***** DRAFT DOCUMENT FOR PUBLIC REVIEW *****
DOES NOT REPRESENT OFFICIAL AGENCY POLICY

(DRAFT DOCUMENT - DOES NOT REPRESENT OFFICAL EPA POLICY)

March 14, 2000

MEMORANDUM

Subject: BACT and LAER for Tier 2/Gasoline Sulfur Refinery Projects

From: Bill Harnett

To: Air Division Directors

Background

EPA recently issued new emissions standards ("Tier 2 standards") for all passenger vehicles, including sport utility vehicles, minivans, vans, and pick-up trucks. As part of this program, EPA also set new standards to significantly reduce the sulfur content in gasoline. These standards require that most refiners meet a corporate average gasoline sulfur standard of 120 ppm and a cap of 300 ppm beginning in 2004. In 2005, most refiners will have produce gasoline meeting a 30 ppm average sulfur level. By 2006, most refiners must meet an 80 ppm cap and a 30 ppm average sulfur level.[1] In order to meet these sulfur in gasoline requirements, some refiners will have to make modifications to their existing facilities. EPA further believes that in certain of these cases these modifications will be subject to the major new source review (NSR) preconstruction permitting requirements under parts C and D of the Clean Air Act. The refiners subject to major NSR will be required to undergo a pollution control technology evaluation to apply either BACT or LAER, depending on the applicable program requirements.

[1]Some exceptions apply for small refiners and gasoline produced for sale in parts of the Western U.S. For a full description of the program, see the final rule published on February 10, 2000 (65 FR 6698).

To provide greater certainty and to expedite the NSR permitting process for refinery projects undertaken to comply with the gasoline sulfur standards, EPA has determined that it would be beneficial to provide federal guidance on BACT and LAER for these type of projects. This guidance is intended to set out a level of control that, in our view, would be expected to satisfy the BACT and LAER requirements for certain emission units and pollutants associated with refinery desulfurization projects. While state and local permitting agencies are not required to apply this guidance in establishing BACT or LAER for a particular emission unit, the guidance will add certainty as to EPA's general perspective and expectations as to the applicable technology requirements which satisfy BACT and LAER for certain types of refinery emission units. In addition, it is also important to note that this guidance on control technology may not be appropriate in all cases. The NSR program requires a case-by-case analysis of BACT and LAER. In specific cases, unusual site-specific circumstances may warrant a different level of control than that suggested by EPA's analysis. Thus, where additional or new information presented by the applicant or public, within the context of the processing of a specific permit application, becomes available it should also be considered when evaluating BACT or LAER for a specific emissions unit.

The control technology findings discussed in this guidance are based on information and analyses contained in the attached report, titled "Petroleum Refinery Tier 2 BACT Analysis Report". The report was prepared by the Eastern Research Group under contract to EPA.

BACT and LAER for NOx emissions from Refinery Heaters

After a review of the available information, it is EPA's conclusion that for NOx emissions, a combination of Selective Catalytic Reduction (SCR) and Ultra-low NOX burners represents BACT for new process heaters at refineries capable of firing 50 MMBTU or greater of refinery or natural gas. The combination of controls represents the best level of control that can be achieved and would be expected to result in an overall NOx reduction of upwards of 97% from uncontrolled levels. The average and incremental costs are acceptable and there are no adverse environmental or economic impacts associated with the control strategy that would indicate that a less stringent options should be considered. Consequently, EPA believes this control strategy

is BACT for such units.

At this time the combination of SCR and Ultra-low NOX burners represents the most stringent control level achieved or contained in a SIP. As a result, it also represents LAER for those units.

EPA expects that refineries will likely be able to avoid the application of major NSR to individual or multiple new refinery process heaters of less that 50 MMBTU by controlling emissions to levels well below the applicable significance level for a major modification (e.g., 40 tons per year for PSD). Consequently, we do not believe it is appropriate to provide a position on BACT for these units at this time. Should the need arise for federal guidance on BACT for these refinery process heaters within the context of permitting refinery gasoline desulfurization, we will consider issuing supplemental guidance at that time.

BACT and LAER for VOC emissions from Refinery Equipment

After a review of the available information, it is EPA's conclusion that for VOC emissions from hydrotreaters and hydrogen units, at both large and small refiners, compliance with the Hazardous Organic National Emission Standards for Hazardous Air Pollutants (HON) (40 CFR Part 63 Subpart H)represents BACT. This is the most stringent control level achievable for VOCs from these units. In concluding that compliance with the HON represents BACT, EPA considered the incremental and average cost of the control strategy as well as any associated energy and environmental impacts. No adverse impacts were found to be associated with the most effective control option. Consequently, was determined to be BACT.

The control option represents the most stringent control level achieved or contained in a SIP, it therefor also represents LAER for those units.

Effect of Guidance

This guidance document does not supercede existing Federal or State regulations or approved SIP's. The policies set out in this memorandum do not represent final Agency action, and are intended as guidance only. The analysis undertaken applies only prospectively and only to major NSR permit applications for

gasoline desulfurization related projects which have been determined to be complete by the relevant permitting agency no later than 18 months from the date of this memorandum. This memorandum is not ripe for judicial review. Moreover, it is not intended, nor can it be relied upon, to create any rights enforceable by any party in litigation with the United States. Agency officials may decide to follow the guidance provided in this memorandum, or to act at variance with the guidance, based on an analysis of specific circumstances. The EPA may change this guidance at any time without public notice.

The EPA will continue to evaluate the need for further guidance on BACT and LAER determinations for emissions units and other pollutants (e.g., SO2) associated with refinery desulfurization projects undertaken to comply with Tier 2 requirements and, as necessary, may issue additional guidance in the future.

Distribution/Further Information

We are asking Regional Offices to promptly send this memorandum with attachment to State and local permitting agencies within their jurisdiction. Questions concerning the application of this guidance to specific BACT or LAER determinations and cases should be directed to the appropriate EPA Regional Office. Regional Office staff may contact David Solomon of the Integrated Implementation Group at 919-541-5375, if they have any questions. This document, including the referenced attachment, is also available on the Internet, at http://www.epa.gov/ttn/nsr, under “What’s New on NSR.”

Attachment