applicability Limit (PAL) Permit for Nitrogen Oxides (NO_x) and Fine Particulate Matter (PM_{2.5}) (Permit #6577)
- Technical Support Memo for NO_x and PM_{2.5} Plantwide Applicability Limits
- Chapter 2 Construction Permits for Two Combustion Turbines and Heat Recovery Steam Generators (Permit #6663-C and 6664-C)
- Technical Support Memo for Cogeneration System Installation
- Chapter 2 Operating Permit for Boiler #3 (Permit #6576)
- Technical Support Memo for Existing Boiler #3

CPP commends DDOE for its diligent work in issuing air quality permits that are generally acceptable to CPP. We appreciate the opportunity to review and provide comments regarding the draft permits and the technical memoranda, and request that DDOE consider the following suggested changes before making any final decisions regarding these air permits. We have one general comment and four additional technical comments. The general comment is listed below and the four technical comments are included in Attachment A to this letter.

General Comment #1: Request that Overly Burdensome PM_{2.5} Stack Testing Requirements on Insignificant Emissions Units (Boilers 3 through 7) be Removed (Draft Permit #6577 Permit Condition IV.1 and Other Related Conditions)

Permit Condition IV.1 of Draft Permit #6577 requires stack testing for each existing boiler at the CPP (Boilers 1 through 7) to determine unit-specific emission factors for particulate matter with a diameter less than 2.5 microns (PM_{2.5}). CPP has several concerns regarding this condition.

First, while CPP agrees that PM_{2.5} stack testing for Boilers 1 and 2 is appropriate, CPP believes that stack testing for Boilers 3 through 7 is neither legally required nor appropriate since the units are of minor significance in setting the PAL baseline and establishing PAL pollutant emissions moving forward. Specifically, based on the requirements of Title 20, Section 208.29(c) of the District Code of Municipal Regulation [20 DCMR 208.29(c)],

“an owner or operator of a *significant emissions unit* that relies on an emission factor to calculate PAL pollutant emissions shall conduct validation testing to determine a site-specific emission factor within six (6) months of PAL permit issuance unless the Department determines that testing is not required.” [*emphasis added*]

A “significant emissions unit” is defined in 20 DCMR 299 as “an emissions unit that emits or has the potential to emit a PAL pollutant in an amount that is equal to or greater than the significant level ... for that PAL pollutant.” Boilers 3 through 7 do not meet the definition of a “significant emissions unit” since the potential to emit (PTE) of each boiler is less than the PM_{2.5} significant level (10 tpy). The PM_{2.5} PTE for Boiler 3 is 2.8 tpy based on the limitations on fuel oil and natural gas consumption contained in Draft Permit #6576, while the PTE for Boilers 4 through 7 is less than 3 tpy each (or 30% of significance level).

Looked at another way, as shown in Table 1 below, Boilers 3 through 7 (in terms of baseline actual emissions) contribute approximately 8 percent of the total sitewide PM_{2.5} PAL, with no single boiler accounting for more than 4 percent of the limit.¹ The units that contribute more than 64 percent of the PAL (boilers 1 and 2 and the cooling towers) will be required to complete site-specific data collection. The remaining 28 percent comes from adding the 10 tpy significance rate to the baseline to form the final cap. For Boilers 1 and 2, stack testing will be required, and site specific sampling for total dissolved solids is required for the cooling towers. Accordingly, not only is stack testing for boilers 3-7 legally precluded, it is onerous because of its minor significance in either re-establishing the PAL or computing emissions moving forward.

¹PM_{2.5} emissions from Boilers 3 through 7 totaled 2.26 tpy from February 2007 through January 2008 and 3.32 tpy from February 2008 through January 2009. The draft PM_{2.5} PAL has been established as 35.4 tpy.

Table 1. Contribution of Emissions Sources to PM_{2.5} PAL

Source Description	Significant Emissions Unit (Yes or No)?	Actual Emissions Contributing to PM _{2.5} PAL (tpy)	Contribution to PAL (% of Total)
Boiler 1 (East Stack)	Yes	6.0	16.9
Boiler 2 (East Stack)	Yes	7.0	19.8
Boiler 3 (West Stack)	No	1.2	3.4
Boiler 4 (West Stack)	No	0.4	1.1
Boiler 5 (West Stack)	No	0.5	1.4
Boiler 6 (West Stack)	No	0.2	0.6
Boiler 7 (West Stack)	No	0.5	1.4
Coal and Ash Handling (N/A)	No	0.004	0.01
Cooling Towers (N/A) ^A	Yes	9.7	27.4
Significant Emission Rate	N/A	10.0	28.2
Total (PAL)		35.4	

^A Note that the draft permit requires sampling of total dissolved solids in order to compute site-specific emissions from the cooling towers.

Our request is further supported in that Boilers 3 through 7 are not required to undergo stack testing in the U.S. Environmental Protection Agency's (EPA's) draft PM₁₀ PAL permit for the CPP.² Accordingly, CPP requests that DDOE remove the PM_{2.5} stack testing requirements for Boilers 3 through 7 in Condition IV.1 and other references to the testing (e.g., listing emission factors) throughout the permit.

²U.S. EPA. Draft Permit for the Capitol Power Plant - District of Columbia. Accessed November 28, 2012, from http://www.epa.gov/reg3artd/permitting/capitol_Power.html.

Please see Attachment A containing four technical comments related to the referenced documents made available by DDOE for review. If you have any questions, or require additional information please feel free to contact me at 202.226.3864.

Sincerely,

A handwritten signature in black ink that reads "C Potter". The signature is written in a cursive style with a large, stylized "C" and "P".

Christopher Potter
Director, Utilities and Power
Architect of the Capitol
U.S. Capitol Power Plant
202.226.3864

ATTACHMENT

Attachment A

Additional Comments

Comments on Draft Permit #6577: Plantwide Applicability Limits (PALs) for NO_x and PM_{2.5}

Technical Comment #1 – Overly burdensome reporting for defined data substitution events:

Proposed Permit Conditions:

Permit Condition VI.a.2 (related to Conditions IV.n.2c, n.3.c, o.1.c, o.2.c, o.4.d, o.6.c)

“The Permittee shall promptly submit reports of any deviations or exceedances of the PAL requirements, including periods where no monitoring is available, except as follows...

...Note that an exemption from prompt reporting in this permit condition does not exempt the Permittee from submitting the exempted deviations in the semiannual report required in Condition VI(a)(1).”

Comments:

The conditions identified above relate to the data substitution practices and reporting requirements contained in the PAL. Only certain data substitution instances, as identified in Condition VI.a.2, require prompt deviation reporting to DDOE – generally those instances reflecting more significant periods of monitor system downtime. CPP agrees that these events should be reported as deviations to DDOE. However, given the quantity of data involved in maintaining/determining compliance with the PAL, particularly data that is monitored continuously or weekly, CPP contends that less frequent monitor system downtime events should not be deemed deviations and should not be subject to prompt deviation reporting requirements.

The CPP believes that the inclusion of these events in the semiannual report required under Condition VI.a.1 is unnecessary and overly burdensome for both the Permittee and the DDOE. As such, CPP proposes that the following condition in the last paragraph under this provision be removed: *“Note that an exemption from prompt reporting in this permit condition does not exempt the Permittee from submitting the exempted deviations in the semiannual report required in Condition VI(a)(1).”*

Furthermore, the CPP proposes that conditions referenced (Conditions IV.n.2c, n.3.c, o.1.c, o.2.c, o.4.d, o.6.c) be revised to correctly refer to Condition VI (reporting requirements) rather than Condition V (recordkeeping requirements).

Comments on Draft Permit #6577 Technical Memorandum:

Technical Comment #2 – CPP concurs with DDOE’s determination that the proposed PAL Baseline Period is more representative and provides these comments in support of DDOE’s determination:

Language from Technical Memorandum:**Page 3 –20 DCMR Chapter 2, Section 208: General and Non-attainment Area Permit Requirements**

“In short, the applicant explained that operation of the five boilers, the main emission units at the site, are based on the need of AOC to provide heating service to various government buildings. Thus, the need to operate the boilers is lower in a year with a mild winter, as compared to a year with a colder winter. AOC provided an analysis of the need to provide heat based on the concept of "heating degree days" (HDDs). AOC showed that 2010 and 2011 had historically mild winters, resulting in a total of 3,800 HDDs over the two year period. As a comparison, they showed that the average two year HDDs over the last 30 years was 4,053. The 24-month period proposed by AOC, February 2007 through January 2009 resulted in 3,956 HDDs, between the immediate two year period and the past 30 year average levels.”

Comment:

CPP concurs with DDOE’s explanation of the HDD concept and its application in determining a representative baseline for the PAL. Indeed, heating degree days is one metric used in the industry for evaluating the fluctuation in the demand for heating. In addition, it is important to note that it is not just that the baseline period approved by DDOE is “between the immediate two year period and the past 30 year average levels.” The point is that the baseline DDOE approves is clearly closer to and therefore more representative of the 30-year average HDD data than two years immediately prior to this application.

Technical Comment #3 – CPP concurs with DDOE’s determination that the proposed PAL Baseline Period is more representative but does not believe projections on the future climate are relevant to making this determination:

Language from Technical Memorandum:

Page 3 – 20 DCMR Chapter 2, Section 208: General and Non-attainment Area Permit Requirements

“AQD has recognized that climate is changing and there is a gradual warming trend occurring in the area. As such, when DDOE adopted its new NSR rule and the related PAL regulations, it adopted a maximum 5-year look-back period to establish the PAL baseline period, as compared to a less stringent federal 10-year look-back period. Nonetheless, AQD does not believe that it is appropriate to limit operations of a facility based on the immediately previous two year period when it can be clearly demonstrated that the winters were substantially milder than other winters, even in the last 5 years, but especially in the last 30 years. While climate change science does indicate that average world temperatures will increase over time, it does not indicate that winters in anyone place will continually and consistently increase in temperature each year.”

Comment:

We agree with DDOE that climate change science does not indicate that winters in any one place will continually and consistently increase in temperature each year. But we also want to emphasize that what might happen in the future related to climate change science does not have any bearing on determining how representative past emissions are for baseline purposes, which is what DDOE’s PAL regulations compel DDOE to determine per the definition of “actual emissions” contained in 20 DCMR 199.

Comments on Draft Permits #6663-C and 6664-C Technical Memorandum:

Technical Comment #4 – CPP agrees with DDOE’s conclusions regarding the effect of establishing a PAL, but provides clarification regarding the extent of the allowable emissions increase:

Language from Technical Memorandum:

Page 2 Regulatory Review – Chapter 2, Section 200:

“This pair of Chapter 2 permits will be issued in conjunction with a permit containing plantwide applicability limits (PALs) for NO_x and PM_{2.5} which result in an allowable increase in emissions from baseline actual emissions, but will effectively cap emissions of the facility well below previous potential emissions.”

Comment:

The memorandum correctly points out that the PALs for NO_x and PM_{2.5} will cap emissions at a level which represents an increase from baseline actual emissions and below the current potential emissions levels. However, the CPP would further clarify that emissions will not increase above the baseline levels by more than the corresponding significance levels (25 tpy and 10 tpy, respectively) defined in 20 DCMR 299.1.