


GOVERNMENT OF THE DISTRICT OF COLUMBIA


District Department of the Environment

Air Quality Division



CHAPTER 2 TECHNICAL SUPPORT MEMORANDUM

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

FROM: John Nwoke 
Engineer

SUBJECT: **Washington Aqueduct, U.S. Army Corps of Engineers
Permit Nos. 6334-R1 through 6336-R1 to Operate Dual Fuel-Fired Boilers**

DATE: August 5, 2013

Background

On February 26, 2013, Air Quality Division (AQD) received a set of Chapter 2 permit applications to renew Permit #6334, Permit #6335, and Permit #6336. These permits were issued in April 29, 2010 to construct and operate three identical natural gas/No. 2 fuel oil fired boilers each of a capacity of 5,240,000 Btu/per hour of heat input.

The applications are being prepared as renewal permits with the goal of publicly announcing the permit actions in the D.C. Register on August 9, 2013. The comment period is normally 30 days from the date of posting. In this case, the comment period will end on September 9, 2013.

Issues

There are no new issues pertaining to these Chapter 2 permit applications.

Regulatory Review

Both the federal and District of Columbia regulations and applicable requirements apply to this project as noted below:

New Source Performance Standards (NSPS) 40 CFR Part 60

1. NSPS: Some HW boilers are subject to Subpart Dc of 40 CFR 60.40c, while others are not.

The dual-fuel (natural gas and No. 2 fuel oil) hot water boilers that have a heat-input rating of less than 10 MMBtu/hr are not subject to 40 CFR 60.40c Subpart Dc, even though the boilers were constructed after the date of applicability – June 9, 1989. Based on this analysis, the three Packaged Scotch Boilers were constructed on August 16, 2001 and each boiler has a capacity of 5.24 MMBtu/hr of heat input rating, and thus are not subject to NSPS.



CHAPTER 2 TECHNICAL MEMORANDUM

Washington Aqueduct – U.S. Army Corps of Engineers

Chapter 2 Permits for HW Boilers

August 5, 2013

Page 2

National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63

The boilers are subject to NESHAP subpart JJJJJ for area source ICI Boilers. NESHAP subpart JJJJJ, 40 CFR 63.11201, Table 1, sets out emission limits for particulate matter of 0.03 lb/MMBtu/hr of heat input for boilers greater or equal to 10 MMBtu/hr of heat input. This requirement is not applicable to the boilers under consideration.

Table 2 of Section 63.11201 specifies that new oil-fired boilers of capacity equal or greater than 10 MMBtu/hr of heat input must follow manufacturer's procedures for minimizing the boiler's startup and shutdown periods. Existing or new oil-fired boilers, regardless of size must conduct a biennial boiler tune-up as specified in Section 63.11223 of 40 CFR 63. Existing oil-fired boilers with capacities equal to or greater than 10 MMBtu/hr, must conduct a one-time energy assessment pursuant to Table 2 of Section 63.11201. These requirements are not applicable to the boilers under consideration.

Under this regulation, a source is deemed "existing" if it commenced operation before June 4, 2010 when this rule was promulgated. The boilers are deemed "existing" since they commenced operation in 2001. The boilers are subject to Sections 63.11201 and 63.11223, and 63.11225.

In this regulatory review, it is noteworthy that this facility does not emit, or has a potential to emit 10 tons per year of a single HAP or 25 tons per year of any combination of HAPs. Consequently, the Major Source MACT did not apply, hence the facility defaults to an area source of HAP emission under subpart JJJJJ instead of a major source subject to subpart DDDDD.

The boilers are subject to the regulatory requirements of 20 DCMR 200.4, 20 DCMR 202.2, 20 DCMR 502, 20 DCMR 500.8, 20 DCMR 805, 20 DCMR 606.1, 20 DCMR 903.1, 20 DCMR 801.1, and 20 DCMR 201.

Conclusions

Subject to receiving no adverse public comments, I recommend, based on all the aforementioned regulatory review that the applicable permits be issued to Washington Aqueduct, following completion of the public review period. If comments are received during the public review period, they will be addressed before issuance of the permits.

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