

GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

CHAPTER 2 TECHNICAL MEMORANDUM

TO: File

FROM: Stephen S. Ours, P.E. *SSO*
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**SUBJECT: U.S. General Services Administration (GSA)
Central Heating and Refrigeration Plant (CHRP)
Permit Numbers 6407-R1 through 6410-R1
Permits to Install and Operate Four (4) Temporary Natural Gas and No. 2
Fuel Oil Fired Rental Boilers**

DATE: October 28, 2015

BACKGROUND INFORMATION

On July 10, 2015 and October 8, 2015 the Air Quality Division (AQD) of the Department of Energy and Environment (DOEE) received a renewal application and proposal to modify Permit Nos. 6407 through 6410 to construct and operate four temporary natural gas and No. 2 fuel oil fired temporary rental boilers at the General Services Administration (GSA) Central Heating and Refrigeration Plant (CHRP).

Per the October 8, 2015 request, the GSA Heating, Operation & Transmission District (HOTD) is requesting to remove the requirement in the previously issued permits to monitor visible emissions (opacity) with the use of continuous opacity monitoring systems (COMS) from permit Nos. 6407 through 6410. This requirement had been placed in the previous permit as GSA had proposed using that as their chosen opacity compliance monitoring technique, not because it was required by any specific regulation.

The stated reasons GSA HOTD wants to remove the requirement of COMS system is that the stacks on these rental boilers are required by Historical Preservation to be taken down at the end of each rental period and reconstructed when needed. Also, in addition to the financial harm, it would be very difficult to maintain alignments in stacks and sustain the required EPA conformance and performance certifications every time the stacks are constructed.

GSA submitted all the requested information to AQD. Based on the applications and subsequent information submitted, AQD determined that it would be appropriate to issue a construction and operating permit Nos. 6407-R1 through 6410-R1 to GSA.

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The permit action will be published in the DC Register on November 6, 2015. Public comments for the permit action will be solicited through December 7, 2015.

The facility has not requested that any of the materials submitted with this application be held confidential.

TECHNICAL INFORMATION

GSA Central Heating Plant is a major source. GSA is requesting that these four boilers be permitted to operate during periods of unforeseeable events that limit the ability of the main facility boilers to operate, only. That is, when any of boilers #1 through 6, except boiler #5 at the plant malfunctioned, one or more of these temporary boilers could be brought in and operated.

REGULATORY REVIEW

The emissions and the regulatory requirements remain the same as in the Chapter 2 Technical Memorandum for Permit Nos. 6407 through 6410, issued September 22, 2011, except that the review performed during the permit renewal process resulted in the identification of three additional regulations requiring evaluation, as well as a revised compliance monitoring approach for one regulation as follows:

20 DCMR 606: Visible Emissions

The visible emissions limitations of 20 DCMR 606.1 are applicable to these fuel burning units. Visible emissions shall not be emitted into the outdoor atmosphere from the operation of the these units; provided, that discharges not exceeding forty percent (40%) opacity (unaveraged) shall be permitted for two minutes in any sixty (60) minute period and for an aggregate of twelve (12) minutes in any twenty-four hour (24 hr.) period during start-up, or malfunction of equipment. This requirement is contained in Condition II(b) of the permit. In the previous version of these permits, compliance with this requirement was monitored with the use of a COMS. This had been included as a requirement based on the applicant's proposal in their previous permit application. However, in a revision to the permit renewal application, the applicant has requested that this be replaced by EPA Reference Method 9 (40 CFR 60, Appendix A) monitoring. AQD agrees that this is a reasonable request and has therefore removed the COMS requirement and replaced it with Conditions IV(g) and (h) of the permit for a combination of Method 22-like and Method 9 visible emissions observations. Related record keeping requirements have also been added.

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

The facility is a major source of oxides of nitrogen (NO_x). The temporary units being permitted are envisioned to have rated heat inputs of approximately 97 MMBTU/hr. Due to varying boiler sized of what GSA might rent, the previous permit had provided a limit to the maximum size of any unit of 100 MMBTU/hr. This version of the permit has been revised to limit it to less than 100 MMBTU/hr (i.e. now units that are exactly 100 MMBTU/hr will no longer be permitted). This limits the applicability of parts of 20 DCMR 805. Because the units will be primarily fired

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by natural gas and only by No. 2 fuel oil during gas interruptions and testing, the only applicable sections of this regulation establishing requirements are sections 805.5(a) and 805.8. These requirements have been incorporated into the permit.

40 CFR 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

Recently, as part of a review of a Title V application for GSA CHRP, GSA identified to AQD that they suspect that the facility may be a major source (i.e. have the potential to emit greater than 10 tons) of hexane, a hazardous air pollutant (HAP). This is still under evaluation at this time. However, if it is determined that the facility is, in fact, a major source of a HAP, 40 CFR 63, Subpart DDDDD has the potential to be applicable. As such, with the assumption that the facility is a major source of a HAP, the regulation was reviewed for applicability otherwise.

Pursuant to 40 CFR 63.7491(j), temporary boilers, as defined in 40 CFR 63.7575 are not subject to the subpart. After consultation with Mr. George Korvah of GSA, AQD added Condition III(h)(3), with related monitoring and record keeping requirements, to the permit to ensure that any boilers installed pursuant to this set of permits will meet the definition of a temporary boiler, and therefore, whether or not the facility is a major source of a HAP, will not be subject to Subpart DDDDD.

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

Per the discussion above, GSA CHRP may be a major source of hexane. If this is the case, 40 CFR 63, Subpart JJJJJ is not applicable to the equipment. However, because this status is undetermined at this time, AQD has acted to ensure that, if the facility is an area source of HAPs, rather than a major source, it will still not be subject to the rule. Per 40 CFR 63.11195(e), a “gas-fired boiler” as defined in 40 CFR 63.11237 is not subject to the rule. The equipment installed pursuant to this set of permits will be eligible for this exemption by complying with Conditions III(b) and (c) of the permit. Additionally, similar to 40 CFR 63, Subpart DDDDD, “temporary boilers” are not subject pursuant to 40 CFR 63.11195(h). The applicable definition is the same for both regulations, so compliance with the added Condition III(h)(3) will also ensure that the equipment will not be subject to 40 CFR 63, Subpart JJJJJ.

RECOMMENDATIONS

The proposed project and attached permits comply with all applicable federal and District air pollution control laws and regulations.

Public comments for the permit action will be solicited from November 6, 2015 through December 7, 2015. AQD will resolve any comments received before issuing the final permit, and if no comments are received, I recommend that permit Nos. 6407-R1 through 6410-R1 be issued in accordance with 20 DCMR 200.2.

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