

PROJECT SUMMARY

I. Introduction

A Construction Permit application has been voluntarily submitted by ExxonMobil Oil Corporation (ExxonMobil) for a Crude/Coker Utilization Project (CCUP), that is, various changes to the refinery to improve the calendar day performance of existing equipment.

Because the CCUP is accompanied by significant increases in emissions of NO_x, CO, PM, PM₁₀, and PM_{2.5}, this draft permit contains the requirements of 35 IAC 203: Major Stationary Sources Construction and Modification (MSSCAM) and the 40 CFR 52.21: Prevention of Significant Deterioration of Air Quality (PSD).

II. Project Description

ExxonMobil Oil Corporation operates an oil refinery in Will County. Will County is designated as attainment for all pollutants except ozone and PM_{2.5}. For PM_{2.5}, emissions of PM₁₀ will be used as a surrogate in accordance with USEPA guidance.

The purpose of the CCUP is to undertake a group of efficiency improvement and unit reliability projects that will allow the refinery to reduce operating costs and improve long-term daily average performance of existing equipment by more consistently approaching short-term design levels of throughput. The physical changes included as part of the project(s) are primarily to process equipment that do not have vents or stacks discharging emissions directly to the atmosphere, such as heat exchanger trains, pumps, etc. The changes being proposed will not change the design capacity of any existing units at the refinery. However, on an annual basis, throughput of several units is expected to increase above historical levels. The change in annual throughput at the Crude Unit will allow increases in throughput of downstream units and the resultant changes in emissions have been evaluated as part of this project.

III. Emissions

The emissions increases from this project are attributable to combustion emissions associated with the potential additional firing of process heaters or boilers and process emissions from units such as the FCCU and SSRU due to the potential increase in throughput on an annual basis. Additionally, the potential exists for there to be an increase in emissions from new fugitive components. As this project does not change the design capacity of existing equipment, the potential increase in emissions from the existing equipment is based on the potential increase in annual emissions by running closer to the design rates on an annual average basis.

IV. BACT/LAER Requirements

The only new emission units proposed for this project are new fugitive components. Additionally, there will be a change in service of an existing storage tank. These units will emit

only VOM. The VOM emissions generated by these units, and the increase in VOM emissions from the entire CCUP project, will not exceed the applicable significant threshold for VOM (40 tons).

Other units, such as process heaters, associated with this project which contribute to a significant increase in emissions do not undergo a physical change or change in the method of operation. Accordingly, these units are not subject to BACT or LAER. In addition to the emission units associated with this project not undergoing a physical change or change in the method of operation, there is no relaxation of any existing federally enforceable emission limits as a result of this project for these units.

VI. Applicable Emission Standards

All emission sources in Illinois must comply with the Illinois Pollution Control Board's emission standards. The Board's emission standards represent the basic requirements for sources in Illinois. The Board has standards for sources of NO_x, CO, VOM, SO₂ and PM/PM₁₀. This project readily complies with all applicable Board standards.

VII. Proposed Permit

The conditions of the proposed permit contain limitations and requirements to assure that this facility will comply with all applicable Board emissions standards, meet the Lowest Achievable Emission Rate (LAER) as required by MSSCAM and achieve the Best Available Control Technology (BACT) as required by PSD.

The permit conditions also establish appropriate compliance procedures, including inspection practices, recordkeeping requirements, monitoring requirements and reporting requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the facility is operating within the limitations set by the permit.

VIII. Request for Comments

It is the Illinois EPA's preliminary determination that the facility meets all applicable state and federal air pollution control requirements, subject to the conditions proposed in the draft permit. The Illinois EPA is therefore proposing to issue a permit with federally enforceable limits for this construction project.

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 Ill. Adm. Code Part 166.

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