

Illinois Environmental Protection Agency
Bureau of Air, Permit Section
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Project Summary for a
Construction Permit Application from
CITGO Petroleum Corporation for an
Ultra Low Sulfur Diesel Project
at the Existing Refinery in
Lemont, Illinois

Site Identification No.: 197090AAI
Application No.: 07090059

Illinois EPA Contacts:

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Important Dates:

Application Received: September 24, 2007
Comment Period Begins: May 6, 2008
Comment Period Closes: June 5, 2008

PROJECT SUMMARY

I. INTRODUCTION

A construction permit application has been submitted by CITGO for an Ultra Low Sulfur Diesel (ULSD) project. The ULSD project will enable the refinery to produce low sulfur diesel as required by federal regulation. CITGO's application shows that the project would not be a major modification under 40 CFR 52.21, Prevention of Significant Deterioration (PSD) or 35 IAC Part 203, Major Stationary Sources Construction and Modification (MSSCAM).

II. PROJECT DESCRIPTION

CITGO operates a petroleum refinery located in Lemont, Illinois. Will County is designated as attainment for all pollutants except PM_{2.5} and ozone, which is designated as moderate nonattainment. The ULSD project will enable the refinery to produce low sulfur on-road and off-road diesel fuel as required by federal regulation. Diesel is made from a number of distinct blend stocks or streams produced at the refinery. This project allows the refinery to remove more sulfur from these streams, to the level needed to produce ultra low sulfur diesel by installing a new hydrotreater unit (Unit 590) and by altering several existing units at the refinery.

Unit 590, the new diesel distillate hydrotreater, will be a continuous operation that improves the quality of high sulfur feedstock by removing sulfur, nitrogen and metal compounds. Within the hydrotreater, a reaction takes place in a reactor in the presence of a catalyst resulting in removal of hydrogen sulfide. Unit 590 will also require two new heaters.

The ULSD unit requires hydrogen to operate. The required hydrogen will come from a new hydrogen plant built by a third party. Although the emissions from this hydrogen plant are included in the emission summary of this permit, a separate permit will be issued to the third party for the hydrogen plant. The hydrogen plant project and the ULSD project are considered to be a larger, single project for purposes of New Source Review regulations.

III. EMISSIONS

This project results in a significant increase in NO_x, CO, SO₂, and PM₁₀ emissions as defined by New Source Review regulations. CITGO has performed a "netting exercise" to evaluate the net emissions increase. This evaluation shows that the project emissions when combined with contemporaneous increases and decreases results in emissions that are less than significant. Accordingly, New Source Review regulations are not triggered.

IV. 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 nitrogen oxides, carbon monoxide, volatile organic material, sulfur dioxide, and particulate matter. This site readily complies with all applicable Board standards.

V. DRAFT PERMIT

The conditions of the permit would contain limitations and requirements that are intended to assure that this project will not trigger the requirements of PSD or MSSCAM. The permit conditions establish appropriate compliance procedures, including monitoring requirements, recordkeeping requirements, and reporting requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the refinery is operating within the limitations set by the permit.

VI. 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 construction permit for this project. Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit.

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