

GOVERNMENT OF THE DISTRICT OF COLUMBIA

District Department of the Environment



Air Quality Division

FACT SHEET
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. 014-R1

APPLICANT AND PERMITTEE:

Washington Hospital Center
110 Irving Street, N.W.
Washington, D.C. 20010-2975

FACILITY LOCATION:

Washington Hospital Center
110 Irving Street, N.W.
Washington, D.C. 20010-2975

FACILITY DESCRIPTION:

The Washington Hospital Center is a health service provider facility 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 six (6) fuel burning boilers, seven (7) emergency generators, one (1) fire-pump generator, twelve (12) fuel oil storage tanks, seven (7) cooling towers, laboratory fume hoods, X-Ray department, air-conditioning and refrigeration equipment and morgue.

EMISSIONS SUMMARY:

2009 PLANTWIDE EMISSIONS SUMMARY [TONS PER YEAR]		
Criteria Pollutants	Actual Emissions (TPY)	Potential Emissions (TPY)*
Sulfur Dioxide (SO ₂)	0.1732	20.7
Nitrogen Oxides (NO _x)	7.7022	210.7



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2009 PLANTWIDE EMISSIONS SUMMARY [TONS PER YEAR]		
Criteria Pollutants	Actual Emissions (TPY)	Potential Emissions (TPY)*
Particulate Matter (PM & PM ₁₀)	1.0645	5.2
Volatile Organic Compounds (VOC)	0.8095	10.1
Carbon Monoxide (CO)	11.0200	138.1
Lead (Pb)	0.000064	0.0012

* Excluding insignificant sources

TITLE V PROGRAM APPLICABILITY BASIS:

This facility has the potential to emit 210.7 tons per year (TPY) of NO_x, 20.7 TPY of sulfur dioxide (SO₂), 5.2 TPY of particulate matter (PM), 10.1 TPY of volatile organic compounds (VOC) and 138.1 TPY of carbon dioxide. Due to this facility's potential to emit over 25 TPY of NO_x or VOC, and/or 100 TPY of any other criteria pollutant, Washington Hospital Center is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 20 DCMR 300.

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.

REGULATORY REVIEW:

This facility has been found to be subject to the requirements of the following regulations (except where the conditions of the requirement are included in all District Title V permits, or as discussed below):

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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 501 - Monitoring devices

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 800 - Control of Asbestos.

20 DCMR 801 - Sulfur contents of fuel oils

20 DCMR 803 - Sulfur Process Emissions

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

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

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

Compliance Assurance Monitoring (CAM) requirements do not apply to this facility because none of the units in this facility rely on control devices for compliance with the emission limitations. By combusting natural gas or No. 2 fuel oil, PM emission is significantly reduced. Stack test data as required in the WHC Title V permit is used to ensure compliance with the PM limitations. Facility inspection reveals that WHC uses low NO_x burners, but not as a control device as identified by CAM. There is no need for this facility to install control devices as defined by 40 CFR 64. CAM does not apply.

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

New Source Performance Standards (NSPS) do not apply to the boilers at this facility as the following NSPS analysis of applicability shows:

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

Combustion Units

All facility packaged boilers: Boilers #1-6

Reference citation: 40 CFR 60.40 – subpart Dc

Test No.1- Size

Each of the six (6) boilers has a heat input greater than 10 million Btu per hour (based on the LHV of fuel oil # 2). Each of boilers #1 through #4 has a capacity of 54.63 MMBtu/hr while #5 and #6 each has a capacity of 55.134 MMBtu/hr. The sizes are greater than the ten (10) million Btu per hour threshold. Therefore the units pass the size test. [40 CFR 60.40 – subpart Dc]

Test No. 2 – Age

Boilers #1-3 were installed on January 1, 1958. Boilers #4-6 were installed January 1, 1976. Clearly the units were not constructed, modified, or reconstructed after June 9, 1989. The boilers have never been modified or reconstructed. Therefore the units fail the age test.

NSPS Subpart IIII applicability for the generators and fire pump at this facility was considered. However, based on the date of applicability (July 11, 2005), these compression ignition, internal combustion engines (CI ICE) are not subject to 40 CFR 60, Subpart IIII, because they were constructed before July 11, 2005.

Conclusion

NSPS does not apply to the boilers since the units passed the size test but not the age test. It also does not apply to the generators and fire pump.

Greenhouse Gas (GHG) Programs

The boilers in this facility emitted 13,934 metric tons/year of carbon dioxide equivalent (CO_{2e}) in the year 2009. If this trend continues in the year 2010, it means that the facility is not likely to emit 25,000 metric tons of CO_{2e} or more per year in combined emissions from the boilers.

Based on the GHG reporting rule applicability of 40 CFR Part 98, Subpart A and Subpart C, this facility does not appear to be subject to the reporting rule. Even if it were subject to this rule, it is not considered an “applicable requirement” under Title V and its requirements would not be included in the permit.

Because Chapter 3 (Title V) was triggered by other pollutants, no evaluation was made to

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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.

Area Source Maximum Achievable Control Technology (MACT) Standards for Reciprocating Internal Combustion Engine (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. Thus, Subpart ZZZZ for a Area Source was applied to the existing SI and CI engines at this facility.

Area Source Maximum Achievable Control Technology (MACT) Standards for ICI Boilers

Subpart JJJJJ 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 considered a Major Source. It is an Area Source of HAPs. Thus, Subpart JJJJJ for ICI boilers is initially applicable because the facility uses dual-fueled (gas/oil) boilers. However, under the provision of 40 CFR 63.11195(b), and 40 CFR 63.11237, this facility is not subject to Subpart JJJJJ.

Appropriate permit conditions have been placed in this permit, pursuant to 40 CFR 63.11195 to ensure that liquid oil is only utilized in the affected boilers in compliance with 40 CFR 63.11237.

Chapter 2 Permits:

No new Chapter 2 permits have been requested since the issuance of the previous Title V permit.

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Operational Limitation:

The ICI boilers are limited to burn No. 2 fuel oil only as follows:

- i. During period of gas supply emergencies;
- ii. During a period of gas curtailment; or
- iii. For periodic testing on liquid fuel not to exceed a combined total of 48 hours during any calendar year.

COMMENT PERIOD:

Beginning Date: February 10, 2012

Ending Date: March 12, 2012

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

Stephen S. Ours, P.E.
Chief, Permitting and Enforcement
District Department of the Environment
Air Quality Division
1200 First Street, NE, 5th Floor
Washington, D.C. 20002

PROCEDURE FOR REQUESTING PUBLIC HEARING:

During the 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:

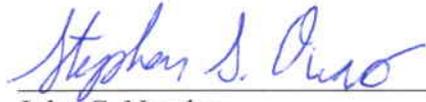
John C. Nwoke
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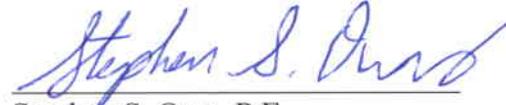
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REVIEWS:

Prepared by:

Approved by:





FOR John C. Nwoke
Environmental Engineer

Stephen S. Ours, P.E.
Chief, Permitting and Enforcement

SSO:JCN