

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-R2 through 6410-R2
Permits to Install and Operate Four (4) Temporary Natural Gas and No. 2
Fuel Oil Fired Rental Boilers**

DATE: June 22, 2021

BACKGROUND INFORMATION

On September 10, 2020, the Air Quality Division (AQD) of the Department of Energy and Environment (DOEE) received a renewal application for Permit Nos. 6407-R1 through 6410-R1 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).

GSA submitted all required information to AQD. The permit application fees due were paid on or about December 10, 2020. Based on the applications submitted, AQD made a preliminary determination that it would be appropriate to issue construction and operation permit Nos. 6407-R2 through 6410-R2 to GSA.

The permit action will be published in the DC Register on July 2, 2021. Public comments for the permit action will be solicited through July 19, 2021.

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 stationary 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

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plant malfunctioned, one or more of these temporary boilers could be brought in and operated as a temporary replacement.

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, as revised by the Chapter 2 Technical Memorandum for Permit Nos. 6407-R1 through 6410-R1, issued October 28, 2015. Some key regulations are discussed below, including one where the language in the permit has been updated since the issuance of permits 6407-R1 through 610-R1.

20 DCMR 600: Fuel-Burning Particulate Emission

In previous versions of these permits, a maximum emission limit of 0.06 lb/MMBTU was identified as the emission limit for these boilers. However, because the permits allow construction and operation of boilers of any size less than 100 MMBTU/hr of rated heat input, the particulate matter limit established by this regulation will actually vary depending upon the size of the boiler in use. As a result, the full requirements of 20 DCMR 600.1 (including the relevant formula for determining the emission limit) have been incorporated into this version of the permit, rather than establishing a single emission limit. This is reflected in Condition II(c) of the permit document.

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 original permit document issued in 2011 had provided a limit to the maximum size of any unit of 100 MMBTU/hr. This was previously revised in the 2015 version of the permit 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 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

Previously, 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, but expected to be the case. If it is determined that the facility is, in fact, a major source of a HAP, 40 CFR 63, Subpart DDDDD is applicable. As such, with the assumption that the facility is a major source of a HAP, the regulation was reviewed for applicability.

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

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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 July 2, 2021 through August 2, 2021. AQD will resolve any comments received before issuing the final permit, and if no comments are received, I recommend that permit Nos. 6407-R2 through 6410-R2 be issued in accordance with 20 DCMR 200.2.

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