June 7,1991

Summary of Proposed Rule on Applicability
of New Source Review and New Source Performance
Standards at Electric Utility Sources

- As a result of the Wisconsin Electric Power Company v. Reilly (WEPCO) court decision, owners and operators of utilities have been concerned that pollution control projects could subject their units to preconstruction permit requirements. The proposal deals with whether pollution control projects and other physical and operational changes at existing utilities are considered "modifications" under the Clean Air Act (the Act).

- Electric utility sources will play a major role in reducing sulfur oxide emissions as part of the new acid rain program called for in Title IV of the Act Amendments of 1990 (1990 Amendments).

- Many existing electric utility sources will be undertaking pollution control projects, and other modifications, in the near future to comply with Title IV. In order for these sources to comply with those provisions in a timely and efficient manner, clarification of the new source review (NSR) regulations and confirmation of EPA policies regarding some of these provisions which affect the utility industry is needed.

- The proposal provides the following:

    - Pollution control projects at utility sources are excluded from NSR requirements, unless the reviewing authority determines that the project will render the unit less environmentally beneficial than before the change.

    - It modifies EPA regulations to reflect changes made by Congress in the 1990 Amendments to the applicability of new source requirements to clean coal technology (CCT), repowering projects, and to "very clean" units.

    - It proposes a presumption that low-NOx burners

represent best available control technology (BACT) for existing coal-fired electric utility steam generating units undergoing a modification.

- It proposes a methodology for calculating emissions changes from non-routine physical or operational changes at electric utility units (other than the total replacement of a unit or addition of an wholly new unit).

BACKGROUND

The 1977 Clean Air Act Amendments established two new source review programs that were designed to apply to construction of new sources and to modifications at existing sources which might increase pollution in an area. These are the prevention of significant deterioration (PSD) program for clean air areas and the nonattainment new source review program for areas that are not meeting established air quality standards. The EPA recognized that Congress did not intend for every modification to be potentially subject to NSR requirements (for instance, installation of projects that are solely designed and intended to reduce emissions at a source). In practice, EPA has generally excluded pollution control projects at electric utility units form NSR requirements. Today's ruling formally proposes to adopt a formal regulatory exclusion, reinforces EPA's support for use of environmentally-beneficial technology, and interprets existing EPA regulations related to these and other modifications at existing electric utility sources.

The 1990 WEPCO court decision also led to a change to the NSR program. The Seventh Circuit ruled that certain types of modifications at electric utilities should receive different treatment under the NSR regulations. This proposal describes how such modifications at electric utilities will be handled in the future.

Today's proposal is timely for a number of reasons. First, Title IV of the 1990 Amendments addresses the acid rain problem in a way which will cause many utility power plants to undertake pollution control projects. Second, EPA believes its extensive experience with other physical and operational changes at utility sources, the general similarity of equipment within the utility source category, and the extent of publicly available information from such sources support a revision to the NSR applicability

criteria. Finally, in passing Title IV, Congress did not suspend any requirements of Title I. However Title I and Title IV are clearly intended to work in concert, not conflict, and today's ruling is intended to ensure that harmony.

Today's proposal implements and explains the provisions of Sections 409 and 415 of Title IV of the 1990 Amendments which provide limited exemptions from new source performance standards (NSPS) and NSR requirements for repowering projects and CCT demonstration projects. Repowering is defined in the proposal as "the replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnethohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of the date of enactment of the 1990 Amendments." Repowering also includes any oil and/or gas-fired unit which has been awarded CCT demonstration funding as of January 1, 1991, by the Department of Energy (DOE). Clean coal technology demonstration projects are projects funded under DOE's CCT program or a similar project funded by EPA that utilize any technology not in widespread use as of November 15, 1990. The demonstration projects must achieve significant reductions in SO2 or NOx emissions associated with burning coal in the generation of electricity, process steam, or industrial products.

When the proposal becomes final, the changes will be applicable to federal NSPS and NSR requirements promulgated by EPA. In some States where the federal requirements apply, EPA has delegated the authority to implement the PSD program to the State. For those States with approved PSD NSR programs, the changes are advisory in nature and are recommended to be included as part of State implementation plans (SIPs) approved by EPA.

THE PROPOSED RULE

Pollution Control Projects

The proposal would revise EPA's PSD and nonattainment NSR regulations for the addition, replacement or use of pollution control projects at existing electric utility steam generating units. Under this proposal, pollution control projects would not be treated as modifications, subjecting the utility to NSR requirements, unless the reviewing authority determines that the project will render the unit less environmentally beneficial. Until the proposal is adopted in final form, EPA will continue its current policy of determining if pollution control projects are excluded from NSR on a case-by-case basis.

In the proposal, a pollution control project is defined as a project undertaken at a utility unit to reduce emissions. These projects are limited to the installation of conventional or innovative emissions control equipment (including, but not limited to, installation of conventional and advanced flue gas desulfurization, sorbent injection for SO2 and NOx controls, electrostatic precipitators) and projects undertaken to accommodate switching to a less polluting fuel (including natural gas or coal re-burning, co-firing of natural gas and other fuels for the purpose of controlling SO2 and NOx emissions).

Changes that are intended primarily to restore original capacity or to improve the operational efficiency of the facility are not considered to be part of a pollution control project for purposes of the proposal. Also, the source must still comply with all applicable State implementation plan (SIP) limits and requirements, permit conditions and applicable national ambient air quality standards (NAAQS) or PSD increment limits.

Method for Determining Emissions Increases

For non-routine changes at electric utility units, the proposal establishes a methodology for determining whether the change would result in an emissions increase. To calculate whether a change would result in an emissions increase, the EPA proposes to compare "actual" emissions before and after a physical or operational changes at an existing utility unit. Under the proposal, the source owner or operator is given more flexibility in choosing which consecutive 2-year time periods will be used to determine pre- and post-change emissions levels which are representative of normal source operations. This methodology does not apply to the addition of a wholly new unit

or the total replacement of an existing unit. Until the proposal is adopted in final form, this methodology is to be applied only where the unit has "begun normal operations," as in the case of a "like-kind replacement."

The proposal proposes EPA's interpretation of its current regulations for utilities, which provides that where increased operations are in response to independent factors which would have occurred even in the absence of the physical or operational change (such as growth of the system to accommodate demand for greater electricity production), such increases may be excluded from the projection of future actual emissions. However, any emissions increase attributable to a physical or operational change must continue to be included in the post-change emissions calculation. Further, the proposal provides that during a representative baseline period, the plant must have been able to accommodate the projected demand growth physically and legally even absent the particular change.

Repowering Projects

Repowering projects that qualify for a compliance extension under Section 409 of the Act will be exempt from NSPS requirements if the project does not cause an increase in actual hourly emissions for any pollutant regulated under the Act. This exemption will not apply to a new unit which is located at a different site than the existing unit it replaces.

Clean Coal Technology

The notice also proposes rules implementing the new clean coal technology (CCT) exemption created by the 1990 Amendments. For the purposes of this proposal, temporary CCT demonstration projects are defined as those CCT demonstration projects lasting 5 years or less. Title IV gives these projects an exemption from NSPS, PSD and nonattainment NSR requirements. Further, EPA proposes that at the end of a temporary project, the facility must be returned to pre-demonstration conditions and hourly emission rates (or lower).

Repowering as a Permanent CCT Demonstration Project

The proposal also implements a provision contained in the 1990 Amendments which exempts repowering projects which are awarded funding from the DOE as permanent CCT demonstration projects (or similar projects funded by EPA) from NSPS and PSD requirements so long as potential emissions from the unit do not increase as a result of the project.

Best Available Control Technology (BACT) Presumption

The EPA proposes to adopt a presumption that, in the case of PSD permits issued by EPA under 40 CFR 52.21, BACT for emissions of nitrogen oxides from coal-fired electric utility steam generating units is the technology required under section 407 of the Clean Air Act. In general, this will call for the use of combustion modification and/or low-NOx burners or similar, cost-effective technologies by those utilities required to obtain PSD permits for NOx emissions.

The proposed presumption is consistent with BACT requirements because it does not purport to relieve the permitting authority of the obligation to weigh the statutory factors in reaching BACT determinations. Rather, it reflects an exercise of policy judgment by the permitting authority that in most cases a BACT analysis of currently demonstrated technologies for retrofitting existing utility boilers would lead to the selection of low NOx burners and/or combustion modifications identified in section 407(b)(1).

NSPS Baseline Calculation

The EPA is proposing that, for an existing electric utility steam generating unit, the pre-modification baseline for NSPS applicability purposes shall be calculated using the highest hourly emissions rate achievable at any time during the 5 years prior to the modification.

Applicability Determinations

Generally, the proposal provides adequate assurances for owners and operators of utility sources to make modifications without uncertainty as to the applicability of the various NSR requirements. In most instances, source owners or operators can

readily ascertain whether new source review requirements apply to them. Consequently, in administering these requirements, EPA does not require sources to obtain a formal applicability determination before proceeding with construction. In keeping with that practice, EPA will not require utilities to seek applicability determinations under either the revised regulations proposed today or the interpretations of existing regulations contained in this preamble.

CONCLUSION

The proposal will help to achieve the goals of the acid rain provisions of the 1990 Amendments in an effective and timely manner. The implementation of the regulations being proposed should not cause any negative environmental effects. As a matter of fact, the proposed exclusion for pollution control projects should encourage owners and operators of utility sources to install pollution control projects, which should inherently lead to positive environmental impacts.

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