

Illinois Environmental Protection Agency
Bureau of Air, Permit Section
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Project Summary for an Application from
Metropolitan Water Reclamation District of Greater Chicago for Renewal of the
Federally Enforceable State Operating Permit (FESOP) for
400 East 130th Street
Chicago, Illinois 60611

Site Identification No.: 31600DQO
Application No.: 5050146

Schedule

Public Comment Period Begins: July 25, 2007
Public Comment Period Closes: August 24, 2007

Illinois EPA Contacts

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I. INTRODUCTION

Metropolitan Water Reclamation District of Greater Chicago has applied for renewal of its Federally Enforceable State Operating Permit (FESOP) for its Calumet Water Reclamation Plant. This plant requires an air pollution control operating permit because it is a source of emissions. The Illinois EPA has prepared a draft of the renewed permit that it would propose to issue for the plant. However, before renewing the permit, the Illinois EPA is holding a public comment period to receive comments on this proposed action and the terms and conditions of the draft permit that it would propose to issue.

II. SOURCE DESCRIPTION

Metropolitan Water Reclamation District of Greater Chicago treats domestic and industrial water from the Metropolitan Water Reclamation District of Greater Chicago's south facility area. The plant uses a conventional activated deluge process and treats an average of 262 million gallons per day. The emission units are various fuel combusting equipment including natural gas fired boilers, digester gas fired boilers, and digester gas fired flares. The digester gas (mainly methane) is produced in the digester and is burned in the boilers to produce hot water. The hot water is used in heat exchangers to heat the sludge in the digester and to heat the plant building. During the summer months when the demand for hot water is low, the excess digester gas is combusted in waste gas flares to prevent a potential safety hazard associated with the release of unburned methane into the atmosphere.

III. GENERAL DISCUSSION

Federally Enforceable State Operating Permits (FESOPs) are federally enforceable, that is, the terms and conditions of the permits can be enforced by USEPA under federal law, as well as by Illinois government and the public under state law. These permits can establish federally enforceable limitations on the operation and emissions of a source that restrict the potential emissions of the source.

The source has been operating this plant under a FESOP because the actual emissions of the plant are below the levels at which the plant would be considered a major source under Title V of the federal Clean Air Act. However, in the absence of federally enforceable limitations, the plant's potential emissions would be such that the plant would be considered a major source. The permit acts to restrict the plant potential emissions so that it need not be considered a major source. As a result, the source does not need to obtain a Clean Air Act Permit Program (CAAPP) permit for the plant, as would otherwise be required.

The FESOP limits the operation and annual emissions of the plant to below the major-source-thresholds of 100 tons for NO_x, CO, SO₂, PM and VOM, 10 tons for an individual HAP and 25 tons for combined HAPs.

IV. APPLICABLE EMISSION STANDARDS

All emission units in Illinois must comply with state emission standards adopted by the Illinois Pollution Control Board. These emission standards represent the basic requirements for sources in Illinois. The Illinois regulations that apply to this source are 35 ICA 212.123 to limit opacity to 30 percent, 35 ICA 214 to limit SO₂, and 35 ICA 216.121 to limit CO. Federal regulation 40 CFR 60 Subpart Dc also applies to this source.

V. CONTENTS OF THE PERMIT

The renewed permit that the Illinois EPA is proposing to issue would continue to identify the specific emission standards that apply to the emission units at the plant. As explained, the CO and SO₂ are subject to 35 ICA 214.122 and 35 ICA 216 which requires: SO₂ in one hour from any new fuel combustion source with actual heat input smaller than, or equal to, 73.2 MW (250 mmBtu/hour), burning liquid fuel exclusively to exceed 0.46 kg of sulfur dioxide per MW-hour of actual heat input when distillate fuel oil is burned (0.3 lbs/mmBtu); and CO of less than 200 ppm into the thermosphere from any fuel combustion emission source with input greater than 10 mmBtu/hour corrected to 50 percent excess air. The conditions of this permit are intended to ensure that the source continues to comply with applicable emission standards.

The permit would also contain limitations and requirements to assure that this plant is operated as a non-major source. The permit would limit the operation and annual emissions of the plant to below the major-source-thresholds of 100 tons for NO_x, CO, SO₂, PM and VOM, 10 tons for an individual HAP and 25 tons for combined HAPs.

The permit conditions would also continue to require appropriate compliance procedures, including inspection practices as well as recordkeeping and reporting requirements. The source must carry out these procedures on an on-going basis to demonstrate that the plant is being operated within the limitations set by the permit and the plant's emissions are being properly controlled.

VI. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that the source has met the requirements for renewal of its permit. The Illinois EPA is therefore proposing to renew the permit.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 IAC Part 166.