

**DDOE's Response to Comments on Capitol Power Plant Proposed Air Quality Permits for Plantwide Applicability Limits for NO<sub>x</sub> and PM<sub>2.5</sub>, Installation of Cogeneration Equipment, and Operation of Existing Boiler #3**

**Background**

The Capitol Power Plant (CPP) became operational in 1910 and was originally designed to provide heat and electricity to the U.S. Capitol. CPP eliminated electrical energy production in 1951, and the power plant currently provides steam and chilled water to 23 facilities on Capitol Hill, including the House and Senate office buildings, the Supreme Court, and the Library of Congress.

On February 10, 2012, the Architect of the Capitol (AOC) submitted a series of air quality permit applications to the District Department of the Environment (the Department). AOC applied for a permit to operate an existing natural gas and fuel oil fired boiler, and permits to construct and operate two new cogeneration units at the U.S. Capitol Power Plant. The cogeneration units are highly efficient, clean technology that will allow the facility to both provide heat to buildings and generate electricity for use by CPP and the buildings that it services. The equipment will also allow CPP to reduce its reliance on older, dirtier fuel burning equipment, particularly the units that still combust coal. In addition, the AOC applied for a permit containing plantwide applicability limits (PALs) for those regulated New Source Review (NSR) pollutants that would otherwise cause a significant increase in emissions due to the project. The pollutants included PM<sub>2.5</sub> and NO<sub>x</sub>, as a precursor for ozone. The PALs permit will cap the annual allowable emissions from CPP for the first time ever.

A public notice of the proposed permits was published in the *DC Register* on November 16, 2012 and solicited comments until December 17, 2012. Based on requests from concerned citizens, the public comment period was extended until February 18, 2013. Below is a summary of the comments received and the Department's responses.

**Acronyms and Abbreviations Used:**

AOC: The Architect of the Capitol

AQD: The Air Quality Division of the District Department of the Environment

CPP: The Capitol Power Plant operated by the Architect of the Capitol

The Department: The District Department of the Environment or DDOE

PAL: Plantwide Applicability Limit (see 20 DCMR § 208)

NO<sub>x</sub>: Nitrogen Oxides

SO<sub>2</sub>: Sulfur Dioxide

PM<sub>2.5</sub>: Fine Particulate Matter

HAP: Hazardous Air Pollutant

GHG: Greenhouse Gases

### **Comments and DDOE Responses on Capitol Power Plant Draft Permits:**

***Comment 1: During the public comment period, AQD received a large number of comments asserting that coal burning is dirty and unhealthy and should not be permitted at CPP or anywhere in the District of Columbia, including comments from Councilmember Tommy Wells, ANC6A, Capitol Hill Day School, and DC Environmental Network. Commenters encouraged the Department to deny the permit applications, prohibit coal burning in the permits, and/or include pollution control requirements and emission limitations that would reduce the emissions from coal burning.***

**Response:** While AQD agrees that coal is overall a higher emitting fuel source than alternatives such as natural gas and fuel oil, the Department does not have legal authority to prohibit coal burning at the facility through any permitting process, or to require additional control technology on the coal burning units, unless the applicant voluntarily agrees to such a condition, and accepts the condition in the final permit.

In this case, AOC submitted applications for permits to install two new combustion turbines with heat recovery steam generation (HRSG) units (collectively “the cogeneration units” or “cogeneration project”) not designed to burn coal, and to update a permit for a boiler (Boiler # 3) not designed to burn coal. Because air quality permits are generally source specific, the proposed permits only cover the listed units and do not affect Boilers #1 and #2, the boilers at the plant designed to burn coal.

Additionally, AOC made use of a newly established permitting process established in 20 DCMR § 208 to request plant-wide emission limits (known as Plantwide Applicability Limits or PALs) for two pollutants, nitrogen oxides (NO<sub>x</sub>) and fine particulate matter (PM<sub>2.5</sub>). The Department has the discretion whether to allow applicants to use this process, but in this case determined that by establishing these PALs, there would be an effective limit placed on the use of coal at the facility without directly limiting or banning coal use, which, as discussed above, is not within the Department’s authority. Such a limit has never been placed on the facility in the past, in part because there has not been a regulatory basis to do so. The PALs will indirectly limit the facility’s ability to use coal in the future for the first time.

Some commenters have stated that the Department should reduce the PALs because they believe that this would effectively prevent the facility from burning coal. The Department does not agree that this approach is appropriate. Until the new cogeneration units are constructed and operating, AOC needs to maintain coal burning capacity at the facility as a backup fuel source. Also, AOC has asserted that the facility is not confident that it could meet its directive to provide heating to

federal government buildings under lower PALs, in the event of a worst-case scenario. Consequently, if the Department were to issue a permit with lower PALs, AOC would most likely reject that permit and proceed with a different permitting process, known as New Source Review (NSR), or abandon the cogeneration project all together. The Department has determined that the PALs permit is more protective of air quality in the District than NSR would be, because it would lower the emission limits *on the entire facility*. New Source Review would *only apply to the new units*, which are already very efficient and designed to be low-emitting.

With all of this in mind, however, the Department has met extensively with AOC in order to address the public's concerns. Consequently, the Department has added an enforceable requirement to the final construction permits that prohibits coal burning at the facility no later than 18 months after the "commercial operation date" of the combustion turbines, except in cases of force majeure and for testing and tuning. The commercial operation date, which is defined in the permit, occurs after the combustion turbines have been constructed, tested, and certified by either the power supplier (PEPCO) or the regional transmission operator (PJM), or any other necessary entity, to provide electricity for the CPP and connected federal buildings, such as the Capitol Building, Union Station, and the Library of Congress. AOC anticipates that the commercial operation date will occur no later January 1, 2016 (although there are many variables that could affect this) meaning that almost all coal burning should cease at the facility by approximately June 1, 2017. The requirement will become effective provided that AOC accepts the permits.

***Comment 2: ANC6A submitted comments opposing coal burning at CPP and requesting that the Department "set particulate standards that protect our neighborhood from exposure to coal dust, sulfur particles, and sulfur dioxide that have been a health hazard to our community in the past, and should be rigorously prevented in the future. Clean burning natural gas is not in short supply, and should continue to be the energy source of the Power Plant".***

**Response:** Please see the response to Comment 1 and Comment 15 for the request to protect against exposure to coal dust and encourage natural gas as a fuel source at CPP. As for sulfur particles and sulfur dioxide (SO<sub>2</sub>), the District is deemed to be in attainment<sup>1</sup> of national standards for sulfur dioxide and has not been delegated authority by the U.S. Environmental Protection Agency (EPA) to issue PAL permits or attainment New Source Review permits (also known as "Prevention of Significant Deterioration" or "PSD") for this pollutant. EPA did not issue a PAL permit for SO<sub>2</sub> because it was determined that emissions from the new construction would not cause a significant increase in emissions of that pollutant. The Department anticipates that SO<sub>2</sub> emissions will decrease following construction of the cogeneration project because this will reduce CPP's need to rely on the coal-fired units and the new natural gas fired units will have very low sulfur oxides (SO<sub>x</sub>) emissions.

***Comment 3: A number of commenters, including the Capitol Hill Day School and DC Environmental Network, observed that the District has a high incidence of asthma and***

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<sup>1</sup> EPA issued new standards for SO<sub>2</sub> on Jun 22, 2010 (75 Fed. Reg. 35520), and the District has not yet been designated being in either attainment or nonattainment for these standards.

*respiratory illnesses, and some requested that the Department conduct health studies prior to issuance of the permits.*

**Response:** The Department is not required to do any health-based studies prior to issuing air quality permits, nor does it have the expertise to do so. However, the Department is confident that the permits will have a positive impact on air quality in the District, and consequently respiratory illnesses like asthma, because the cogeneration project will allow CPP to reduce its reliance on the old coal-fired units at the facility in favor of the highly efficient and lower emitting cogeneration system. The cogeneration project will also allow CPP reduce its load on the electrical grid, thereby reducing regional emissions from large coal-fired and other power plants. In addition, through the PALs, the Department is lowering CPP's current *allowable* emission limits from the equivalent of 925 tons per year (tpy) for nitrogen oxides (NO<sub>x</sub>), 82 tpy for fine particulate matter (PM<sub>2.5</sub>), and 257 tpy for hazardous air pollutants (HAPs), to 197 tpy for NO<sub>x</sub>, 35 tpy PM<sub>2.5</sub>, and 25 tpy for HAPs. AOC has estimated that actual emissions of sulfur dioxide (SO<sub>2</sub>) and HAPs will decrease notably following completion of the cogeneration project. Direct emissions of NO<sub>x</sub>, PM<sub>2.5</sub>, and greenhouse gases (GHGs) will either stay mostly the same or may increase slightly from 2011 levels, however, overall regional emissions of these pollutants will be reduced because the cogeneration project will allow CPP to reduce its load on the electrical grid (from 91,146 MWh in 2011 to an estimated 5,989 MWh after construction of the cogeneration project), much of which is powered by coal-fired power plants. NO<sub>x</sub>, PM<sub>2.5</sub>, and GHGs are regulated on a regional and national basis; therefore regional net reductions of these pollutants will benefit the local air quality.

**Comment 4:** *Sierra Club commented that "DDOE cannot issue a PAL unless and until the SIP for the District is amended to allow PALs". Sierra Club's comment states that the Plantwide Applicability Limit (PAL) provisions of the District's regulations (20 DCMR § 208) 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 SIP, are preempted. 42 U.S.C. § 7416."*

**Response:** Commenter is correct that the PAL provisions of the District's regulations have not yet been incorporated into the District's State Implementation Plan (SIP). The Department submitted the PAL provisions along with other recent amendments to the air quality regulations (adopted on November 16, 2012 at 59 DCR 13044) to the U.S. Environmental Protection Agency (EPA) as a SIP amendment on April 5, 2013. EPA received the SIP amendment on April 15, 2013 and deemed it administratively and technically complete on May 3, 2013. The Department worked closely with EPA in developing amendments to the District's regulations, and in fact adopted provisions that are more stringent than required by the federal rules. See Notice of Proposed Rulemaking, 59 DCR 1211 (February 17, 2012).

The District cannot submit a SIP amendment until it has been legally adopted as a local law or regulation; therefore it is inevitable that there is a gap between when the regulation is locally enforceable and when it is federally enforceable. The Department must be able to implement its air quality program in the mean time, which is why it determined that issuing the PALs permit in this instance is appropriate. If the District's SIP amendment is ultimately disapproved, either in

part or in full, then the Department will have to revisit this issue. At this time, the Department has determined that the PALs are more protective of air quality in the District than requiring the AOC to go through New Source Review (NSR) for the new cogeneration equipment, because it will enable the Department to indirectly limit emissions from the older coal-fired boilers at the facility. Without the PALs, there is no way for the Department to limit emissions from these two units.

***Comment 5: Sierra Club commented that “even if the District’s EPA-approved SIP allowed PALs, the proposed PAL would be deficient” and cited four different reasons for this. First, Sierra Club’s comment states that the Department’s proposal to use the 2007-2009 period as the PAL baseline period, “rather than the presumptive 24-month period immediately preceding the application” is unacceptable because it inconsistent with the meaning of the phrase “more representative of normal operations”. Sierra Club also commented that the Department “must exclude all emissions from Boiler #3 during the baseline period that exceeded BACT and LAER limits”. Sierra Club commented that the Department 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”. Finally, Sierra Club stated that the Department “cannot rely on the AP-42 emission factors to calculate the PAL baseline emission rates”.***

**Response:** The Department disagrees with Sierra Club’s assertion that its use of the 2007-2009 baseline period is inconsistent with the meaning of “representative of normal operations”. The District’s PAL regulations require that the Department use the 2 calendar year period immediately preceding the application date for the PAL baseline period, except that the Department may use a different consecutive 24-month period within the previous 5 years if it determines that the period is “more representative of normal source operations”. 20 DCMR § 299.1, definition of “PAL baseline period”. Sierra Club states that according to EPA guidance, “[t]o 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”. While the Department agrees that when calculating credible emissions reductions for “netting” purposes, EPA has *generally* used events such as strikes or catastrophic circumstances to determine that a time period does not capture “normal source operations”, these events are not exhaustive, and therefore not the only circumstances under which the Department would consider allowing a different baseline.

Both through its permit application and comments on the proposed permit, AOC provided justification that the 2007-2009 time frame is more representative of normal operations because it is more representative of weather patterns (represented by heating degree days) over the previous 30 years. Because CPP is used primarily to provide heating and cooling to federal buildings, its operations are directly related to the ambient temperature. AOC provided data that the two calendar years immediately preceding the permit application were warmer than the 30 year average, resulting in a particularly low heating demand on CPP. Because the facility’s operations are directly related to weather conditions, the Department has found that it is appropriate to determine that a time period with temperatures closer to the 30-year average are “more representative of normal source operations”. Sierra Club also argued that any period before March 2009 is not representative of normal operations because after that CPP “effectively

ceased burning coal fuel at that time”. While it is true that coal usage has made up a significantly smaller percentage of CPP’s fuel mixture in recent years, the Department has determined that weather patterns are more directly related to normal source operations at the facility than fuel mixture because they directly relate to the demand on the facility. If CPP had experienced a higher steam demand (resulting from a colder winter) during calendar years 2010 and 2011, it is possible that coal would have comprised a higher percentage of the facility’s fuel mixture. Furthermore, AOC has expressed that it intends to use the co-generation project, for which the Department has simultaneously issued construction permits (which are anticipated to lead to operation permits, upon completion of construction), to move away from coal burning at CPP altogether. For this reason, the Department anticipates that emissions of certain pollutants at the facility will likely be well below the PALs following construction of the cogeneration project. When the PALs permits are up for renewal in 5 years, the Department will reassess the PALs level pursuant to 20 DCMR §§ 208.17-18, and *may* adjust the PALs downward to reflect CPP’s more current emissions at the time.

In addition, while informative, this EPA guidance is not controlling on the PAL provisions of the District’s regulations. The PAL provisions were not added to the federal New Source Review (NSR) regulations until 2002 (67 Fed. Reg. 80186, December 31, 2002), two years after the EPA issued the Sierra Club cited guidance interpreting “normal source operations”, as they applied to determining creditable emission reductions for netting purposes. The *federal* PAL provisions allow the use of any two-year period within the previous ten years, and do not require that the period be “representative of normal operations”<sup>2</sup>. 40 C.F.R. §§ 51.165(a)(1)(xxxv) and 51.165 (f)(6)(i). On January 23, 2013, EPA issued PALs to AOC covering attainment pollutants at the CPP that used November 2002 – October 2004 as the baseline period for greenhouse gas (CO<sub>2</sub>e) and nitrogen dioxide (NO<sub>2</sub>) and December 2006 – November 2008 as the baseline period for particulate matter (PM<sub>10</sub>). In contrast, the District’s requirement that the source use the immediately preceding 24-month period, unless the source can demonstrate that a different 2-year period within the previous 5 years is significantly more restrictive than the federal rule. Also more restrictive is the District’s requirement that the source use the same 2-year period for each PAL pollutant. Even if the Department interprets the phrase “more representative of normal source operations”, as it applies to the District’s PAL provisions, to be broader than EPA’s pre-NSR reform interpretation of “normal source operations”, this would still be more stringent than the federal PAL provisions. For the reasons stated above, the Department has determined that it is a reasonable interpretation of the District’s PAL provisions to use weather trends as a basis for selecting a baseline period earlier than the immediately preceding 2 calendar years, for facilities that are designed primarily to provide heating or cooling.

Second, the Sierra Club argued that the Department should exclude from the baseline calculation all emissions from Boiler #3 that exceeded Best Achievable Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) emission limits, pursuant to 20 DCMR § 299.1, which requires the Department to exclude all non-compliant emissions. The comment stated that, “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

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<sup>2</sup> The federal rule may take “normal source operations” operations into account when determining the baseline period for an “electric utility steam generating unit”. 40 C.F.R. §§ 51.165(a)(1)(xxxv). The District does not have any facilities of this kind.

burning diesel fuel (and subsequently exceeded after-the-fact synthetic minor limits)". Sierra Club stated that AOC made changes to Boiler #3 in violation of NSR requirements, and that the Department later established a 10 ton per year (tpy) limit<sup>3</sup> in order to make the source a "synthetic minor". Sierra Club cited EPA guidance stating that an after-the-fact synthetic minor limit is not sufficient to avoid NSR applicability, and therefore the Department should exclude any emissions that exceed the BACT and LAER emission limits from calculation of the PAL baselines. When determining the PAL emission baselines, the Department excluded any emissions that exceeded 10 tons per year as non-compliant emissions. This appears to be a more conservative approach than applying LAER emission limits based on the boiler's fuel usage. In its second set of comments, AOC submitted an analysis of hypothetical LAER emission limits for Boiler #3, which found that, "[a]ssuming a hypothetical NO<sub>x</sub> LAER emissions rate of 0.1 lb/MMBtu on both oil and gas firing conditions, the actual fuel usage during the Draft PALs permit baseline period, the actual emissions for use in setting the PAL would be approximately 15.7 tpy." For this reason, the Department has determined that the using 10 tpy as baseline emissions for Boiler #3 is more conservative and more protective of air quality than Sierra Club's approach.

Third, Sierra Club also challenged the Department's use of a baseline period that was within 5 years of the date that the permit application was submitted, but began more than 5 years before the date that the PAL provisions in the regulations became final: "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." For reasons stated above, the Department has determined that the proposed PALs baseline period is more representative of normal operations at CPP and that the PALs permit will as a whole be positive for air quality in the District. The Department anticipates that when the PALs permit is up for renewal in 5 years, the baseline emissions may be considerably lower because CPP will be relying on the cleaner more fuel efficient cogeneration units and not the older coal fired units. The Department will consider this when deciding whether to lower the PALs at that time.

Sierra Club's fourth and final criticism of the baseline period was that the Department should not have relied on AP-42 emission factors to calculate the PAL baseline emissions, because "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." Commenter made a similar comment on EPA's proposed PALs permit for GHGs, NO<sub>2</sub>, and PM<sub>10</sub> at CPP. The District's regulations specifically allow the use of "generally recognized and accepted emission factors such as AP-42" for determining PAL baseline emissions. 20 DCMR § 299.1, definition of "PAL Baseline Emissions". Sierra Club has not asserted that there is any specific inconsistency between the design, controls, or raw materials at CPP and those used in the development of the AP-42 emission factors. Therefore, the Department concurs with EPA's response, that to its knowledge, the emissions factors used are consistent with the units' source type, design, controls, and raw material input, and we therefore view the use of these emissions factors as justified in this instance.

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<sup>3</sup> There is also some reason to believe that this 10 tpy limit may have been an error in the permit calculations, rather than an attempt to establish a "synthetic minor" as stated in the technical support document..

In addition, although AOC used AP-42 to calculate the PAL baseline emissions, the permit conditions require these calculations to be verified through stack testing and emissions monitoring. Permit Condition IV(k) requires that the NO<sub>x</sub> emission factors be validated using a Continuous Emissions Monitoring System (CEMS), and Condition IV(l) required that the PM<sub>2.5</sub> emission factors be verified by stack testing. The Department has amended Conditions IV(f)(3) and IV(l) in the Final Permit slightly in order to clarify this requirement. Pursuant to 20 DCMR § 208.11(a)(1), the Department is required to reopen a PALs permit to correct calculation errors, so if the testing and monitoring prove that the emission factors used were, in the Department's determination, significantly inaccurate, the PALs will be adjusted accordingly.

***Comment 6: In addition to the Sierra Club, many other commenters challenged whether the PAL baseline period selected (February 2007-January 2009) for establishing the PALs for NO<sub>x</sub> and PM<sub>2.5</sub> is appropriate, including Councilmember Tommy Wells, and ANC6B. Many of these comments focused on the fact that the coal usage and actual emissions during that period were both much higher than they were during the period covered by calendar years 2010 and 2011, the default period used unless the applicant justifies that a different 24 month period in the preceding 5 years was more representative of normal source operations.***

**Response:** The Department agrees that coal use and emissions were higher during the February 2007 – January 2009 time period than during calendar years 2010 and 2011. However, AOC submitted a valid justification that the proposed baseline period is more representative of normal source operations than calendar years 2010 and 2011. Specifically, AOC showed that the weather conditions during the most recent years were particularly mild. Most of the load on the existing boilers at the facility results from AOC's mission to provide steam to heat federal buildings during cold months. AOC performed an evaluation of the number of heating degree days<sup>4</sup> during the 2010 and 2011 period and found that there were 3,800 on average in 2010 and 2011, as compared to an average of 4,053 over the last 30 years. The average number of heating degree days during the selected baseline period of February 2007 – January 2009 was found to be 3,956. AOC must be able to operate CPP to provide adequate heating to federal buildings during a particularly severe winter. As such, the Department agrees with AOC that the weather/climatic conditions from February 2007 to January 2009 represent a period closer to "normal" than the calendar years 2010 and 2011 period.

Some commenters have argued that a 2009 public commitment by AOC to make efforts to reduce coal use and only use it during limited instances of natural gas interruptions (or insufficient supply), equipment downtime, and periods when extremely high heating loads require operation of more than just the natural gas fired equipment, constituted a change in the method of operation of the plant and therefore periods before that commitment cannot be used to represent normal operations. The Department has evaluated this argument and found that it is insufficient for eliminating the selected baseline period from consideration. While AOC did

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<sup>4</sup> "Heating degree day" is defined in the permit application as follows: "Heating degree day is a commonly used measurement, directly related to air temperatures, that is designed to capture the demand for energy to provide heating. The measurement is defined relative to a base temperature at which there is no need for supplemental heating. When the daily average air temperature (high and low temperatures averaged) is less than the base temperature, HDD is calculated as the base temperature minus the daily average temperature. If the daily average air temperature is greater than the baseline temperature then there are no heating degree days for that day. AOC and CPP utilize this measurement when tracking operational performance and demand.



make such a commitment in the public arena and subsequently voluntarily reduced coal usage (and emissions) at the facility, this was always a voluntary action. It was never a regulatory requirement, hence the Department never added such a restriction to any of the facility's permits, nor did AOC seek to make it enforceable in any permit. Furthermore, it is not possible for AQD to determine the extent to which more coal might have been burned despite this public commitment during subsequent years if the winters had been more severe. Steam demand at CPP is directly related to weather conditions, and therefore the Department has determined that this is an acceptable basis for determining reasonable operations.

Based on this evaluation, the Department has determined that the proposed baseline period from February 2007 through January 2009 is the more appropriate baseline period to use pursuant to District regulations. It should be noted that, consistent with 20 DCMR § 208.19 and § 208.20, the Department will have the opportunity to evaluate the appropriateness of the PALs levels at the time of PALs permit renewal (5 years from permit issuance).

***Comment 7: In a comment related to the previous comment about heating degree days, some commenters indicated that the cooling load on the plant, as represented by cooling degree days, should also be considered in establishing the baseline period.***

**Response:** The Department has determined that cooling load on the facility does not need to be considered in developing the baseline period. This is because CPP uses refrigeration equipment rather than the boilers responsible for nearly all of the emissions from the facility for providing cooling services to its customers. Variations in cooling load will have no significant impact on overall NO<sub>x</sub> or PM<sub>2.5</sub> emissions from the facility and therefore need not be considered in the baseline period evaluation.

***Comment 8: Jane R. Chittick, CFRE; Jim Dougherty, Sierra Club; and others: Comments were received indicating that small cogeneration units exist on the market and these, along with other lower polluting alternatives should be used rather than expanding the CPP central heating and cooling plant. Specifically, it was suggested that these smaller cogeneration units could be installed in numerous federal buildings throughout the District rather than concentrating operations at CPP.***

**Response:** AOC has indicated to the Department that they did evaluate a more decentralized heating and cooling system, but concluded that a centralized plant, such as currently exists, is more efficient and cost effective. The Department did not perform an independent analysis of this proposal, nor is it the Department's function to do so. Under the Clean Air Act and related federal and District regulations, regulated entities such as AOC have high levels of flexibility in what equipment they install and where they install it to meet their own needs and goals. The Department does not have authority to dictate what specific technologies or equipment a regulated entity employs. The Department has determined that the equipment that AOC has proposed to install and related operational methodologies are consistent with all regulatory requirements. As such, it is appropriate for the Department to grant the requested permits without requiring an evaluation of alternate technologies.

***Comment 9: Jesse Rauch: Similar to the previous comment, the commenter indicated that the Department should require the facility to install alternative equipment such as larger cogeneration units to reduce the need to operate Boilers #1-3.***

**Response:** As mentioned in the previous comment response, the Department does not have authority to require facilities to choose specific technologies or equipment. This would include the sizes of the equipment. In actual fact, the cogeneration equipment is sized to provide similar quantities of steam to the amount produced by Boilers #1 and #2, the coal burning boilers at the facility. AOC has stated that the proposed cogeneration units are needed to phase out coal usage at the facility, and are a major step in that process. The cogeneration equipment is not sized to also replace Boiler #3, which is a large boiler, but natural gas-fired with No. 2 fuel oil backup. The commenter appears to be under the impression that Boiler #3 is a third coal-burning boiler, which it is not.

***Comment 10: Sierra Club commented that 20 DCMR §§ 201.1 and 903.1 prohibit the Department from issuing the permits to AOC until it has determined that they would not cause a violation in the National Ambient Air Quality Standards (NAAQS).***

**Response:** Pursuant to 20 DCMR § 201.1(e), the Department may issue an air quality permit upon finding that “the operation of the source will not result in the violation of any provision of this subtitle”. Sierra Club commented that the Department is prohibited from issuing the proposed permits until the Department demonstrates that the source would comply with 20 DCMR § 903.1, and that violation of a NAAQS would constitute a violation of § 903.1. Section 903.1 prohibits “emission into the atmosphere of odorous or other air pollutants from any source in any quantity and of any characteristic, and duration which is, or is likely to be injurious to the public health or welfare, or which interferes with the reasonable enjoyment of life”. This section is under Chapter 9, which is titled “Motor Vehicular Pollutants, Lead, Odors, and Nuisance Pollutants”. In light of this, the Department has historically applied this section to nuisance pollutants, mainly odors. It has not interpreted this section as applying to NAAQS violations, nor does it consider it appropriate to begin doing so now. A violation of 20 DCMR § 903.1 only carries a fine of \$200 (16 DCMR §§ 3201.1(d) and 3637.4(jj)), further supporting the Department’s interpretation that this section was not intended to address large scale air quality issues, such as the NAAQS. The District has numerous other regulations designed to bring it into attainment and ensure that it stays in attainment with the NAAQS. Therefore, the Sierra Club erred in stating that § 903.1 applies to compliance with the NAAQS.

Nonetheless, 20 DCMR § 201.1(d) states that the Department may issue a permit upon a finding that “the operation of the source will not prevent or interfere with the attainment and maintenance of any applicable national ambient air quality standard and will not result in the contravention of any provision of the Federal Clean Air Act or the regulations promulgated under the Act”. The Department does not anticipate that the proposed permits will result in any violation of the NAAQS<sup>5</sup>. The PALs permit limits any increase in CPP’s actual emissions from

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<sup>5</sup> Sierra Club included “the recently-signed new 12 ug/m<sup>3</sup> annual PM<sub>2.5</sub> NAAQS” among those NAAQS that the Department must demonstrate compliance with prior to issuing the permit. The Department is currently undesignated under the 2012 PM<sub>2.5</sub> NAAQS and EPA is not expected to make these designations until December 2014.

the baseline to a *de minimus* amount<sup>6</sup>. In addition, the PALs permit will also significantly *reduce* the permitted *allowable* emissions at CPP, thereby ensuring future protection of the NAAQS. Although the historical actual emissions at the CPP have been well below the permitted amounts, without the PALs permit, there is no way for the Department to ensure that they stay this way. In addition, the Department anticipates that once the cogeneration system is functioning and CPP is consequently able to move away from the use of its coal-fired units, air quality in the District will benefit. The Department expects that the cogeneration project will result in regional reductions of emissions, due to CPP reducing its reliance on the electric grid from 91,146 MWh in 2011 to an estimated 5,989 MWh after construction of the project. Finally, the Department is required to reopen the PALs permit pursuant to 20 DCMR § 208.11(a) if it “determines that a reduction is necessary to avoid causing or contributing to a NAAQS or PSD increment violation, or to an adverse impact on an air quality related value that has been identified for a Federal Class I area by a Federal Land Manager and for which information is available to the general public”.

***Comment 11: Stephen Waller; Mike Englert; Lisa Jones; Jim Dougherty, Sierra Club; others: Several commenters suggested that the Department should require AOC and the Federal Government in general to install solar, geothermal, or wind energy infrastructure, implement energy efficiency measures at their many facilities, purchase green power from the grid, etc. to remove the need for all or portions of CPP.***

**Response:** As noted in the responses to previous comments, the Department does not have the authority to require the installation of any particular technologies to meet an applicant’s needs. AOC has evaluated its alternatives and has chosen a legally allowable technology to meet their needs. The Department’s role is to evaluate whether the applicant’s proposal complies with legal and regulatory requirements. The Department has determined that the applications do, in fact, meet legal standards.

***Comment 12: Several commenters focused on a statement made in the public notice indicating that the combustion turbines would “likely result in increased emissions from the facility”, stating that they are opposed to allowing the facility to increase emissions.***

**Response:** First, it should be made clear that this statement was describing possible *actual* emission increases, not increases in *allowable* (i.e. permitted) emissions from the facility. The permits being issued will result in substantial decreases in allowable emissions from the facility because emission limits will be established plantwide for NO<sub>x</sub>, PM<sub>2.5</sub>, and hazardous air pollutants (HAPs) for the first time. The actual emission increases that *could* occur would be above the actual levels observed in some previous years. However, the Department *anticipates* an overall decrease in the actual emissions of some pollutants, particularly sulfur dioxide and hazardous air pollutants, because the facility will need to rely less on the coal-fired boilers once the cogeneration combustion turbines are installed. See responses to comments #3 and #6.

Under the Clean Air Act and related federal and District regulations, any applicant may apply for a permit to install new equipment resulting in new emissions from a facility. There are,

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<sup>6</sup> A “significant” emission increase is 25 tons per year (tpy) for NO<sub>x</sub> and 10 tpy of PM<sub>2.5</sub>. 20 DCMR § 299.1, definition of “significant”. The Department proposed PAL limits of 196.7 tpy for NO<sub>x</sub> and 35.4 for PM<sub>2.5</sub>, which would only allow a *de minimus* increase above the PAL baseline emissions.

however, many regulations with which an applicant must comply in order to receive approval for such increases. In most cases, equipment can be installed as long as emissions increases stay below levels defined as “significant” (see 20 DCMR § 299.1). In this case, because PALs are being established, emission increases of NO<sub>x</sub> and PM<sub>2.5</sub> are being limited to levels below those thresholds (25 tpy and 10 tpy, respectively).

Even if the Department refused to approve PALs for these pollutants and required the facility to go through the alternative requirements of 20 DCMR § 204, known as nonattainment New Source Review (NSR) – which several commenters have asserted would be a better, more stringent approach – actual emissions from this facility could still increase. The new equipment would be installed (perhaps slightly lower emitting equipment), the old equipment would remain, unchanged, and there would be no limitations on how much the facility could emit from the existing equipment. There would be emission offsets purchased from other sources in the region (likely from around Baltimore), but these would have far less impact on the neighborhood residents than establishing the PALs.

The Department does not have the authority to arbitrarily decide that it will not allow a given facility to increase emissions when such increases are envisioned and allowed by the existing regulatory structure.

***Comment 13: Hal Wackman: The commenter states: “Mention is made of monitoring emissions from the plant. Provision should be made as part of the project for monitoring ambient conditions in the vicinity of the plant, and relevant information should be made publicly available. The cost of such monitoring should be included in the project.”***

**Response:** The Department operates a comprehensive ambient monitoring program in the District in accordance with federal requirements. In fact, this monitoring network is far more concentrated than most networks nationwide. While this monitoring network does not monitor each neighborhood in the District, the Department believes that it effectively monitors air quality conditions in the District.

The Department does not generally require permit applicants to perform ambient monitoring in their neighborhoods. Most pollutants for which the federal Clean Air Act has established air quality standards are regulated regionally, not locally. In some instances, it may be appropriate to monitor these emissions (see 20 DCMR § 501.2), but these instances are generally only when there is a new major stationary source installed or a major modification at an existing major stationary source. The installation of the proposed cogeneration units, when issued with the PALs, do not constitute either the installation of a new major stationary source or a major modification at an existing major stationary source because the major source triggers are not exceeded.

In fact, allowable emissions from the facility will actually be reduced as part of this permitting process. As such, the Department has determined that neighborhood level ambient monitoring by the facility is not needed at this time.

***Comment 14: Ben Shaibly: The commenter states in part: “After the AOC completes the promised changes in technology from coal burning to natural gas and alternative energy sources (solar and geothermal would be nice), I think the permit should be approved. The natural gas-fired cogeneration facility proposed for the generation of electricity for the Capitol complex and the Hill seems like an efficient idea in the grand scheme of things.”***

**Response:** Air quality permits must be obtained for AOC to modify CPP to convert to natural gas. AOC has stated publicly that the installation of the natural gas fired cogeneration systems (with fuel oil backup) are a major step toward eliminating coal use, but permits must be obtained for the installation. It is these permits that AOC is currently requesting and are being issued.

***Comment 15: A number of commenters indicated that they had been subject to soot, dust, particulate matter, etc. from the plant at times. Often it was asserted that these problems occurred when the plant was burning coal.***

**Response:** According to its records, AQD has not received any dust complaints concerning CPP within the last few years, and therefore has not investigated this specific concern of the community. For this reason, it cannot opine as to whether the observed soot, dust, particulate matter, etc. can be attributed to operations at the CPP. CPP is required to comply with the District’s regulations concerning fugitive dust and visible emissions. 20 DCMR §§ 605 and 606. However, commenters should keep in mind that there are many potential sources of these particles, for example construction, or residential fireplaces. The Department does not anticipate that the proposed permits would result in any observable particulates. (Water vapor emissions are currently observable from the facility, and will continue to be in the future, but this does not indicate that there is any air quality violation.)

***Comment 16: Sierra Club commented that the draft permits’ synthetic minor limit for HAPs is insufficient because it is not practicably enforceable.***

**Response:** Sierra Club challenged the Department’s creation of a “synthetic minor” for hazardous air pollutants (HAPs) by citing EPA guidance that states an emissions limit alone is not practicably enforceable and is rarely sufficient to limit a source’s potential to emit (PTE), that this must be accompanied by some other production or operation limit. The Department disagrees that the facility-wide limits on HAPs are not practicably enforceable. Permit condition IV(l) requires CPP to monitor the rolling (12) month facility-wide emissions of total HAPs and individual HAPs. They are able to do this based on AP-42 emission factors. The predominant HAPs from this type of coal combustion are hydrogen chloride (HCl) and hydrogen fluoride (HF). In fact, based on a review of AP-42 factors, the limiting factor on coal use related to HAPs is HCl. Based on coal use, the facility would reach the 10 ton per year major source threshold for HCl before reaching the 25 ton per year total HAP major source threshold. Therefore ensuring HCl emissions remain below 10 tons per year will ensure compliance with the overall emission limits.

AP-42 emission factors for HCl and HF resulting from bituminous and subbituminous coal burning are rated “B” (on a scale of A through E, with A being the most accurate). As such, the Department has determined that these emission factors, used in combination with coal usage data that AOC is required to track and record, can be used effectively to determine HCl and HF

emissions and therefore ensure that HAP emissions remain below the thresholds. However, as a double check, the permit does require AOC to calculate emissions of all HAPs. AP-42 factors can be used for this purpose effectively as well.

In addition, in order to further address this concern, the Department has added Condition II(g) to permit, which limits the facility-wide coal combustion to 16,666 tons per 12 month rolling period. This limit is based on an AP-42 emission factor calculation of the maximum coal that the facility could burn (assuming that no other fuels are being used) without exceeding the major source threshold for HCl and therefore all applicable HAP emissions limits.

***Comment 17: Mike Ewall, Esq., Energy Justice Network: The commenter proposed that, if the permit applications are not rejected outright, the Department should require continuous monitoring of carbon dioxide, particulate matter, hydrofluoric acid, hydrochloric acid, volatile organic compounds, arsenic, cadmium, chromium, lead, manganese, mercury, nickel, selenium, ammonia (if ammonia injection is ever used in scrubbers in these units), polycyclic aromatic hydrocarbons (PAHs), and dioxins/furans for all units at the facility. The commenter also suggested that the Department should “require that all emission data be released real-time on a public website, with data broken out per unit as well as facility-wide, so that it’s clear when the coal units are in use, and what the emissions are from the coal units vs. the oil/gas units.” The commenter provided some references to provide precedent related to local ordinances in localities in Pennsylvania related to mercury and dioxin/furan emissions from crematoria as well as a requirement that an oil refinery in Pennsylvania continuously monitor for particulate matter. The commenter also cited precedent that various coal power plants in Pennsylvania are required to maintain continuous emission monitoring systems for mercury and hydrochloric acid.***

**Response:** Requiring continuous monitoring of pollutants is very expensive, especially for pollutants not commonly subject to such continuous monitoring and should only be required when there is a strong need to determine the emission rate of a given pollutant, generally to determine compliance with a specific emission limit. Most of the pollutants mentioned do not have individual emission limits or have only annual emission limits, not hourly emission limits. In these cases, continuous emission monitoring is not valuable for determining compliance.

Many of the precedents cited by the commenter are distinguishable from these permits. Three localities in Pennsylvania established extremely stringent siting, monitoring, and reporting requirements for new crematoria and/or medical waste incinerators. These are dissimilar sources from CPP. Additionally, these ordinances were put in place, arguably, to discourage the installation of crematoria in at least two of the three localities. The commenter cites the ActionPA.org website which states (in reference to a law in Pennsylvania allowing stringent local environmental ordinances): “We’re taking advantage of this to create strong local air pollution laws that create levels of accountability *that air polluting corporations will not want to operate under.*” Emphasis added.

Similarly, the citation that the City of Philadelphia requires the Sun Oil refinery to have CEMS for particulate matter appears to be for a very different type of unit. Although not specified in the comments, it appears that the particulate matter CEMS is one of very few in the nation, and

was applied to a fluid catalytic cracking unit (FCCU). This is very different equipment from that at CPP.

The only precedents cited by the commenter for CEMS that are at all similar to CPP are the ones for coal fired power plants in Pennsylvania, where some units are required to monitor continuously for mercury and/or hydrogen chloride. The commenter is correct that some states are requiring mercury CEMS for coal-fired power plants in some instances. However, it should be remembered that the coal-burning units at CPP are not Electric Generating Units (EGUs) as defined by federal regulations. They are actually very small units and use very little coal, comparatively, and do not produce electricity. Installing CEMS to monitor mercury emissions when there is no short-term mercury limit is unnecessary in this instance. Similarly, the even less common hydrogen chloride CEMS would be of little value.

As part of his comment, the commenter discounted the value of stack testing on a periodic basis as not being sufficiently protective. However, stack testing is of great value for developing reasonable emission factors for determining compliance. These permits do require extensive stack testing programs to ensure compliance with regulatory and permit emission requirements.

***Comment 18: Nicole W. Sitaraman: The commenter states: "...as a federal agency, under Executive Order 12898, the Architect of the Capitol has a duty to make sure that its activities are aimed at achieving environmental justice. Indeed section 1 of the Executive Order states, 'Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States.' The Architect of the Capitol is not exempt from this provision. Should these permits be granted, they would directly contravene and fly in the face of the established environmental justice goals of the entire federal government, including the EPA which has launched an initiative specifically geared towards ensuring that environmental justice is woven into every aspect of each and every federal agency decision and action. The Architect of the Capitol simply cannot treat environmental justice as an after-thought and ignore the potential impacts of the permits it has requested on the communities surrounding it."***

**Response:** Environmental justice, as defined by the U.S. Environmental Protection Agency (EPA), is "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to development, implementation, and enforcement of environmental laws, regulations and policies." It follows that environmental *injustice* occurs when certain segments of society, such as low-income and minority communities, bear a disproportionate share of the harmful effects of governmental decisions. The Department, of course, strives for environmental justice in all its actions—including the review of these permit applications.

The Architect of the Capitol is a Legislative Branch agency, and is therefore not subject to Executive Order 12898. However, the Department has determined that these permits are consistent with the principals of environmental justice. This is because actual emission increases from historic levels are kept below significant levels through the implementation of the PALs,

and allowable emissions from the plant will actually be significantly reduced from current levels. For example, the plant's current limits are equivalent to 925 tons per year (tpy) for nitrogen oxides (NO<sub>x</sub>), 82 tpy for fine particulate matter (PM<sub>2.5</sub>), and 257 tpy for hazardous air pollutants (HAPs). Under the PALs permit, these limits will be 197 tpy for NO<sub>x</sub>, 35 tpy for PM<sub>2.5</sub>, and 25 tpy for HAPs. Additionally, the Department anticipates seeing emission reductions in many pollutants after the cogeneration system is constructed because it reduces the facility's need to rely on its coal-fired units. As coal is phased out at the facility PALs levels may warrant further reductions in 5 years when the PALs permit comes up for renewal. For these reasons, the Department has determined that the permits are more protective of human health, including that of minority and low-income populations, than the status quo, and there will not be any disproportionately high or adverse human health effects on minority and low-income populations from the issuance of these permits.

Contributing to the meaningful involvement of concerned citizens, the Department conducted a public hearing on the proposed permits at its offices at 1200 First Street NE on December 17, 2012. The hearing was announced on November 16, 2012 in the *DC Register* and on the DDOE website. On January 18, 2013, in response to requests from members of the public, the Department announced that it would extend the public comment period for the proposed permits until February 18, 2013. This announcement was published in the *DC Register* and on the DDOE website. In addition, the Department presented at a public meeting organized by Council Member Tommy Wells on January 24, 2013, at the United Methodist Church, 421 Seward Square S.E.

***Comment 19: Architect of the Capitol: AOC requested that "overly burdensome PM<sub>2.5</sub> stack testing requirements on insignificant emissions units (Boilers 3 through 7) be removed (Draft Permit #6577 Permit Condition IV.1 and other related conditions". The support for this comment was based on the requirement of 20 DCMR § 208.29(c) which states:***

***"If technically practicable, the 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."***

***The commenter suggested that emission testing of these units are not necessary because the units do not meet the definition of "significant emissions unit" as defined in 20 DCMR § 299 as follows:***

***"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 (as defined under "significant" in this subsection or in the Clean Air Act, whichever is lower) for that PAL pollutant."***

***The significant level in question is 10 tons per year.***

***The commenter further indicates that the testing should not be required because the U.S. Environmental Protection Agency did not require stack testing for these units for similar PM<sub>10</sub> particulate matter standards.***



**Response:** The Department agrees that 20 DCMR § 208.29(c) does not specifically require stack testing for PM<sub>2.5</sub> for these units. However, Boilers #3-7 are relatively large, older boilers. Boiler #3 is a 203 MMBTU/hr boiler and Boilers #4-7 are all 50 MMBTU/hr units. Generic AP-42 emission factors, which would likely be used in place of stack test factors, in their absence, have moderate to fairly low accuracy ratings for PM<sub>2.5</sub>. Therefore, the Department has determined that it is appropriate to obtain updated emission factors for these units from time to time to ensure that the units are being properly maintained, and that reported emissions actually reflect real emissions. The permit has been revised from the proposed draft to cite 20 DCMR § 502.1 as well as 20 DCMR § 208.29(c) in Conditions IV(f)(3) and IV(l)(1) to clarify the Department's authority to require this stack testing. The language of Condition IV(f)(3) has also been revised to require that testing of other units where testing is required in the permit needs to be performed for validation purposes. Otherwise, the Department declines to make further changes to these requirements.

**Comment 20: Architect of the Capitol: The commenter submitted the following comment:**

***“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 monitoring 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 Department. 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).*

**Response:** The exceptions from prompt reporting found in Condition VI(a)(2) of the proposed permit are as follows:

- A. Prompt reporting of missing fuel use data, if less than 10 percent of the days for a given month, is not required.
- B. Prompt reporting of missing continuously monitored hours of operation data, if less than 10 percent of the days for a given month, is not required.
- C. Prompt reporting of total dissolved solids concentration data, if missing for only a single week, or two or more consecutive weeks for only one unit, is not required.
- D. Prompt reporting of cooling water flowrate data, if missing for only a single week, is not required.

While the Department agrees that these data, when kept to the exempted levels are seldom a sign of problems at the facility, and therefore they do not need to be reported "promptly" and separately for each occurrence, this does not mean that they are not valuable for evaluating the compliance status of the facility. They can lead to a determination that further evaluation of records in a given area is required during a site inspection, or may lead to requests for clarifying information. Additionally, while these occurrences may be minor, individually, they should still be kept to a minimum, and reporting of these occurrences as deviations combined with Department oversight will likely encourage the permittee to make every effort to minimize them.

In short, the Department does not agree that AOC should be exempted from reporting these data as deviations in the semiannual report and therefore declines to remove the clause in questions.

With regard to the proposal that various references to Condition V be corrected to refer to Condition VI, the Department agrees. These were typographical errors in the draft. Therefore, the following conditions had references changed from Condition V to Condition VI:

- Condition IV(n)(1)(B)
- Condition IV (n)(2)(C)
- Condition IV (n)(3)(C)
- Condition IV (o)(1)(C)
- Condition IV (o)(2)(C)
- Condition IV (o)(3)(B)
- Condition IV (o)(4)(D)

Condition IV (o)(5)(B)  
Condition IV (o)(6)(C)

***Comment 21: Daryl Kimball: Commenter had a number of questions about the Capitol Power Plant, the proposed permits, the air quality permitting process in general.***

- 1. Is DDOE aware of any coal use by CPP since 2009, if so, how much was burned and did the plant exceed its current permitted emissions? What is the trigger for AOC using coal at CPP?***
- 2. Do you anticipate CPP will use some or part of the coal that is being purchased and stock-piled for the coming heating season?***
- 3. Will the permits under review, if approved result in a net increase of regulated air pollutants from the plant, and of which pollutants?***
- 4. What assessment of respiratory health issues in the surrounded neighborhood has been conducted and considered in the permitting process?***
- 5. Has DDOE conducted any field study of particulate emissions from CPP in the surrounding neighborhood when coal is being burned?***
- 6. Where does DDOE announce hearings concerning permitting?***
- 7. Who are the individuals responsible for the DDOE permitting decisions?***

**Response:**

1. CPP has burned at least some coal every year since 2009. The annual coal combustion from 2009-2012 is as follows:
  - 2009: 11,406 tons
  - 2010: 2,121 tons
  - 2011: 2,768 tons
  - 2012: 2,873 tons

This does not constitute a violation of any of CPP's permit limits; during these years the facility was permitted to burn as much coal as it chose. The Department does not know the triggers for using coal at CPP because fuel switching is permitted at the facility without any conditions. The Department does not have the authority to place conditions on the facility's fuel switching. AOC has stated, however, that it may need to burn coal in three situations:

- If there is an emergency and natural gas supplies are interrupted
- Abnormally cold conditions place a high heating demand on CPP
- Equipment outages or maintenance on the gas-fired boilers, requires coal to be used as a backup

AOC Fact Sheet:

[http://www.aoc.gov/sites/default/files/ CPP\\_Cogen\\_FAQs\\_Final\\_January\\_2013.pdf](http://www.aoc.gov/sites/default/files/ CPP_Cogen_FAQs_Final_January_2013.pdf)

2. As stated above, CPP has burned at least some coal every year since 2009. Pursuant to Condition III(e) of the construction permits for the cogeneration units, 18 months after the commercial operation date of the cogeneration units, the facility is only permitted to

burn coal for up to 72 hours per year for testing and tuning purposes and during instances of *force majeure*. Any coal that is used for these purposes will be reported to the Department as required by the facility's Title V permit.

3. The permits are greatly lowering the allowable emission limits at the facility. Prior to issuance of the PALs and the construction permits, the facility did not have any enforceable gross emission limits and therefore it was legally allowed to operate at its maximum capacity. The permits are lowering the allowable emissions from the equivalent of 925 tons per year (tpy) for nitrogen oxides (NO<sub>x</sub>), 82 tpy for fine particulate matter (PM<sub>2.5</sub>), and 257 tpy for hazardous air pollutants (HAP), to 197 tpy for NO<sub>x</sub>, 35 tpy PM<sub>2.5</sub>, and 25 tpy for HAP. The Department expects to see substantial reductions in HAP and sulfur dioxide (SO<sub>2</sub>) following completion of the cogeneration project. It is possible that actual emissions of some pollutants, such as NO<sub>x</sub> and PM<sub>2.5</sub>, *may* increase at CPP following completion of the new construction; however these pollutants could increase even without the construction. Also, the cogeneration project will allow CPP to reduce its load on the electrical grid (much of which is supported by coal-fired power plants) and will reduce regional emissions. Please also see the response to Comment 12.
4. Please see the response to Comment 3, regarding health studies.
5. Please see the response for Comment 13, regarding local air monitoring.
6. The Public Notice and Comment requirements for air quality permits are in 20 DCMR § 210. The Department is not required to hold a public hearing on proposed permits, however it may do so if it deems appropriate or if a member of the public requests one. In accordance with this, the Department publishes public notice of draft permits and hearing notices on the DDOE website (<http://green.dc.gov/service/public-notices-hearings>) and in the *D.C. Register*.
7. The Permitting Branch Chief for the Air Quality Division is delegated authority issue air quality permits; however permits of particular significance may also involve the DDOE Director and/or the Mayor.

Date Issued:

6/6/2013

Approved by:



Stephen S. Ours  
Chief, Permitting Branch  
Air Quality Division  
District Department of the Environment

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