

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

**FACT SHEET AND STATEMENT OF BASIS
FOR PROPOSED PERMITTING ACTION
UNDER 20 DCMR 300 (TITLE V-OPERATING PERMIT PROGRAM)**

This "Fact Sheet and Statement of Basis" has been prepared pursuant to 20 DCMR 303.1(c) and 40 CFR 70.7(a)(5).

PERMIT NO. 051

APPLICANT AND PERMITTEE:

Architect of the Capitol
Capitol Building Jurisdiction
U.S. Capitol Building
Washington, DC 20515

FACILITY LOCATION:

U.S. Capitol Building
Washington, DC 20515

RESPONSIBLE OFFICIAL

Mr. Mark D. Reed, PE, CFM, Superintendent

FACILITY DESCRIPTION:

The Capitol Building Jurisdiction of the Architect of the Capitol provide general support for government operations (Standard Industrial Classification code (SIC) 9199, North American Industry Classification System (NAICS) code 921190)¹. The facility's emission unit inventory primarily consists of six (6) diesel-fired emergency generator sets.

This is the first Chapter 3 (Title V) permit application for the Capitol Building Jurisdiction. The Department of Energy and Environment (the Department) received a Chapter 3 (Title V) permit application on November 14, 2017. This permitting action is to address this Title V application.

It should be noted that the Capitol Building Jurisdiction (including the Capitol Visitor Center) is a jurisdiction of the larger Architect of the Capitol (AOC) agency of the Legislative Branch of the U.S. Government. Prior to acting upon this application and two others that came in for other jurisdictions near the same time, the Air Quality Division (AQD) performed an extensive analysis to determine whether the various jurisdictions of AOC should be aggregated into a

¹ It should be noted that, in a March 19, 2018 letter from Christopher Potter, Director of Utilities and Power, Architect of the Capitol, Capitol Power Plant, in response to questions from the U.S. Environmental Protection Agency, AOC indicated that the NAICS code for the Capitol Building Jurisdiction's buildings was 921120, Legislative Bodies. At the time of preparation of this Fact Sheet and Statement of Basis, AOC continues to assert that 921120 is correct, but AQD believes 921190, Other General Government Support, is more descriptive of the applicant's operations.

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single facility. It was determined that they should not be aggregated. See the “Major Source Determination Memorandum” signed by Stephen S. Ours, P.E., dated April 12, 2018, for a discussion of this evaluation and the reasons for this conclusion.

The Title V permit application for the Capitol Building Jurisdiction listed two (2) non-NSPS diesel fired emergency generators and four (4) diesel fired emergency generators subject to NSPS (40 CFR 60) Subpart IIII. In addition, the facility maintains the following miscellaneous/insignificant sources:

- Two (2) Underground Storage Tanks (USTs) for diesel;
- Six (6) Aboveground Storage Tanks (ASTs) for diesel;
- Twenty-four (24) Wet-Type Transformer Vaults for mineral oil;
- Twenty-six (26) Elevator Storage Tanks for hydraulic oil;
- One (1) portable cement mixer; and
- One (1) carpentry shop dust collector.

EMISSIONS SUMMARY:

Plant-wide Emissions Summary (tons per year)	
<u>Pollutant</u>	<u>Potential Emissions</u>
Oxides of Sulfur (SO _x)	0.03
Oxides of Nitrogen (NO _x)	39.24
Particulate Matter (PM/PM10)*	2.10
Volatile Organic Compounds (VOCs)**	1.04
Carbon Monoxide (CO)	2.21
Total Hazardous Air Pollutants (HAPs)	0.02

* Includes all of the insignificant particulate units.

** TV Application states Total VOC is 3.78 tons/yr, but this includes the Blue Plains paint booth, which is not a part of this facility as it is not contiguous or adjacent. A separate Chapter 2 permit has been issued for the paint booth.

** Includes all of the tanks with capacities less than 1,000 gallons, in addition to those units included in the original calculations provided with the Title V application.

BASIS OF 20 DCMR CHAPTER 3 (TITLE V) APPLICABILITY:

This facility has the potential to emit 39.24 tons per year of oxides of nitrogen (NO_x). The value for this criteria pollutant exceeds the major source thresholds in the District of Columbia of 25 TPY of NO_x. Because potential emissions of NO_x exceed the relevant major source threshold, pursuant to 20 DCMR 300.1(a), the source is subject to Chapter 3 and must obtain an operating permit in accordance with that regulation and Title V of the federal Clean Air Act.

LEGAL AND FACTUAL BASIS FOR DRAFT PERMIT CONDITIONS:

The conditions contained in the Title V operating permit are based on underlying requirements of 20 DCMR as well as various federal regulations promulgated pursuant to the federal Clean Air Act. The regulations that are the basis of each condition are cited in the permit, except that conditions added to make another condition, with a direct underlying regulation, enforceable as a practical matter may, in some cases, not have a specific citation. These latter, un-cited conditions

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generally consist of monitoring, record keeping, and reporting requirements authorized under 20 DCMR 500.1.

The draft Title V permit has been developed to incorporate the requirements of all applicable requirements as defined in 20 DCMR 399.1 along with additional conditions necessary to make all such requirements enforceable as a practical matter.

Any condition of the draft Title V Permit that is enforceable by the District but is not federally enforceable is identified in the Title V permit as such with an asterisk.

It should also be noted that this permit will be issued to include updated requirements established pursuant to 20 DCMR Chapter 2 as well as Chapter 3. When the permit is issued for public review, the public notice will reflect this fact.

REGULATORY REVIEW:

This facility has been found to be subject to the requirements of the following regulations, except as noted in the discussion below:

Federal and District Enforceable:

- 20 DCMR Chapter 1 - General Rules
- 20 DCMR Chapter 2 - General and Non-Attainment Area Permits
- 20 DCMR Chapter 3 - Operating Permits and Acid Rain Programs
- 20 DCMR 500 - Records and Reports
- 20 DCMR 502 - Sampling, Tests, and Measurements.
- 20 DCMR 600 - Fuel-Burning Particulate Emission.
- 20 DCMR 604 - Open Burning
- 20 DCMR 605 - Control of Fugitive Dust
- 20 DCMR 606 - Visible Emissions
- 20 DCMR 774 - Architectural and Industrial Maintenance Coatings
- 20 DCMR 800 - Control of Asbestos.
- 20 DCMR 801 - Sulfur Contents of Fuel Oils
- 40 CFR 51.212, 52.12, 52.30, 60.11, and 61.12 - Credible Evidence
- 40 CFR 60, Subpart IIII- Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CIICE)
- 40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (NESHAP for RICE)
- 40 CFR 82, Subpart G - Protection of Stratospheric Ozone (Federally enforceable only except through Title V) (*Note: Air Quality Division [AQD] did not make a positive determination that this regulation was applicable to the facility, but included it as a standard requirement in the permit.*)
- 40 CFR 82, Subpart H - Halon Emissions Reduction (Federally enforceable only except through Title V) (*Note: AQD did not make a positive determination that this regulation was applicable to the facility, but included it as a standard requirement in the permit*

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District Enforceable Only:

20 DCMR 402 – Chemical Accident Prevention (*Note: AQD did not make a positive determination that this regulation was applicable to the facility, but included it as a standard requirement in the permit.*)

20 DCMR 900 - Engine Idling

20 DCMR 901 - Vehicular Exhaust Emissions

20 DCMR 902 - Lead Content of Gasoline

20 DCMR 903 - Odorous or Other Nuisance Air Pollutants

20 DCMR Chapter 2 – General and Non-Attainment Area Permits:

All stationary engines are subject to Chapter 2 permitting requirements, regardless of size. As such, all of the significant units at the facility are subject to Chapter 2 permitting requirements.

AQD is using Chapter 2 authority to update other permit requirements where applicable. As such, this draft Title V permit will be issued for public notice pursuant to both Chapter 2 and Chapter 3 public notice requirements. The requirements of the following permits issued under the authority of 20 DCMR Chapter 2 (approval numbers are listed where the unit is covered by a source category permit; the source category permit number is the first six characters of the approval number) have been incorporated into the draft Title V permit and updated where appropriate.

Emission Unit ID	Emission Unit Identification	Chapter 2 Permit or Approval No.	Approval Date
Senate Side Emergency Generator	Caterpillar Model No. 3412 generator set located at U.S. Capitol Building	5911-R2	8/21/2014
House Side Emergency Generator	Caterpillar Model No. 3412 generator set located at U.S. Capitol Building	7115-SC-0065	6/6/2018
Emergency Generator 1	Caterpillar Model No. 3516 generator set located at U.S. Capitol Visitor Center	6099-R2	12/23/2014
Emergency Generator 2	Caterpillar Model No. 3516 generator set located at U.S. Capitol Visitor Center	6282-R1	1/17/2014
Emergency Generator 3	Caterpillar Model No. 3516 generator set located at U.S. Capitol Visitor Center	6283-R1	1/17/2014
Emergency Generator 4	Caterpillar Model No. 3516 generator set located at U.S. Capitol Visitor Center	6284-R1	1/17/2014

20 DCMR 204: Permit Requirements for Sources Affecting Non-Attainment Areas

The facility submitted an application on October 23, 2009 for the installation and operation of Emergency Generators 2, 3, and 4. According to that application, the units had a potential to emit less than 25 tons per year of NOx, combined, at 500 hours per year of operation. Chapter 2

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permits were issued for the units on June 22, 2010 on this basis. These permits were renewed on January 17, 2014. They were due for renewal by January 16, 2019. During this renewal process, it was identified that the original permit application package from 2009 incorporated incorrect NOx emission factors, and that the potential to emit from the three units was approximately 44.74 tons per year NOx when operating for 500 hours per year. Because this potential to emit was greater than 25 tons per year (TPY) for the project, it met the definition of “significant” and should have triggered a non-attainment New Source Review under 20 DCMR 204. Alternatively, the units should have had a limit on hours of operation to limit emissions for the three units to less than 25 TPY in order for 20 DCMR 204 not to apply to these units. Emergency Generators 2, 3, and 4 operating for 250 hours per year have potential to emit NOx of 22.37 tons per year (TPY), which is below the 25 TPY value meeting the definition of “significant”. In a revised set of Chapter 2 permit applications received on February 25, 2019, the Permittee has requested that such a limit be placed on the three units. AQD has accepted this type of limit for emergency generator sets in the past, even as after-the-fact NSR avoidance, because actual emissions from emergency generator sets are generally well below potential emissions, and installation of Lowest Achievable Emission Rate (LAER) controls would lead to minimal emission reductions at high cost for such low-usage equipment.

AQD is acting on the Chapter 2 applications in combination with the Title V permit application in this permitting action and is therefore incorporating a 250 hour per 12-consecutive-month operating limit for the three units to ensure that the applicant avoids applicability of 20 DCMR 204. These limits have been incorporated in Condition III(b)(2)(A)(ii) of the permit. A note has been added to this condition to ensure that it is well documented that, should a future permitting action be undertaken to remove these conditions, that action would trigger the requirements of 20 DCMR 204. Additionally, AQD has added two additional conditions to the permit to make the limit to avoid non-attainment NSR enforceable as a practical matter. Specifically, Condition III(b)(1)(A)(iii) has been added to establish a limit of 59.66 pounds per hour NOx for each of the units. This is consistent with the manufacturer’s provided emission factor. Also, Condition III(b)(4)(E) has been added to require that the Permittee maintain a copy of these manufacturer-provided emission guarantees to document compliance with the emission limit.

20 DCMR Chapter 3 – Operating Permits and Acid Rain Programs:

Please see the discussion above in the section entitled “Basis of 20 DCMR Chapter 3 (Title V) Applicability” for a discussion of the applicability of Chapter 3 to the facility. The acid rain portions of this chapter are not applicable to the facility.

20 DCMR Chapter 5 – Source Monitoring and Testing:

Throughout the permit, appropriate monitoring, testing, and record keeping requirements have been established to ensure that all emission and operational limits in the permit are enforceable as a practical matter. These requirements are established under the authority of Chapter 5.

20 DCMR 603 – Particulate Process Emissions:

The requirements of 20 DCMR 603 are not included in the permit for the one shop dust collector

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because the unit vents indoors. However, the permit establishes that all captured dust emissions shall be controlled by an exhaust system attached to a baghouse unit which collects the particulates into a barrel and vents within the building. Additionally, the baghouse unit shall be maintained in accordance with the recommendations of the manufacturer.

20 DCMR 701 – Storage of Petroleum Products:

The requirements of 20 DCMR 701 do not apply to the source because all of the storage vessels located at the source have a capacity less than 40,000 gallons.

20 DCMR 715 – Major Source and Case-By-Case Reasonably Available Control Technology (RACT):

The requirements of 20 DCMR 715 do not apply to the source because the VOC PTE of the source is less than 25 tons per year.

20 DCMR 801 – Sulfur Content of Fuel Oils:

This regulation limits fuel oil sulfur content to 1% by weight in all circumstances. There are more stringent requirements for commercial fuel oil, but the only portion of 20 DCMR 801 applicable to the emergency engines is the 1% sulfur content limit. This requirement is streamlined with the more stringent requirements found in 40 CFR 63.6604(b) for the non-NSPS engines and 40 CFR 60.4207(b) for the NSPS engines.

20 DCMR 805 – Reasonably Available Control Technology for Major Stationary Sources of the Oxides of Nitrogen:

The requirements of 20 DCMR 805 do not apply to the source. Pursuant to 20 DCMR 805.1(c)(2), the requirements of 20 DCMR 805 do not apply if “emergency standby engines operated less than five hundred (500) hours during any consecutive twelve (12) month period.” The emergency generators all have operation limits of less than 500 hours listed in Conditions III(a)(2)(A) and III(b)(2)(A) of the permit.

40 CFR 60, Subparts K, Ka, and Kb – Standards for Storage Vessels for Petroleum Liquids or Volatile Organic Liquids:

The requirements of the New Source Performance Standard for Storage Vessels for Petroleum Liquids or Volatile Organic Liquids (40 CFR 60, Subparts K, Ka, and Kb) do not apply to this facility for all of the storage vessels located at the source because for the purposes of Subparts K, Ka, and Kb all of the storage vessels at the source have a capacity less than 151,412 liters (40,000 gallons) for petroleum liquids or a capacity less than or equal to 75 cubic meters (m³) for volatile organic liquids as specified in 40 CFR 60, Subparts K, Ka, and Kb.

40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines:

The engines of four diesel emergency generator sets at the facility are subject to 40 CFR 60, Subpart IIII. 40 CFR 60, Subpart IIII applies to stationary compression ignition internal combustion engines (CI-ICE) that: 1) commenced construction after July 11, 2005 and were

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manufactured after April 1, 2006, or 2) were modified or reconstructed after July 11, 2005.

The four (4) diesel CI-ICE identified below are subject to 40 CFR 60, Subpart IIII:

Emission Unit ID	Stack ID	Emission Unit Identification	Description
Emergency Generator 1	CVC1	Caterpillar Model No. 3516 generator set located at U.S. Capitol Visitor Center	2,000 kWe generator set powered by a 2,937 hp diesel engine, installation date: 2008 (NSPS)
Emergency Generator 2	CVC2	Caterpillar Model No. 3516 generator set located at U.S. Capitol Visitor Center	2,000 kWe generator set powered by a 2,876 hp diesel engine, installation date: 2006 (NSPS)
Emergency Generator 3	CVC3	Caterpillar Model No. 3516 generator set located at U.S. Capitol Visitor Center	2,000 kWe generator set powered by a 2,876 hp diesel engine, installation date: 2006 (NSPS)
Emergency Generator 4	CVC4	Caterpillar Model No. 3516 generator set located at U.S. Capitol Visitor Center	2,000 kWe generator set powered by a 2,876 hp diesel engine, installation date: 2006 (NSPS)

The requirements of this regulation are incorporated throughout Condition III(b) of the permit for these units.

The engines listed below of the two diesel emergency generator sets at the facility are not subject to 40 CFR 60, Subpart IIII because 40 CFR 60, Subpart IIII applies to stationary compression ignition internal combustion engines (CI-ICE) that: 1) commenced construction after July 11, 2005 and were manufactured after April 1, 2006, or 2) were modified or reconstructed after July 11, 2005. The engines listed below were manufactured before April 1, 2006.

Emission Unit ID	Stack ID	Emission Unit Identification	Description
Senate Side Emergency Generator	CAP1-S	Caterpillar Model No. 3412 generator set located at U.S. Capitol Building	750 kWe generator set powered by a 1,109 hp diesel engine, installation date: 2005 (non-NSPS)
House Side Emergency Generator	CAP2-H	Caterpillar Model No. 3412 generator set located at U.S. Capitol Building	750 kWe generator set powered by a 1,109 hp diesel engine, installation date: 2005 (non-NSPS)

40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Engines
 This subpart does not apply to this facility because this facility only includes compression ignition (diesel) engines.

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40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (NESHAP for RICE):

40 CFR 63, Subpart ZZZZ applies to stationary reciprocating internal combustion engines (RICE) at major or area sources of HAP emissions to regulate/monitor HAPs such as acetaldehyde, acrolein, benzene, toluene, xylene, cadmium, chromium, lead, etc., through surrogate compounds such as formaldehyde, CO and/or VOC.

A facility that emits or has the potential to emit 10 TPY of any single HAP or 25 TPY of any combination of HAPs, is consider a major source. Any source that is not a major source is an area source. Because this facility does not have the potential to emit more than 10 TPY of a single HAP or an aggregate of more than 25 TPY of total HAPs, it is an area source. Therefore the area source NESHAP requirements of Subpart ZZZZ are applicable to this facility.

Subpart ZZZZ is applicable to new or reconstructed diesel compression ignition (CI) engines at this facility, where “new” is defined as those engines that are manufactured or reconstructed after June 12, 2006. However, the only requirements for these units are to comply with 40 CFR 60, Subpart IIII, as applicable. This situation affects the four generator sets (Emergency Generator 1, Emergency Generator 2, Emergency Generator 3, and Emergency Generator 4) previously discussed as covered by 40 CFR 60, Subpart IIII. Only the NSPS requirements have been cited in the permit for these units because Subpart ZZZZ does not add any additional compliance requirements.

“Existing” CI engines are also covered by this regulation. Two diesel engines associated with generator sets at the facility fall into this category as shown in the following table:

Emission Unit ID	Stack ID	Emission Unit Identification	Description
Senate Side Emergency Generator	CAP1-S	Caterpillar Model No. 3412 generator set located at U.S. Capitol Building	750 kWe generator set powered by a 1,109 hp diesel engine, installation date: 2005 (non-NSPS)
House Side Emergency Generator	CAP2-H	Caterpillar Model No. 3412 generator set located at U.S. Capitol Building	750 kWe generator set powered by a 1,109 hp diesel engine, installation date: 2005 (non-NSPS)

The requirements of this regulation are incorporated throughout Condition III(a) of the permit for these units.

Compliance Assurance Monitoring (CAM) [40 CFR 64]:

The CAM rule does not apply to the emission units at U.S. Capitol Building Jurisdiction that are covered by the draft Title V permit. The emissions units covered in the permit are engines. Individually, emissions from each of these units will not exceed the major source threshold for air contaminant emissions identified within 40 CFR 64; therefore none of the units meet the criteria for CAM applicability.

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Greenhouse Gas (GHG) Requirements:

Because Chapter 3 (Title V) was triggered by other pollutants, no evaluation was made to determine if the facility would trigger Title V applicability under the GHG Tailoring Rule. No modifications have been made to the source that would trigger PSD applicability under the GHG Tailoring Rule. Other than this requirement, there are no other applicable requirements related to GHGs at this time, therefore none were included in the permit.

COMPLIANCE HISTORY:

The applicant has not been subject to enforcement actions by AQD in the past three years. No air quality violations have been identified by the Compliance and Enforcement Branch over the last three years. No air quality violations are listed in the three year compliance status summary in EPA's Enforcement and Compliance History Online (ECHO) database.

COMMENT PERIOD:

Beginning Date: March 22, 2019
Ending Date: April 22, 2019

All written comments should be addressed to the following individual and office:

Stephen S. Ours, P.E.
Chief, Permitting Branch
Department of Energy and Environment
Air Quality Division
1200 First Street NE, 5th Floor
Washington DC 20002

PROCEDURE FOR REQUESTING PUBLIC HEARING:

During the public comment period, any interested person may submit written comments on the draft Title V permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The District shall grant such a request if it is deemed appropriate. The venue, date, and time for any public hearing shall be announced in the District Register and a daily newspaper.

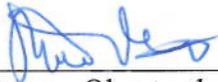
POINT OF CONTACT FOR INQUIRIES:

Thomas Olmstead
Environmental Engineer
Department of Energy and Environment
Air Quality Division
1200 First Street NE, 5th Floor
Washington, DC 20002
(202) 535-2273

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REVIEWS:

Prepared by:



Thomas Olmstead
Environmental Engineer

Approved by:



Stephen S. Ours, P.E.
Chief, Permitting Branch

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