

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. 022-R2

APPLICANT AND PERMITTEE:

District of Columbia Department of General Services
2000 14th Street NW- Reeves Center
Washington, DC 20009

FACILITY LOCATION:

DC General Health Campus and DC Jail
1900 Massachusetts Avenue SE
Washington, DC 20003

RESPONSIBLE OFFICIAL:

Rear Admiral Christopher E. Weaver, USN, Retired
Acting Director, Department of General Services

FACILITY DESCRIPTION:

The facility is a dual purpose government facility which consists of the DC General Health Campus (also known as DC General Hospital, though it is no longer a full-service hospital) and a correctional remand center, the DC Jail. The health campus portion of the facility serves as both a homeless shelter and a medical service center. The primary activities of this facility are covered by Standard Industrial Classification (SIC) 8062.

The facility has the potential to operate twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year. The facility consists of three (3) major boilers and one (1) small boiler, thirteen (13) emergency generators, ten (10) cooling towers/chillers, one (1) underground fuel storage tank, and eight (8) aboveground fuel storage tanks.

It was confirmed that the facility does not have gas-fired kitchen equipment.

EMISSIONS SUMMARY

The facility reported the following potential facility-wide emissions in the Title V permit application (and subsequent revisions and corrections):

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FACILITY-WIDE EMISSIONS SUMMARY	
Criteria Pollutants	Potential Emissions (tons per year)
Oxides of Sulfur (SO _x)*	1.14
Oxides of Nitrogen (NO _x)	77.57
Total Particulate Matter, including condensables (PM Total)	6.27
Volatile Organic Compounds (VOC)	5.48
Carbon Monoxide (CO)	63.12

*Note that this SO_x number represents sulfur dioxide (SO₂) from the boilers and SO_x from the generators.

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

The facility has the potential to emit approximately 78 tons per year (TPY) of nitrogen oxides (NO_x). This value exceeds the major source threshold in the District of Columbia of 25 TPY of NO_x. As such, 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 generally consist of monitoring, record keeping, and reporting requirements authorized under 20 DCMR 500.1.

The 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 is being issued pursuant to the District's authority under 20 DCMR Chapter 2 as well as Chapter 3. When the permit is issued for public review, the public notice will reflect this fact.

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.

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REGULATORY REVIEW:

This facility has been found to be subject to the requirements of the following regulations (except as specified in notes and 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 700 - Miscellaneous Volatile Organic Compounds (VOCs)

20 DCMR 774 - Architectural and Industrial Maintenance Coatings

20 DCMR 800 - Control of Asbestos.

20 DCMR 801 - Sulfur Contents of Fuel Oils

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

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: 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.)*

40 CFR 61.12 - Credible Evidence

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.

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

The three large boilers and all of the generators are subject to permitting pursuant to Chapter 2. Please see the discussion of the issued Chapter 2 permits below for more information. It should be noted that this permitting action is being processed pursuant to both Chapter 2 and Chapter 3. Some requirements are being established or updated pursuant to Chapter 2 authority in this permit.

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

As discussed above, the facility has the potential to emit greater than 25 tons per year of NO_x and is therefore subject to this regulation. This permitting action is intended to address the requirements of this regulation, such as establishment of CO, NO_x, and PM Total emission limits for the boilers in Condition III(a)(1)(A).

20 DCMR Chapter 5 – Source Monitoring and Testing

Numerous monitoring and testing requirements have been placed in the permit to ensure that it is enforceable as a practical matter. This memo will not get into these items in detail. However, one particular aspect of monitoring is of particular interest as follows:

Continuous Emissions Monitoring System (CEMS)/Continuous Opacity Monitoring Systems (COMS): DC General Hospital's CEMS/COMS arose in part as a response to a Notice of Non Compliance proceedings initiated by the Office of Enforcement, Compliance & Environmental Justice in 2004 and also as part of a larger boiler plant overhaul scheme, dubbed the Phase 2 Project.

It is noteworthy that the boiler modification project resulted in de-rating of the heat input capacity of each of the three boilers (Boiler #1, 2 and 4) from 59 MMBTU/hr to 47 MMBTU/hr. Boiler #5 was condemned and permanently taken out of service.

The project, among other activities, included the modification of the power plant boiler systems and the installation of a CEMS and a COMS. The CEMS was to capture and analyze the emissions from the combined power plant output via a probe located in the common stack. The COMS was to monitor the opacity from Boilers #2 and #4. The facility sought and obtained a permit to carry out the project on April 3, 2006.

The CEMS and COMS components of the project were carried out without obtaining proper approval from the Air Quality Division (AQD) and hence the installation did not meet U.S. Environmental Protection Agency (EPA) certification standards. Additionally, the units were not properly maintained. Until recently, the matter had been a major roadblock to the facility moving forward with their compliance obligations.

Recently, however, the boilers were disconnected from their fuel oil source with no intent to re-

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connect them. The facility made significant efforts to rejuvenate the CEMS and COMS and had completed most of the certification process, but was still having difficulty with operation and maintenance of the equipment.

In consultation with the EPA Region III, and in consideration of the fact that no regulatory requirements remained requiring operation of CEMS or COMS for the units, AQD agreed to allow the discontinuation of the use of the CEMS and COMS and instead require periodic testing. This is being formally implemented with this permitting action.

20 DCMR Chapter 6 – Particulates

Several sections of Chapter 6 are applicable to this facility. Section 600 is applicable to the boilers and has been included appropriately. Sections 604 (Open Burning) and 605 (Control of Fugitive Dust) are standard requirements included in all Title V permits. Section 606 covers visible emissions requirements. These boilers were determined to have been placed in initial operation before January 1, 1977, hence the applicability of 20 DCMR 606.2 instead of the more common, and more stringent standard found in 20 DCMR 606.1. See the email from Carl Kohlmeyer of Global Consulting, Inc. to Manuel Oliva of the Department, dated June 2, 2015. 20 DCMR 606.1 is, however, applicable to the generators.

New Source Performance Standards (NSPS) [40 CFR 60]:

New Source Performance Standards (NSPS) apply to this facility as the following NSPS analyses and applicability determination indicate:

Combustion Units: Boilers CU-1, CU-2, and CU-4

Applicability for NSPSs for boilers is based on unit size and age. Both criteria must be met for applicability of 40 CFR 60.40c – subpart Dc

Reference citation: 40 CFR 60, Subpart Dc

Test No. 1- Size Limitation

Each of the three (3) identical boilers has a heat input rating greater than 10 million Btu per hour (i.e. 47 MMBTU/hr). This capacity is greater than the ten (10) million Btu per hour threshold. The units pass the size test. [40 CFR 60.40 – subpart Dc]

Test No. 2 – Age Limitation

The three boilers were modified on April 3, 2006. Clearly the units were modified, or constructed after June 9, 1989. The units pass the age test, thus the NSPS is applicable. However the opacity, particulate matter and sulfur dioxide requirements under 60.42c and 40 CFR 60.43c do not apply to the units since they are limited to burning natural gas only. Consequently, although the units are subject to Subpart Dc, the requirements do not apply to them because of the type of fuel the boilers combust.

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Emergency Generators

NSPS Subpart IIII applicability for the generators was considered for this facility. Based on the date of applicability (July 11, 2005), this subpart is applicable to three (3) compression ignition internal combustions engines (CIICE) under 40 CFR 60, Subpart IIII. The engines identified are as follows:

Equipment Location	Emission Unit Description	Equipment Model Number
Building 9	One (1) 300 kW Kohler Generator	300 REOZ
Core Building	One (1) 300 kW Caterpillar Diesel Generator	Cat C9
Building 15	One (1) 25 kW Generac Diesel Generator	Generac SD025

Condition III(b) of the permit has been written to include the requirements of Subpart IIII for these three units.

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

Subpart ZZZZ of 40 CFR 63 regulate/monitor Hazardous Air Pollutants (HAPs) such as acetaldehyde, acrolein, benzene, toluene, xylene, cadmium, chromium, lead, etc, through surrogate compounds such as formaldehyde, Carbon Monoxide (CO) and/or Volatile Organic Compounds (VOC).

A facility that emits or has the potential to emit 10 tons/year of any single HAP or 25 tons/year 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 tons/year of a single HAP or an aggregate of more than 25 tons of total HAPs, it is not a major source. It is rather an area source. Therefore the area source MACT for Reciprocating Internal Combustion Engines (RICE) is applicable to this facility.

Subpart ZZZZ for area source RICE is not applicable to any existing engine under the provisions of 40 CFR 63.6590; the facility is an institution, therefore these units would be considered “institutional emergency stationary RICE” which do not have to meet the requirements of subpart ZZZZ under 40 CFR 63.6585(f)(3) as long as they do not participate in demand response or operate (or are under contract to operate) for more than 15 hours in any calendar year during low voltage or frequency situations. The existing engines at the facility are prohibited from engaging in these practices in the permit, therefore they are exempt from having to comply with Subpart ZZZZ.

Subpart ZZZZ is applicable to new or reconstructed SI and CI engines at this facility. New/Reconstructed stationary engines are those manufactured or reconstructed after June 12, 2006. However, for new engines, Subpart ZZZZ refers to the New Source Performance Standard,

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40 CFR Part 60 Subpart IIII as the only requirements needed to ensure compliance with Subpart ZZZZ. Only emergency stationary CI engines are in this facility based on the information provided by the applicant. There are three (3) new engines that fall into this category at the facility. The permit has been drafted to include the applicable requirements for these units.

40 CFR 63, Subpart JJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

The three boilers now use natural gas only therefore the requirements of this NESHAP are not applicable. They had historically been connected to fuel oil as well, but have since been disconnected. The permit allows only the use of natural gas in the boilers.

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

Compliance Assurance Monitoring Plan (CAM) does not apply to this facility because none of the units in this facility rely on control devices for compliance with emission limits. The facility uses low NO_x burners and flue gas recirculation (FGR), but these do not constitute control devices. There is no need for this facility to install control devices as defined by 40 CFR 64. Therefore, CAM does not apply.

Chapter 2 Permits:

The requirements of the following permit(s) issued under the authority of 20 DCMR Chapter 2 have been incorporated into the Title V permit:

- Permit Nos. 6874-6880 – Permits to operate seven emergency generators were issued on March 10, 2015.
- Permit Nos. 6994, 6995, and 6997 – Permits to operate three emergency generators were issued on July 13, 2015.
- Permit Nos. 6992, 6993, and 6996– Permits to operate three emergency generators were issued on August 27, 2015.

Note that AQD is using Chapter 2 authority to update permit requirements for covered equipment, as appropriate. As such, this Title V permit will be issued for public notice pursuant to both Chapter 2 and Chapter 3 public notice requirements.

ENFORCEMENT HISTORY:

In the past three years enforcement actions had been taken by the United States Environmental Protection Agency, (U.S. EPA) Region 3 against DC General Hospital for various violations of the Clean Air Act. In the past three years one informal enforcement action and two EPA formal enforcement cases had been filed against the facility. The two formal enforcement actions resulted in assessed penalty in the amount of \$14,900.00. The informal action was issued as a Notice of Violation (NOV), by the EPA on 08/09/2012. The formal enforcement actions were

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issued on 09/27/2013 and 12/12/2013 as formal administrative order.

COMMENT PERIOD:

Beginning Date: October 9, 2015

Ending Date: November 9, 2015

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 public comment period any interested person may submit written comments on the draft 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:

John C. Nwoke
Environmental Engineer
District Department of the Environment
Air Quality Division
1200 First Street NE, 5th Floor
Washington, DC 20002
(202) 724-7778

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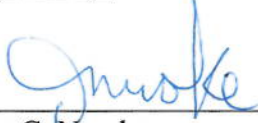
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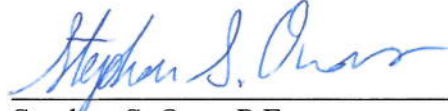
REVIEWS:

Prepared by:



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Approved by:



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Chief, Permitting Branch

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