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Steven S. Ours-Chief, Permitting Branch
Air Quality Division
District Department of the Environment
1200 First Street NE, 5th Floor
Washington, DC 20002
Stephen.Ours@dc.gov

Re: Public Comments of the Sierra Club
Architect of the Capitol, Capitol Power Plant
Draft Permits ## 6577 (PAL for NOx and PM2.5); 6663-C and 6664-C (construction of new combustion turbines with heat recovery); and 6576 (operation of Boiler #3)

Mr. Ours,

These comments are submitted on behalf of the Sierra Club and its members and relate to the four interrelated draft permits for the Capitol Power Plant (CPP). 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. DDOE Cannot Issue A PAL Unless and Until The SIP For the District Is Amended To Allow PALs.

According to the Technical Support Memorandum for Permit 6577 ("6577 TSM"), "installation of the cogeneration units would otherwise cause a significant increase in emissions and a significant net increase in emissions and trigger the requirements of" 20 DCMR 204 unless a Plantwide Applicability Limit (PAL) is adopted.[1] For this reason, the DDOE is proposing to issue a PAL for PM2.5 and NOx, thereby avoiding nonattainment new source review (NNSR) requirements for ozone and PM2.5. However, until the United States Environmental Protection Agency (USEPA) approves the District's PAL provisions into the District's SIP, DDOE cannot rely on them and cannot issue PAL permits. Until then, as correctly noted in the 6577 TSM, the proposed project constitutes a major modification subject to NNSR permitting requirements.

We recognize that the DDOE regulations were recently revised to include a provision allowing for the establishment of a PAL. *See* 20 DCMR 204.7, 208 (adopted 59 DCR 13044 (Nov. 16, 2012)). However, those provisions have not been approved by the United States Environmental Protection Agency (USEPA) into the District's SIP. That is, they are only effective as a matter of local law, and conflict with the applicable federal law. Unless and until approved by USEPA, DDOE's regulations allowing PALs are not effective as a matter of federal law and, since they conflict with the currently-approved

[1] The proposed project will result in significant increases of NOx, PM10, PM2.5, and Greenhouse Gases without a PAL. *See* Application Appx. B (Emission Calculations).

SIP, are preempted. 42 U.S.C. § 7416 ("[I]f an emission standard or limitation is in effect under an applicable implementation plan… such State or political subdivision may not adopt or enforce any emission standard or limitation which is less stringent than the standard or limitation under such plan…"); *General Motors Corp. v. U.S.*, 496 U.S. 530, 540 (1990) (the EPA-approved SIP remains the applicable law, notwithstanding state-submitted revisions, until EPA approves the revisions) (citing *Train* v. *Natural Resources Defense Council, Inc.,* 421 U. S. 60, 92 (1975); *United States* v. *Alcan Foil Products Division of Alcan Aluminum Corp.,* 889 F. 2d 1513, 1519 (6th Cir. 1989); *United States* v. *Wheeling-Pittsburgh Steel Corp.,* 818 F. 2d 1077, 1084 (3rd Cir. 1987); *Duquesne Light Co.* v. *EPA,* 698 F. 2d 456, 471 (D.C.Cir. 1983); D. Currie, Air Pollution: Federal Law and Analysis § 8.07, 541*541 n. 14 (Supp. 1990); 1 W. Rodgers, Environmental Law: Air and Water § 3.39(c) (1986 and Supp. 1988)); *see also Safe Air for Everyone v. EPA*, 488 F.3d 1088, 1097 (9th Cir. 2007) ("a state may not unilaterally alter the legal commitments of its SIP once EPA approves a plan… the SIP became *federal* law, not *state* law, once EPA approved it, and could not be changed unless and until EPA approved any change." (emphasis original)). Therefore, DDOE must either process the proposed modification to add new combined cycle emission units as a NNSR major modification[2], or wait until the U.S. EPA approves the recent revisions to 20 DCMR 204.7 and 208 in the District's SIP. Relying on a PAL is not a lawful option at this time.

[2] This would include requirements to comply with LAER emission limits, obtaining sufficient offsets, an assessment of alternatives to the project, and a weighing of the benefits to the social and environmental costs of the project. 20 DCMR 204.3-204.8.

2. Even if the District's EPA-Approved SIP Allowed PALs, The Proposed PAL Would Be Deficient.

If the EPA approves the Districts recently-adopted PAL provisions in 20 DCMR 204.7 and 208, DDOE would still be required to comply with the provisions in those regulations when adopting a PAL for the CPP. The proposed PAL permit at issue here does not do so in at least four ways.

First, DDOE proposes to use the period from February, 2007, through January, 2009, as the PAL baseline period. 6577 TSM at 3. DDOE proposes to use that period—rather than the presumptive 24-month period immediately preceding the application—because it is "more representative of normal operations" since recent winters have been "historically mild" compared to the last 30 years. (Id.) However, this is inconsistent with the established meaning of "representative of normal operations." To overcome the presumption that the most recent 24 months represent "normal operations," and to use a different time period for baseline emissions, an applicant generally must show that operations in the most recent 24 months were affected by strikes, retooling, major industrial accidents, or other catastrophic occurrences. *See* Letter from R. Douglas Neeley, USEPA, to John Yntema, Georgia EPC, March 2, 2000) (quoting NSR Manual at A.39); Memorandum from John Calcagni, USEPA, Re: Proposed Netting for Modifications at Cyprus North Shore Mining Corp. (August 11, 1992) (to show that the time immediately prior is not representative of normal operations requires showing of catastrophic occurrences) (citing NSR Manual at A.39). A general warming trend resulting in the most recent 24 months being slightly warmer than the 30-year average

does not constitute a "catastrophic occurrence" of the type necessary to justify the use of a different time period.[3]

Second, the PAL baseline emissions must exclude "non-compliance emissions that occurred while the source was operating above any emission limitation that was legally enforceable during the PAL baseline period." 20 DCMR § 299.1 (as amended by 59 DCR 13081-82). Here, the baseline period includes emissions from Boiler 3 that exceeded BACT and LAER emission limits, which were triggered when the facility made modifications by adding burners capable of burning diesel fuel (and subsequently exceeded after-the-fact synthetic minor limits).

The record demonstrates that the permittee underwent a major modification in 1989 that added fuel oil burners to Unit 3. *See* Chapter 2 Operation Permit Memorandum for Permit #6576 at p. 1 (November 15, 2012) ("6576 OPM"). Eleven years later, in 2000, DDOE issued an after-the-fact permit purporting to impose a 10 tons NOx/year synthetic minor limit on Boiler 3 to avoid NSR applicability for the 1989 project. 6577 TSM at 4. After-the-fact synthetic minor limits are insufficient to prevent applicability of PSD and NNSR and, in any event, the facility admitted in January, 2011, that it also failed to comply with the after-the-fact synthetic minor limit. *See* Memorandum from Eric V. Schaeffer, USEPA Office of Regulatory Enforcement Re: Guidance on the Appropriate Injunctive Relief for Violations of Major New Source Review Requirements

[3] Furthermore, the period prior to March, 2009, is not representative of normal operations because the plant effectively ceased burning coal fuel at that time. www.msnbc.msn.com/id/30561554/ns/us_news-environment/t/contress-stop-using-coal-power-plan. Operations prior to this fuel switch are not representative of the current normal operations of the plant.

(Nov. 17, 1998). Therefore, the modifications in the late 1980s to install burners capable of burning both natural gas and oil were major modifications that triggered BACT and LAER emission limits. Emissions in excess of those limits are, by definition, non-compliant emissions in excess of applicable limits. To properly set the PAL baseline, DDOE must exclude all emissions from Boiler 3 during the baseline period that exceeded BACT and LAER limits. 20 DCMR § 299.1.

Third, the PAL rules—including the definition of the baseline period—were only adopted a month ago. They define the PAL baseline period to exclude any period more than five years ago prior to the application—clearly intending that applications would be submitted after the rule was finalized. Here, however, the applicant applied for a PAL in February, 2012, and updated that application over the course of several months. 6577 TSM at 1. This pre-dates the regulation by many months. DDOE should interpret the definition of PAL baseline period to refer to applications submitted after the rule allowing PALs was adopted, and not to encourage filing of a placeholder application in anticipation of future rules.

Fourth, the baseline emission rates were calculated based on EPA's AP-42 emission factors. (*See* Application Appx. C) However, those emission factors are explicitly not to be used to determine source-specific emissions without analyzing the specific source at issue to ensure that it has the same design, controls and raw materials as those that were tested by EPA when establishing the AP-42 emission factor. *See* AP-42, Introduction at p. 4. Nothing in 20 DCMR 299.1 changes this qualification on the use of AP-42 emission factors. Therefore, since no analysis was done comparing AP-42 factors

to the CPP, DDOE cannot rely on the AP-42 emission factors to calculate the PAL baseline emission rates.

3. DDOE Has Not Ensured That Emissions of NOx and $PM_{2.5}$ Comply With 20 DCMR 201.1(d) and 903.1

Pursuant to 20 DCMR 201.1, the DDOE (as the Mayor's designee) may not issue a permit for a facility that would prevent or interfere with the attainment and maintenance of any applicable national ambient air quality standard. Similarly, pursuant to 20 DCMR 903.1, it is unlawful for any air pollution source to emit any quantity of pollution that is or is likely to be injurious to public health or welfare or that interferes with reasonable enjoyment of life and property. Compliance with this requirement is also a prerequisite to permit issuance. 20 DCMR 201.1(e). Thus, before DDOE can issue the proposed permits, it must determine that the facility will not cause a violation of ambient air quality standards.

There has been no determination in the record that the CPP will comply with national ambient air quality standards (and therefore, will not emit pollution in amounts injurious to health and welfare). Specifically, there has been no determination that emissions of $PM_{2.5}$ and nitrogen oxides will comply with the standards in 40 C.F.R. §§ 50.11(b), 50.13, and 50.15, or the recently-signed new 12 ug/m^3 annual $PM_{2.5}$ NAAQS which are established to protect public health. Absent such findings, DDOE is not authorized to issue the permits. 20 DCMR 201.1 ("The Mayor may issue a permit *upon finding the following*…" (emphasis added)).

4. The Draft Permits' Synthetic Minor Limit for HAPs Is Insufficient.

DDOE proposes to make the CPP a "synthetic minor" for hazardous air pollutants (HAPs) by limiting emissions of any single HAP to 10 tons per year and total HAPs to 25 TYP. *See* Chapter 2 Operation Permit Memorandum, Permits 6663-C and 6664-C (November 15, 2012); Draft Permits 6663-C and 6664-C § II.e and f. However, DDOE proposes to do so with only skeletal limits prohibiting, vaguely, emissions of a single HAP more than 10 TPY and all HAPs more than 25 TPY. (Id.) This is insufficient because it is not practically enforceable.

The EPA has stated that the "practically enforceable criterion is an implied requirement of the first criterion," because a permit "in reality cannot be federally enforceable if it cannot be enforced as a practical matter." Memorandum from Terrell E. Hunt, Associate Enforcement Counsel, Air Enforcement Division, U.S. EPA Office of Enforcement and Compliance Monitoring, and John S. Seitz, *Guidance on Limiting Potential to Emit in New Source Permitting* at 2, (June 13, 1989) (hereinafter "*Hunt Memo*").[4] EPA has specified what practicable enforceability means in the source-specific permit context: to reduce "potential to emit," permits must contain a "production or operational limitation in addition to [an] emission limitation in cases where the emission limitation does not reflect the maximum emissions of the source operating at full design capacity without pollution control equipment." *Hunt Memo* at 5-6. *Production limits* are restrictions on the amount of final product which can be manufactured or produced at a source. *Hunt Memo* at 5. *Operational limits* include all other restrictions on the manner in which a source is run, such as limits on hours of

[4] *Available at* http://www.epa.gov/ttn/atw/pte/june13_89.pdf.

operation, amount of raw material consumed, fuel combusted, or conditions which specify that the source must install and maintain add-on controls that operate at a specified emission rate or efficiency. *Id.* Examples of operational limits are constraining operation to one (time limit specified) shift per day, limitations on the amount of material used (such as using no more than 100 gallons of paint each month), or limits on the maximum temperature at which facility could operate (for sources like an incinerator). *Seitz Memo* at 5-6. For a fuel combustion process like CPP, such limitations would be expressed as maximum combustion each month of each type of fuel. Such production and operation limits must be also supported by adequate monitoring and recordkeeping. *Hunt Memo* at 6-7.

Emission limits *alone*—i.e., restrictions over a given period of time on the amount of a pollutant which may be emitted from a source into the outside air (like the 10/25 TPY limits in the draft permit), *Hunt Memo* at 5—are treated differently. Such limits, also known as "blanket emission limits," virtually never satisfy the definition of "potential to emit." This rule was first articulated in *U.S. v. Louisiana-Pacific Corp*., which considered a PSD permit limiting carbon monoxide to 78 TPY and volatile organic compounds to 101.5 TPY. 682 F. Supp. at 1125. There, the court noted that while compliance with restrictions on hours of operation or amount of material which may be combusted is "easily verified," "compliance with blanket restrictions on actual emissions would be virtually impossible to verify or enforce." *Id*. at 1133. The court concluded that "not all federally enforceable restrictions are properly considered in the calculation of a source's potential to emit," and specified that blanket restrictions on

emissions should be excluded from such calculations. *Id*. So too here, where the draft permit contains only a blanket limit on HAPs.

The Hunt Memo elaborated on *Louisiana-Pacific*, agreeing that there was an "absolute prohibition on using blanket emission limits to restrict potential to emit." *Hunt Memo* at 7. The guidance provided in the Hunt and Seitz memos is consistent with EPA's regulations specifying that PTE limits must be operational or physical, 40 C.F.R. § 63.2. Yet, here, DDOE proposes only blanket emission limits on HAPs. See Draft Permits 6663-C and 6664-C § II.e and f. These are insufficient.

DDOE must, at a minimum, establish process limits (i.e., the amount of fuel that can be burned) and establish meaningful and enforceable monitoring to ensure that those process limits are never exceeded.

If you have any questions about these comments, please do not hesitate to contact us.

Regards,

Zachary M. Fabish
Staff Attorney
50 F Street, NW - 8th Floor
Washington, DC 20001
(202) 675-7917
(202) 547-6009 (fax)
zachary.fabish@sierraclub.org

Counsel for Sierra Club