United States
Environmental Protection
Agency

Office of Water
Mail Code 4303

EPA-821-F-93-005
November, 1993

EPA FACT SHEET

EFFLUENT GUIDELINES: PROTECTING OUR NATION'S WATERS FROM INDUSTRIAL DISCHARGES

BACKGROUND

In 1972 Congress established, as part of the Clean Water Act, a landmark program to control the discharge of pollutants from industries into the waters of the United States. This program, which is administered by the Environmental Protection Agency (EPA), is made up of two complementary approaches for ensuring the protection of our valuable water resources: technology-based effluent guidelines and water quality-based controls.

The technology-based *effluent guidelines* set national standards for wastewater discharges by regulated industries. The guidelines apply to effluent discharged by these industries, whether they discharge directly into surface waters or indirectly into sewage treatment plants. Each guideline is written for a specific industry and it includes limits on pollutants that are typically discharged by that industry. The guidelines, and the pollutant levels that they contain, are based on the best technology that is economically achievable by the regulated industry. *Water quality-based controls* are developed by individual states for watersheds when more stringent measures are needed to protect water quality in specific areas.

EPA has developed effluent guidelines for many industries, regulating over fifty industrial categories to date. These are industries such as oil and gas extraction, iron and steel manufacturing, and organic chemical manufacturing. Each guideline regulates conventional pollutants such as oil and suspended solids, toxic pollutants (like lead and benzene); and nonconventional pollutants (including many pesticides). All guidelines are developed by EPA with the help of scientists, the industries under consideration, environmental groups, and other interested parties.

DEVELOPING GUIDELINES

Developing a guideline for an industry is a complex process. It begins with EPA conducting an extensive study of the industry, its production processes, how it incorporates pollution prevention into production processes, how material is reused and recycled, and the wastewater treatment technologies that are in place in the industry. A vastamount of information related to manufacturing processes, production costs, waste reduction, and pollution treatment technologies is assessed and wastewater samples from many facilities are analyzed to determine the kinds and amounts of pollutants that are discharged.

After extensive analysis of all production and process data, EPAprepares an economic analysis to help assess the potential impact of a guideline. This combination of economic, engineering, and wastewater databases enables EPA to develop guideline options for each industrial category being considered.

THE REGULATION PROCESS

The Clean Water Act requires EPA to publish effluent guidelines for direct and indirect industrial dischargers. It also provides specific factors that EPA is to consider in developing guidelines.

Each guideline includes specific pollutant limits that are based on process and treatment technology that is in use in the industry.

- For facilities that discharge conventional pollutants directly to surface waters, these limits are called Best Practicable Control

Technology (BPT) and Best Conventional Pollutant Control Technology (BCT).

- For dischargers that discharge toxic and nonconventional pollutants directly to surface waters, these limits are called Best Available Technology Economically Achievable (BAT).

- For new sources, these limits are called New Source Performance Standards (NSPS).

Controls for indirect dischargers to municipal sewage treatment systems, are different in some aspects than those for direct dischargers to surface water. Conventional pollutants are considered compatible with the operation of a municipal sewage treatment plant; therefore, indirect dischargers are not subject to controls for conventional pollutants. For EPA to establish limits for toxic pollutants, it must show that a pollutant would "pass through" the municipal treatment system. If it will, EPA includes limits on those pollutants for indirect dischargers.

For each regulated industry, EPA defines the levels of pollutants that are technically and economically achievable, and describes how these levels can be met and at what cost. The industry may use any technology that allows it to meet the performance levels established by the guideline.

The most suitable guideline option is published in the Federal Register as a proposed regulation for public review and comment. It may contain a specific request for comments on controversial or difficult issues. The public comment period, an integral part of the guidelines development process, gives all interested parties the opportunity to provide support or opposition for the proposal and invites them to submit constructive comments and additional information. At the close of the comment period, EPA evaluates all the comments and again reviews the alternative options.

In some cases the comments are so substantial that EPA decides on further study or evaluation to assist in the final decision. If this is the case, EPA may restudy the industry and re-propose the regulation--following the same procedures that were followed originally.

After consideration of the comments and any subsequent research or analysis, the final guideline is published as a regulation in the Federal Register. The regulated industry generally has three years to comply with the new regulations.

FUTURE ACTIVITIES

The 1987 Amendments to the Clean Water Act require EPA to publish a biennial plan to review and revise existing guidelines. It also requires EPA to develop new guidlines for dischargers of toxic or nonconventional pollutants. As wastewater treatment technologies continue to advance, earlier guidelines will be revised to take into account improved treatment methods and opportunities for pollution prevention. In addition, national concern will focus on new pollutants, more stringent discharge limits, and industries not presently regulated.

EPA has developed an effective national effluent guidelines program that is widely recognized and used by other countries. This program has been essential to meeting the commitment that the Clean Water Act represents: the protection of our nation's water.