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VIA ELECTRONIC MAIL AND U.S. MAIL

Comments of the Sierra Club on the Draft Permit Proposed for the Capitol Power Plant, 25 E. Street, SE, Washington, DC.

Mr. Gordon,

These comments are submitted on behalf of the Sierra Club and its members, including those who live in and around the District of Columbia. The Sierra Club and its members advocate for the development of renewable energy, energy efficiency, and smart cogeneration projects. The proposal by the Architect of the Capitol (AOC) to install cogeneration turbines has some positive components, including the use of more efficient methods to provide heat and electricity to the Nation's Capitol and other buildings than is currently being used. However, the specific permit at issue raises several concerns that should be addressed before a final permit is issued.

1. The Permit Must Meet All 40 C.F.R. § 52.21 Requirements.

The current permit action being proposed by EPA is to issue a permit pursuant to 40 C.F.R. § 52.21 to provide a Plantwide Applicability Limit (PAL). Once properly in place, that PAL would allow changes to be made to the plant without triggering the Prevention of Significant Deterioration (PSD) program requirements—provided that the plant complies with the PAL. The PAL, however, does not waive or otherwise affect the requirements applicable to the permit establishing the PAL. That is, all of the prerequisites that must be met before a permit can be

issued pursuant to 40 C.F.R. § 52.21 apply equally to the permit action at issue here. The PAL, once established, only allows future modifications to be determined not to constitute major modifications and therefore not to need future PSD permits, it does not affect the prerequisites in § 52.21 for issuing the permit in the first instance. 40 CFR 52.21(aa)(1)(ii) (providing that once a PAL is in place, changes do not constitute major modifications); *accord* 67 Fed Reg at 80,208 (PAL is an "alternative for determining NSR applicability" but only where the source has a PAL in place).

Where states have approved minor source construction permit programs, or other federally enforceable mechanisms to establish a PAL, a facility seeking a PAL must meet the prerequisites applicable for issuance of such minor source construction permit for the permit to issue and the PAL to be effective. For example, when establishing a PAL through a minor source construction permit or a Title V permit, "all applicable requirement" of that program apply. 67 Fed Reg at 80,208. Here, because that is apparently not an option for the AOC due to the limitations of the District of Columbia State Implementation Plan (SIP), the EPA is proposing to use its permitting authority under 40 C.F.R. § 52.21 to issue a permit that, once issued, establishes a PAL. Before the permit can issue, however, all of the preconditions in 42 U.S.C. § 7475 and 40 C.F.R. § 52.21 must be met, and all procedures in 40 C.F.R. pt. 124 must be complied with.

2. Because the District of Columbia's State Implementation Plan (SIP) Does Not Include A PAL Provision, And the Proposed Combustion Turbine Project Triggers Nonattainment New Source Review As Currently Proposed, The EPA Cannot Issue A Permit Under 40 C.F.R. § 52.21 Until The Project Complies With The Nonattainment New Source Review Program In The D.C. SIP.

One of the requirements that must be met before EPA can issue the permit (and therefore before a PAL can be established) is that the facility will meet all of the requirements of the SIP. 40 C.F.R. § 52.21(j)(1). The current District SIP requires that major modifications obtain a permit, acquire emission off-sets, and meet lowest achievable emission rates. 20 D.C.M.R. §§ 204.3, 204.4, While the District has considered providing for PALs under the SIP (for nonattainment area New Source Review) it has not yet adopted rules to do so; and EPA has not approved such regulations into the SIP.[1] Therefore, the proposed modifications that will be made

[1] On February 17, 2012, the DCDOE proposed to adopt the NSR Reform regulations. See 2/17/12 Notice of Proposed Rulemaking (proposed section 204.7, 208) available at

contemporaneously with the proposed draft permit trigger Nonattainment NSR requirements under the D.C. SIP and § 52.21(j)(1) requires compliance with those requirements before EPA can issue the permit under § 52.21.

3. EPA Must Ensure Compliance With NAAQS.

Pursuant to 40 C.F.R. § 52.21(k) and (m) the AOC is required to demonstrate that emissions will not cause or contribute to a violation of ambient air quality standards. There is no exception to this required demonstration in the regulation for permits issued intending to create a PAL, yet this requirement has not been met. The permit cannot issue until this demonstration has been made.

4. The Application and EPA's Analysis of Baseline Emissions Improperly Relies on Generic Emission Factors That Are Not Representative of the Facility's Actual Emissions.

The particulate matter (PM/PM10/$PM_{2.5}$), nitrogen oxides (NOx) and sulfur dioxide (SO_2) baseline emissions were calculated from AP-42 factors. (*See* Application Appx C p. 3; EPA Fact Sheet at 9-11.) According to AP-42, before using the emission factors the user "should review the latest literature and technology to be aware of circumstances that might cause such sources to exhibit emission characteristics different from those of other, typical existing sources" and users are cautioned "to assure that the subject source type and design, controls and raw material input are those of the source(s) analyzed to produce the emission factor." AP-42, *Compilation of Air Pollutant Emission Factors* at 4. However, there is nothing in the permit record to indicate that the generic AP-42 emission factors are representative of the emissions from the CPP.

Moreover, the ash handling emissions were determined based on a factor from AP-42 Section 13.2.4. (Fact Sheet p. 10.) In that equation, the emission factor is determined based on, among other data points, the material moisture content. EPA assumed 27% moisture. (Id.) However the emission factor was based on testing of moisture content between 0.25 and 4.8%. *See* AP-42 § 13.2.4-4. Since the moisture content EPA uses is so far outside of this emission factor, the

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http://www.dcregs.dc.gov/Notice/DownLoad.aspx?NoticeID=1942733. But these need to be adopted in final form, and then approved by USEPA into the District's SIP before they can be relied upon to establish a nonattainment PAL.

quality rating is at least one quality rating lower. (Id.) Moreover, the silt content of flyash is much higher (~80%) than the range used to develop the factor (0.44-19%), so it must be given yet another downward quality rating. In other words, the rating is C for the emission factor used to determine fly ash emissions. This is not a reasonably representative emission factor and the record contains no analysis showing that it is.

5. EPA Has Not Sufficiently Demonstrated That The Impacts From This Proposal Will Not Have Disproportionately Adverse Impacts In Minority Populations and Low-income Populations.

According to EPA's Fact Sheet, the agency's proposal to issue a permit to the facility complies with Executive Order 12898, which requires EPA to "make part of its mission to identify and address disproportionately high and adverse human health or environmental effects" when issuing this permit. However, there is no evidence to support this assertion in the record. For example, EPA contends that emission of PM10 and NO_2/NOx authorized by the permit "will not impact continued compliance with applicable NAAQS." (Fact Sheet at 23.) The basis for this assertion is unclear, since there is no ambient air quality analysis in the record. Specifically, there is no analysis of the location-specific PM10 air quality or the NO_2 concentrations, much less what the concentration of those pollutants would be if the facility operates up to the emission limits allowed by the proposed permit. Impacts of PM10 and short-term (i.e., 1 hour) NO2 impacts are very localized around emission source—which means that regional monitors are not representative of air quality impacts in the vicinity of the CPP. (No regional monitoring data is included in the record either, however.)

Furthermore, even if one assumed that the emissions allowed under this permit are only "de minimis" increases above a baseline emission rate from sometime in the last 10 years, *see* Fact Sheet at 24, there is no evidence that at the baseline emission rates the NAAQS are protected. To the extent that EPA is relying on regional monitoring for making the assertion that NAAQS are met in the vicinity of the CPP, EPA has not shown that the regional monitor locations are representative of the air quality impacts from the CPP in the area around that facility. EPA monitoring guidance specifies when regional monitoring can be substituted for site-specific data. There is no record indicating that those standards have been met here.

Furthermore, there is no analysis of the impact that his permit (and the emission increases it allows) will have no adverse impacts on minority or low-income populations due to $PM_{2.5}$ or ozone. There is no exception in Executive Order 12898 for pollution when an area is designated nonattainment. NOx are precursors of both ozone and $PM_{2.5}$. The NOx PAL that will be allowed by the permit is based on the November 2002- October 2004 emission rates from the facility. (Fact Sheet at 14.) In fact, the permit would allow increases of 39 tons above the emission rates in 2002-2004. EPA has not determined that such increases can occur without causing NAAQ violations. During 2002-2004, design values for the District was 15.1 ug/m^3 of $PM_{2.5}$ on an annual basis, and 37-42 ug/$m3^2$ on a 24-hour basis. The ozone design values were 0.096 ppm on an 8-hour basis. *See* http://www.epa.gov/airtrends/values.html. In other words, the emissions allowed by the permit are not associated with compliance with the NAAQS. IF anything, they are associated with NAAQS violations. Because the permit would allow the facility to increase its emissions up to, and beyond, the emission rates associated with violations of $PM_{2.5}$ and 8-hour ozone standards in 2002-2004 (even if regional background levels are used for $PM_{2.5}$ and ozone), the record indicates that the permit will allow emissions that contribute to adverse impacts. The plant is located in an area with significant populations of minority and low-income residents. EPA cannot satisfy its obligations under Executive Order 12898 if it issues this permit—especially not on the record made in this case.

Respectfully submitted,

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