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National Advisory Council for Environmental Policy and Technology

The Effluent Guidelines Program:

Selection Criteria for Preliminary Industry Studies

Report and Recommendations of the Effluent Guidelines Task Force

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**The Effluent Guidelines Program:
Selection Criteria for Preliminary Industry Studies**

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I. Executive Summary

The Environmental Protection Agency established the Effluent Guidelines Task Force in 1992. The Task Force is an advisory committee that consists of representatives from industry, environmental groups, states, local governments, the academic/scientific community, and EPA regional offices. It was formed to offer recommendations to the Agency on improvements to the Effluent Guidelines Program. EPA's Effluent Guidelines Program, which was created by the 1972 Clean Water Act, develops industrial wastewater regulations for dischargers to surface waters and publicly owned treatment works.

Since 1972, EPA has promulgated effluent guidelines for 51 industrial categories, and is currently developing additional regulations. The Agency is also conducting preliminary studies of industries prior to selecting categories for regulation.

In this first report, the Effluent Guidelines Task Force recommends criteria that EPA should use for screening and selecting industries for preliminary studies, the information sources that should be relied upon, and offers other related recommendations to improve the guidelines program.

1. Criteria to be Used to Screen Industries for Preliminary Studies for New and Revised Effluent Guidelines.

The Task Force recommends that EPA begin its screening process by consulting with pretreatment control authorities, NPDES authorized states, industry; and professional/trade associations regarding their recommendations pertaining to revising existing effluent guidelines and to targeting industries for new guidelines. To screen industry candidates EPA should review its list of facilities discharging into water quality-impaired receiving waters (the section 304(l) list) and its sediment

inventory. EPA should look for industries that are not implementing pollution prevention practices, where there would be the greatest potential for source reduction. If reliable information on whole effluent toxicity is available on EPA's Permit Compliance System (PCS), then the Agency should use this information as a screening criterion. The Toxic Release Inventory (TRI) should be used for screening industries while taking into consideration the limitations in the database.

2. Criteria to be Used to Select Industries for Preliminary Studies for New and Revised Effluent Guidelines

In selecting industries for studies, any legal mandates (statutory or judicial) to perform specific studies must be heeded. For discretionary industry selections, EPA should continue to utilize total toxic pounds-equivalent (TTPE) discharged, and the number of facilities and flow as criteria. EPA should give priority to: selecting industries not covered by existing guidelines that are highly ranked in terms of TTPE discharged; industries targeted for regulations by other EPA media programs; and service industries. The Agency should also develop information on investment cycles for industrial categories to help select industries.

3. Information to be Relied Upon to Characterize Industries as Part of the Selection Process.

EPA should continue to work with the Association of Metropolitan Sewerage Agencies (AMSA), other POTW representatives, and states, and should continue to seek out and contact trade associations in order to acquire available data that would help with the selection of industries for preliminary studies, or any other aspect of the effluent guidelines program. Resources should be made available to EPA for technical literature searches to collect information to characterize industries.

Due to its limitations, EPA should use TRI information only for identifying potential industrial sources, and industrial locations. EPA's Pollution Prevention Clearing House should not be used as a primary source of information for selecting industries.

4. Elimination of Barriers for Collection and Use of Information.

The results of the present EPA/AMSA case studies, which are collecting and evaluating existing data/information sources, may be used as examples of how information bias and transfer-of-information barriers can be eliminated. EPA Regional contacts should be established to simplify the collection and dissemination of information and feedback between EPA Regions and Headquarters. The present Paperwork Reduction Act requirement which limits the number of respondents for small EPA surveys should be revised to allow for at least 30 surveys to be conducted without having to first obtain OMB approval.

5. Other Ways to Improve and Expedite the Selection Process.

EPA should begin a concerted effort to modify the Permit Compliance System (PCS) so that the information contained in the system and the format of the information can be used for more than one purpose. All stakeholders that need to utilize the system, including EPA Headquarters and Regions, and authorized states should be involved in a comprehensive modification of PCS.

The Office of Research and Development (ORD) should be involved early in the selection process by participating in the Effluent Guidelines Planning work group and by collecting industry-specific information on feasible pollution prevention and control technologies and the costs/impacts of those technologies. The EPA and AMSA National Pretreatment Coordinator meetings should be scheduled so that they overlap with time devoted to discussing the selection of industries for preliminary

studies.

In the near term, EPA should direct NPDES authorized states and pretreatment approval authorities to provide summary sheets to EPA for all direct and indirect dischargers under each authority's jurisdiction. The summary sheets should present a tally of the total number of dischargers, categories, compliance status, etc. as determined by the information presented in the dischargers' annual reports. The authorities and dischargers should be provided with the resources needed to accommodate this requirement. As a long-term option, EPA should investigate a standardized annual reporting format for approval authorities.

6. Other Recommendations.

With regard to plans for revising effluent guidelines, EPA should obtain feedback from permit writers and control authorities, industry, and professional/trade associations regarding their satisfaction with the effluent guidelines in terms of ease of administration and effectiveness. A formal feedback mechanism should be included in promulgated effluent guidelines so that adjustments or corrections to a rule can be made after promulgation.

A provision should be included in all effluent guidelines which provides adequate funding and directs EPA to routinely conduct a retrospective evaluation of the impacts of promulgated regulations.

Both EPA and AMSA's national pretreatment coordinators' meetings should be scheduled so that they overlap with time devoted to discussing both technical issues and planning issues pertaining to the effluent guidelines program. EPA should also utilize other forums for feedback such as annual conferences sponsored by the Association of State and Interstate Water Pollution Control Administrators, Water Environment Federation, American Institute of Chemical Engineers, Air and

Waste Management Association, American Society of Civil Engineers and trade associations.

As effluent guidelines are developed, EPA should disseminate more information on which industries will be affected by the guidelines and how the rules will be implemented to facilitate obtaining feedback from state and local regulators and the regulated community.

For the forthcoming Centralized Waste Treatment (CWT) regulations, EPA should consider how these regulations will mesh with existing and future guidelines; how to define CWTs to avoid the creation of future regulatory problems; and how the rule will affect the dynamics of waste generation, treatment and disposal in the future. EPA should review the present guidance for CWTs for the interim period between promulgation of the guidelines regarding the issue of what standards should be applied to CWTs treating wastes from categorical industries.

II. Background

A. The Effluent Guidelines Program

1. Clean Water Act

The Federal Water Pollution Control Act Amendments of 1972 established a program to restore and maintain the integrity of the nation's waters.¹ To implement the Act, Congress directed EPA to issue effluent limitation guidelines, pretreatment standards, and new source performance standards for industrial dischargers.² These regulations, commonly known as "effluent guidelines" were to be based principally on the degree of effluent reduction attainable through the application of control technologies.

The limitations are implemented through National Pollutant Discharge Elimination System (NPDES) permits for direct dischargers (i.e. to surface waters) and a pretreatment program for indirect dischargers (to publicly owned treatment works--POTWs).

The principal components of effluent guideline regulations are numerical wastewater discharge limitations controlling specified pollutants for a given industry. These are typically concentration-based limits (specified in units such as milligrams or micrograms of pollutant per liter of water) or production-based mass limits (specified in units such as milligrams of pollutant per unit of production). Numerical limits also cover parameters such as pH and temperature.

Although the limitations are based on the performance capability of particular control technologies, including in some cases in-process controls, dischargers may meet their requirements using whatever combination of control methods they choose, such as manufacturing process or equipment changes, product substitution, and water re-use and recycling.

The Act called for several levels of control, which may cover different pollutants, with different degrees of stringency:

- ! For direct dischargers--Best Practicable Control Technology (BPT) and Best Available Technology Economically Achievable (BAT) for existing sources, and New Source Performance Standards (NSPS). BPT is concerned mainly with conventional pollutants such as biological oxygen demand (BOD) and suspended solids, while BAT addresses toxic and nonconventional pollutants. NSPS is based on the best available demonstrated technology aimed at greatest degree of effluent reduction, including zero discharge where possible.
- ! For indirect dischargers--Pretreatment Standards for Existing Sources (PSES), and Pretreatment Standards for New Sources (PSNS). PSES is similar to BAT, while PSNS is similar to NSPS. These are also referred to in the pretreatment program as “categorical standards.”

The Clean Water Act Amendments of 1977³ added an additional level of control for direct dischargers, Best Conventional Pollutant Control Technology (BCT).

A guideline often subcategorizes an industry based on differences in raw materials, manufacturing processes, age of plant, characteristics of the wastewaters, and type of product manufactured; in some cases, non-water quality environmental impacts or other appropriate factors that justify the imposition of specialized requirements on the subcategorized facilities are used as a basis. EPA develops a set of effluent limitations for each category or subcategory at each level of control

(BPT, BAT, etc.) that is addressed in the guideline.

A guideline also may prescribe Best Management Practices (“BMPs”) in addition to or in lieu of numerical limits. BMPs may include, for example, requirements addressing the minimization or prevention of storm water runoff, plant maintenance schedules and requirements addressing the training of plant personnel.

Effluent guidelines are among the Agency’s most complex regulations. They require extensive data collection and analysis, both in engineering and economic aspects. The typical effluent guideline takes five or six years to develop, from initial data collection to promulgation. Since the programs’ inception, EPA has promulgated effluent guidelines for 51 categories.

The 1972 Act required EPA to promulgate BPT and BAT guidelines by 1973 and NSPS by 1974. In the 1974-75 period the Agency promulgated guidelines for 28 categories, focusing primarily on conventional pollutants at the BPT level of control. Dissatisfied with the pace of regulation development for toxic pollutants, several environmental groups filed suit against the Agency.

In 1976, EPA entered into a consent decree with the National Resources Defense Council (NRDC) and other parties, bringing to a conclusion four separate actions challenging EPA’s regulation of the discharges of toxic pollutants into the nation’s waters.⁴ Under that consent decree, the Agency was to initiate rulemaking proceedings to develop BAT guidelines, new source performance standards and pretreatment standards covering 34 specified point source categories in accordance with an agreed upon schedule. The guidelines were to control any of 65 toxic pollutants or classes of pollutants, listed in the consent decree, that were found in the discharges of the covered industries. (This list has been refined to become a list of 126 “priority pollutants.”) The 1977 amendments to the Clean Water Act

codified many of the provisions in the consent decree.

2. Effluent Guidelines Plan

EPA's initial industry selections were directed by specific category listings in the 1972 CWA and subsequent consent decrees. EPA proceeded to fulfill the requirements of the 1976 decree with promulgation of BAT regulations through the mid-1980's. By this time, the Agency had raised additional concerns about discharges of toxic pollutants. A 1986 EPA Report to Congress known as the "Domestic Sewage Study" (DSS) recommended that additional effluent guidelines be promulgated to address discharges of hazardous waste to publicly owned treatment works⁵. The National Dioxin Study discussed discharges of dioxins and other toxics from several industries⁶.

In the 1987 amendments to the Clean Water Act, titled the Water Quality Act of 1987,⁷ Congress added a new planning requirement to the effluent guidelines program. Section 304(m) of the Act requires EPA to publish a biennial Effluent Guidelines Plan in the *Federal Register*. The plan would identify categories of sources discharging toxic or nonconventional pollutants from which guidelines have not previously been published and establish a schedule for promulgation. Section 304(m) and its legislative history do not provide guidance on the procedures EPA should use for identifying industries and formulating the plan.

EPA published the first biennial plan on January 2, 1990.⁸ In that plan, the Agency listed nine categories for which effluent guidelines would be promulgated. The plan described the criteria EPA used to select the categories. The category selections were based on a review of data from various EPA reports, such as the Section 304(l) list of facilities discharging into water quality-impaired waters, and the annual Toxic Release Inventory (TRI); public comments; recommendations from states and

local governments; and Agency reports known as “preliminary data summaries.”

The preliminary data summaries were compiled by EPA as a follow-up to the DSS, to further characterize industrial discharges. The studies were published in 1989⁹. These reports have served as the prototype for the Agency’s current work on preliminary studies.

NRDC challenged the 1990 plan in new litigation, charging that the plan did not meet the requirements of Section 304(m).¹⁰ The parties entered into a settlement agreement and a consent decree was approved on January 31, 1992. The decree requires EPA to develop additional effluent guidelines, but differs from the 1976 decree in that it does not specify all of the categories in advance. A total of 20 regulations are called for, to be promulgated between 1993 and 2003. 12 categories were specified, and 8 categories are to be identified on a phased basis as each rulemaking project commences. To assist in selecting the 8 categories for guidelines development, EPA is required to conduct 11 preliminary studies between 1992 and 1997. Thus the consent decree has established the preliminary studies as a formal part of the guidelines development process.

3. Preliminary Studies

The 1992 consent decree requires EPA to conduct 11 studies, and lists 8 specific categories, with the remaining three to be specified later. However, the decree allows EPA to replace any of the listed categories with other categories, provided the Agency gives proper notice to NRDC. Studies have begun on six categories. (The six studies underway are all reviews of existing effluent guidelines: Petroleum Refining, Metal Finishing, Textile Mills, Inorganic Chemicals, Iron and Steel Manufacturing, and Steam Electric Power Generating.)

The initial 10 studies, conducted pursuant to the DSS, generally consisted of reviewing

production processes and wastewater treatment, analyzing a small number of wastewater samples, and in some cases estimating costs for additional treatment or controls, and projecting economic impacts. The type and amount of data collected for each of the studies varied to some extent. For the studies currently underway, EPA is attempting to ensure that each report will provide information to support inter-category comparisons. However, the data collection and analysis procedures for each report will vary to some extent, depending on the relevant issues for a category and the funding available.

B. Effluent Guidelines Task Force

The 1992 consent decree also required EPA to establish a task force to advise the Agency on the effluent guidelines program. The Effluent Guidelines Task Force was established in July 1992 and consists of representatives from industry, environmental groups, states, local governments, the academic/scientific community, and EPA regional offices. It is chartered under the Technology Innovation and Economics Committee of the National Advisory Council for Environmental Policy and Technology (NACEPT), the external policy advisory committee to the Administrator of EPA. The Consent Decree defines the role of the Task Force as “assist[ing] the Agency in discharging its responsibility to implement the Clean Water Act” and offering advice on the long-term strategy for the effluent guidelines program.

As directed by the Decree, EPA has asked the Task Force to “provide recommendations with respect to a process for expediting the promulgation of effluent guidelines.” Other issues to be considered by the Task Force are:

- ! a process for deciding which categories to regulate by means of effluent guidelines, based on potential for risk reduction, the utility of regulation and

- the schedule for promulgation of such rules;
- ! a process and schedule for reviewing and determining whether to revise additional existing effluent guidelines;
- ! new technologies and control methods, including methods to achieve zero discharge;

- ! the minimum components of new and revised effluent guidelines to ensure that they are adequate in scope and coverage;
- ! minimum requirements for surveys (used to support regulation development);
and
- ! process for effective co-regulation of categories to eliminate or minimize cross-media transfer of pollution.

The Task Force held its first public meeting in October 1992 and has proceeded to review and analyze the various procedures and policies affecting development of effluent guidelines.

III. Recommendations of the Effluent Guidelines Task Force: Selecting Industries for Preliminary Studies in the Effluent Guidelines Program

The Task Force was asked by EPA to develop recommendations on selecting industries for preliminary studies for guidelines development and revision. This was done in the context that recommendations should help expedite the overall guideline development process, and that the time frame for the selection process is short and EPA resources are limited. The recommended criteria can be used by EPA to first screen and then select industries for preliminary studies.

The Task Force's efforts focused on those criteria that took into consideration risk to human health and the environment, utility to permitting authorities, and legal mandates for studies of specific industries. There are also recommendations pertaining to sources of information which are applicable to the selection process in terms of utility and access; recommendations which pertain to improving and expediting the industry selection process; and recommendations which are relevant to improving and expediting the overall guideline development process, and which could be integrated into other Task Force assignments. The recommendations are listed in order of importance. The actual ranking of recommendations may vary depending on industry-specific issues.

As a general framework for the selection process and to ensure consistency, the Task Force recommends that EPA develop written guidelines (selection guidelines) which would include procedures on how to apply the screening and selection criteria, and how to use information sources. The selection guidelines should include a data decision matrix or data flow model which enumerates the available data sources for each criterion, and characterizes the information in terms of quality and accessibility. The

flow model would then allow EPA to determine which sources provide the best quality of information and can be accessed the fastest, as well as where sources of information are deficient and where more information should be developed. How the criteria will be weighted will depend on quality factors to be determined by EPA, including how reliable each data source is in terms of national representation and statistical significance. The Task Force also recommends that the selection guidelines be reviewed after each selection process to explore the lessons learned and to make modifications as appropriate.

These recommendations were approved by the Task Force at its meeting on October 12-13, 1993. The recommendations were approved by NACEPT on May 11, 1994.

1. Criteria to be Used to Screen Industries for Preliminary Studies for New and Revised Effluent Guidelines.

The screening criteria are intended to be used as gross measures to cull out meritorious candidates from all of the possible industrial categories. Categories that make it through the screening process would then be subjected to the selection criteria for further evaluation and final selection. This process is analogous to the scoping process used in identifying key environmental issues to be addressed in environmental impact reports.

Recommendation 1.1. Preliminary Input

In advance of the screening process, EPA should obtain feedback from pretreatment control authorities and NPDES authorized states; industry; and professional/trade associations regarding their recommendations pertaining to revising existing effluent

guidelines and to targeting industries for new guidelines, and that the information be obtained through formal and/or informal means such as surveys or national meetings. As part of this effort, permit and control authorities should provide information on non-categorical regulated industries.

The Task Force believes that this is an important first step, inasmuch as the stakeholders who administer or are impacted by effluent guidelines have valuable insight and understanding of where attention should be focused. See Recommendation 5.3 regarding national meetings.

Recommendation 1.2. Section 304(l) Information.

EPA should continue to utilize the number and type of facilities discharging into water quality-impaired receiving waters per the CWA Section 304(l) listing as a gross screening tool to identify industrial categories for further consideration in the selection process.

The 304(l) list is a tool which can target, on a national basis, industrial dischargers which impair or impact water bodies; however, it has limitations in terms of utility. The 304(l) data base for direct dischargers may not have information available on applicable Standard Industrial Classification (SIC) codes, or the codes in the data base may be inaccurate (see Recommendation 5.1 regarding the Permit Compliance System). For indirect dischargers, the information would have to be individually obtained from pretreatment control authorities.* Another limitation is the lack of a direct cause-and-effect relationship between an industrial category discharging into an

*See Recommendation 5.4 for discussion of the limitations of obtaining standardized information.

impaired water body and the impairment. Nevertheless, the criterion may allow for some common categories of industries to be detected which could advance through the selection process.

Recommendation 1.3. Sediment Inventory.

EPA's sediment inventory should be used as a screening criterion for targeting industries after the inventory has been completed and validated.

This is a tool which can target, on a national basis, industrial dischargers which potentially contribute to sediment contamination; however, it has some limitations in terms of utility. The inventory identifies those industries currently discharging contaminants known to occur in sediment. The inventory also provides data on the toxicity and loading to surface waters of sediment contaminants currently discharged. The Office of Science and Technology is continuing to work on this project, and an inventory of point sources of sediment contaminants will be available in 1994. EPA is also identifying loads of sediment contaminants entering surface waters from non-point sources and atmospheric deposition. Within the next two years, EPA will also include information in the inventory describing sites where sediment contamination has actually been measured.

In this format, the inventory will be easy to use for the guidelines development process. The point source information is limited to contaminant loading data gathered from existing discharge permits or contained in EPA's Toxicity Release Inventory. Nevertheless, the criterion may allow for some common categories of industries to be detected which could advance through the selection process.

Recommendation 1.4. Pollution Prevention Implementation.

If information becomes available pertaining to which categories of industries are and are not implementing pollution prevention (P2) practices, EPA should use this as a screening criterion for selecting industries for preliminary studies thereby targeting those industries that have the greatest potential for source reduction through P2.

The Task Force's investigation of this issue revealed that information delineating those industrial categories that have and have not implemented P2 is not presently available. A review of five national data bases cited in EPA's report "Pollution Prevention 1991: Progress on Reducing Industrial Pollutants" indicates that the data do not reveal clear cut answers on the extent of source reduction on a national level, but only in specific cases.* However, if such information were available, it could be used as a screening criterion to target industries for further evaluation.

Recommendation 1.5. Whole Effluent Toxicity.

If reliable information on whole effluent toxicity is available on EPA's Permit Compliance System (PCS), then the Agency should use this information as a screening criterion.

This is a tool which can target, on a national basis, industrial dischargers which could potentially impact receiving waters; however, it has limitations in terms of utility inasmuch as it

* The five data bases are the EPA Toxic Release Inventory, EPA Hazardous Waste Generator Survey, EPA Hazardous Waste Biennial Report, Chemical Manufacturers Association Survey, and American Petroleum Institute Survey

will only be available for some direct dischargers,* because of the data availability/utility problems with PCS (see Recommendation 5.1) and because the data/information may not have any bearing on the significance of the discharge in terms of environmental significance. The cause-and-effect relationships between pollutants and the toxicity test results are not defined, and can be caused by transitory rather than chronic emission factors. Nevertheless, the criterion may allow for some common categories of industries to be detected which could advance through the selection process.

Recommendation 1.6. Toxic Release Inventory.

EPA should use information in its Toxic Release Inventory (TRI) for screening industries while taking into consideration its limitations.

The TRI data base provides annual information on many facilities regarding releases of pollutants to all media. This makes it a potentially valuable tool for screening industry candidates for effluent guidelines, however, limitations in coverage must be noted. Examples of limitations are: inclusion of pollutant releases associated with treatment chemicals used by industries to achieve compliance with discharge standards; pollutants which are compatible with municipal sewage treatment plant processes; imprecise information on listed chemical releases and transfers based on gross estimates; and incomplete coverage of pollutants and SIC codes.

2. Criteria to be Used to Select Industries for Preliminary Studies for New and Revised Effluent Guidelines.

The selection criteria are intended to be used to choose the specific categories for preliminary studies from those categories which have made it through the screening process. In cases where there a number of categories which appear to be equally deserving for study, some of the criteria may be

used as “tie-breakers” for final selection.

Recommendation 2.1. Legal Mandate for Specific Studies.

In selecting industries for studies, any legal mandates (statutory or judicial to perform specific studies must be heeded.

(The 1992 consent decree requires EPA to conduct 11 preliminary studies. The decree lists eight categories for study, however, EPA is allowed to substitute other categories.)

Recommendation 2.2. Total Toxic Pounds-Equivalent Discharged.

EPA should continue to utilize total toxic pounds equivalent (TTPE) discharged as a primary tool for selection. The TTPE calculation should include the priority pollutants and other toxic pollutants of interest which also have existing laboratory methods for analysis.

EPA has used TTPE for selecting industries for studies and rulemaking in its previous effluent guidelines plants. It is used as an indicator of overall risk to human health and the environment. It is the Task Force’s understanding that the toxicity factor takes into consideration a variety of toxicological endpoints including bioaccumulation, mutagenicity, teratogenicity, and carcinogenicity. This is a tool which can be easily developed and used to rank industries for study.

Recommendation 2.3. Number of Facilities and Wastewater Flow.

EPA should continue to use the number of facilities and flow as criteria in selecting industries for study, thereby focusing on those categories that collectively have the potential for significant impacts. In this same light, with regard to industrial categories with small

numbers of facilities within a category or de minimis flow below which a different approach would be taken rather than promulgating effluent guidelines. For categories where the number of direct dischargers and/or the flows of direct dischargers fall below the cutoff, EPA should develop suggested control guidance which can be used by control authorities to prepare permits. For categories where the number of indirect dischargers or the flows of indirect dischargers fall below the cutoff, the classification of these industries as “significant industrial users” should be left to the discretion of the pretreatment control authority so that the industries will be regulated under local control strategies and local limits.

The Task Force believes that these recommendations will be of utility to control authorities by focusing on facilities in need of effluent guidelines, yet still covering a broad scope of facilities. The general pretreatment regulations at 40 CFR 403.3(f) currently require that indirect dischargers subject to categorical standards are “significant industrial users.”

Recommendation 2.4. Industries Not Covered by Existing Effluent Guidelines.

EPA should give priority to selecting industries not covered by existing guidelines that are highly ranked in terms of TTPE discharged.

The Task Force believes that this will enable EPA to identify those industries most in need of regulation.

Recommendation 2.5. Multi-Media Rulemaking.

To the extent practicable, priority should be given to industries targeted for

regulations by other EPA media programs.

Joint rules can be advantageous in terms of promoting pollution prevention approaches, more efficient data collection and analysis (both for EPA and the regulated industry), and in building cooperation with industry. However, the Agency has had limited opportunities for joint rulemaking due to differing legal mandates, schedules and budgets under the different environmental statutes.

EPA is currently developing a joint rule for the Pulp and Paper industry under the Clean Water Act (effluent guidelines) and the Clean Air Act.¹¹ The Agency has not announced any other joint rulemakings.

Recommendation 2.6. service Industries.

EPA should give priority to selecting service industries for preliminary studies to assure national consistency and equity.

The highly variable nature of service industries makes them a unique and difficult set of users for permit and control authorities to regulate. These are industries that do not make products, but perform services for their customers which in turn generate wastewater pollutants.

One example of a highly variable service industry is the Industrial Laundry category. (EPA is currently developing effluent guidelines for industrial laundries.) Industrial laundries accept shop towels, rags and other cloth items from different customers. These materials may be contaminated with solvents and other contaminants which are transferred to wastewater during the washing process. The variability in the types of items washed and in the degree of contamination can be significant, making it difficult to design and operate a treatment system to achieve consistent removals of contaminants.

The other significant aspect of service industries is that in the absence of categorical standards, they are subject to local limits which vary considerably from one POTW to the next. Consequently, in a metropolitan area with multiple POTWs, a laundry may receive a load from one customer which causes a violation of local discharge limits. The problem is usually resolved by the customer's loads being diverted to a laundry in the service area of the neighboring POTW with less stringent local limits, rather than by implementing pollution controls at the first plant. Thus there is a need for customer involvement and the use of pollution prevention/best management practices in controlling these types of industries.

Recommendation 2.7. Investment Cycles.

EPA should use information on investment cycles for industrial categories to select industries for preliminary studies, and that resources should be provided to the Agency in order to collect and evaluate the information. The objective would be to target industrial categories that are at or are approaching the beginning of investment cycles.

The Task Force believes that economics are a significant factor in the development of effluent guidelines, and as such should be included in the very early stages of the process. The best time for an industry to replace equipment or purchase new equipment is at the beginning of an investment cycle. Resources are required to undertake this task because the information is not on hand and must be generated. The Task Force believes that this criterion may ultimately expedite the effluent guidelines development process inasmuch as industry may be more receptive and less inclined to pursue litigation if the rule making process is coordinated with economic cycles.

See Section IV of this Report for discussion of other economic criteria considered but not recommended.

3. Information to be Relied Upon to Characterize Industries as Part of the Selection

Process.

As part of the Task Force's discussions, the following types of information have been identified as being critical for selecting industries for preliminary studies: 1) names and addresses of industrial facilities; 2) types of dischargers; 3) industry characteristics such as processes, products, types and characteristics of waste streams, facility size in relation to production, and employment; 4) profit margin data; 5) cost of treatment; and 6) pollution prevention implementation.

As previously noted, for selection of industries, the time frame is short and resources are limited. Information can be broad, and analyses can be qualitative for this process. The Task Force addressed the issue of information in terms of quality and availability, and how quickly it can be obtained. One of the primary problems with this issue is that there is no complete national data base that can be tapped (see Recommendation 5.1).

Recommendation 3.1. AMSA/POTW/State Data.

EPA should continue to work with the Association of Metropolitan Sewerage Agencies (AMSA), other POTW representatives, and states to collect existing information on direct and indirect dischargers for the effluent guidelines development process.

These sources have extensive information available which is accessible, and can also provide

expertise in addressing questions that arise as the data are reviewed. State information should include all applicable, available water quality data.

Recommendation 3.2. Trade Association Data.

EPA should continue to seek out and contact trade associations in order to provide such groups with the opportunity to contribute available data that would help with the selection of industries for preliminary studies, or any other aspect of the effluent guidelines program.

This type of cooperative effort has been successful in other aspects of the guidelines development process such as developing questionnaires and regulatory provisions for rules including the pulp and paper, and metal products and machinery categories. Trade associations have information which may be accessible by EPA, and associations can provide expertise in addressing questions that arise as the data are reviewed.

Recommendation 3.3. Literature Reviews.

Resources should be made available to EPA for technical literature searches to collect information to characterize industries.

Information contained in the literature is a valuable resources of pertinent, current and peer reviewed information; however, EPA needs resources to perform comprehensive reviews.

Recommendation 3.4. Toxic Release Inventory.

Due to its limitations, EPA should use TRI information only for identifying potential industrial sources, and industrial locations. Other uses of TRI data could be undertaken, provided that its limitations are understood and considered. EPA should compare TRI data with applicable effluent discharge data such as that in PCS and pretreatment program information provided by Control Authorities.

The TRI limitations are discussed in Recommendation 1.6.

Recommendation 3.5. Pollution Prevention Clearing House.

Due to its limitations, EPA's Pollution Prevention Clearing House should not be used as a primary source of information for selecting industries.

The information contained in the Clearing House is not in a format that is readily useful for characterizing industries by category at the facility level. In addition, the information is not peer reviewed or verified before it is entered into the Clearing House.

4. Elimination of Barriers for Collection and Use of Information.

These recommendations, in addition to their relevancy for industry selection criteria, may be appropriate for consideration with other Task Force reports.

Recommendation 4.1. Case Studies.

The results of the present EPA/AMSA case studies, which are collecting and evaluating existing data/information sources, may be used as examples of how information

bias and transfer-of-information barriers can be eliminated.

AMSA member POTWs have been assisting EPA in studying the Industrial Laundries and Transportation Equipment Cleaning categories for rulemaking. This cooperative effort may demonstrate how the Agency can utilize POTW information and experience to develop accurate industry profiles under the time and budget constraints which are typical of preliminary studies.

Recommendation 4.2. EPA Regional Contacts.

EPA Regional contacts should be established to simplify the collection and dissemination of information and feedback between EPA Regions and Headquarters. Each Region should have a lead staff member at the Water Division Director level appointed by Headquarters to deal with effluent guidelines issues and a staff coordinator.

The lead position should be at this level in order to have access to wastewater management, water quality and compliance information, and to have the capability of crossing sectional boundaries within the Region. The lead would make information available to a staff coordinator (preferably a Senior Permit Writer in the Wastewater Management Section) to serve as the liaison with the Engineering and Analysis Division.

Recommendation 4.3. Paperwork Reduction Act Survey Barrier.

The present Paperwork Reduction Act requirement which limits the number of respondents for small EPA surveys should be revised to allow for at least 30 surveys to be

conducted without having to first obtain OMB approval.

The Paperwork Reduction Act requires Office of Management and Budget (OMB) approval for any “collection of information” from 10 or more respondents.¹² Preparation of an OMB review package, and the OMB review itself can be a lengthy process. For this reason, EPA has heretofore not conducted surveys for preliminary studies. Revising the threshold to 30 respondents would help expedite the collection of information and hence the selection of industries for preliminary studies.

5. Other Ways to Improve and Expedite the Selection Process.

Recommendation 5.1. Permit Compliance System Modification.

EPA should begin a concerted effort to modify its Permit Compliance System (PCS) so that the information contained in the system and the format of the information can be used for more than one purpose. All stakeholders that need to utilize the system, including EPA Headquarters and Regions, and authorized states should be involved in a comprehensive modification of PCS.

It is generally recognized that the PCS data management system could be used as a valuable resource for multiple agency functions such as development of effluent guidelines, but its general applicability and utility have been hampered by a lack of coordination between EPA offices, and a lack of funding. We believe that this is an important issue inasmuch as the Enforcement, Engineering and Analysis, and Permits Division need to share and use similar data, and the systems should be set up to accommodate those needs. One specific issue for selection of industries is to improve the quality of the

four-digit SIC codes included in the data base to ensure their accuracy, and to include fields for more than one applicable SIC code per facility. It is the Task Forces understanding that some discussions about revising PCS have occurred in light of upcoming initiatives and the reauthorization of the Clean Water Act.

Recommendation 5.2. Office of Research and Development Involvement.

The Office of Research and Development (ORD) should be involved early in the selection process by participating in the Effluent Guidelines Planning work group and by collecting industry-specific information on feasible pollution prevention and control technologies and the costs/impacts of those technologies. This work would be similar to the types of information developed in the 1970's for the early guideline development efforts. ORD should be provided with the resources to undertake this effort with emphasis placed on the development of new technologies that could be applied generically to industry or to specific industrial categories.

The Task Force believes that early involvement by ORD will enable the guideline development process to get ahead of the curve on what industries/technology to look at, and technical feasibility and cost impacts. ORD has the experience and talent pool to do this, but doesn't have the resources dedicated to adequately support the guidelines program. One of the reasons so many guidelines were developed in the 1970's was that ORD had \$40 million and 60 staff members dedicated to supporting the program.

Recommendation 5.3. National EPA and AMSA meetings.

The EPA and AMSA National Pretreatment Coordinator meetings should be scheduled so that they overlap with time devoted to discussing the selection of industries for preliminary studies.

These meetings which occur annually, provide an opportunity to convene a large number of experts for brainstorming and sharing ideas, and to specifically collect information and provide feedback on all aspects of the effluent guidelines development process.

Recommendation 5.4. Annual Pretreatment Program Reports.

In the near term, EPA should direct NPDES authorized states and pretreatment approval authorities to provide summary sheets to the EPA Office of Water for all direct and indirect dischargers under each authority's jurisdiction. The summary sheets should present a tally of the total number of dischargers, categories, compliance status, etc. as determined by the information presented in the dischargers' annual reports. The authorities and dischargers should be provided with the resources needed to accommodate this requirement. As a long-term option, EPA should investigate a standardized annual reporting format for approval authorities.

Pretreatment control authorities are currently required by 40 CFR 403.12(i) to provide annual reports to their respective approval authorities. The Task Force has discussed the utility of annual pretreatment reports as a means of collecting existing information for selection of industries. It was agreed that with few exceptions, the formats are so dissimilar, that the utility of the reports for easy

access to information is questionable. One exception is New Jersey, which stipulates a mandatory format for the reports. The Task Force also conducted an informal survey of authorized states to ascertain the types and format of data collected by each entity. This investigation revealed that there is a disparity in the type and form of data collected by each state. Consequently, one short-term option would be for approval authorities to provide summary sheets for indirect dischargers. The best option would be to have the capability to access annual report data which would be prepared in a standardized format. This option, however, requires further evaluation by EPA regarding regulatory constraints and resource impacts on POTWs. Given the present budgetary situation for public agencies, it may be infeasible to make significant data management changes unless resources are provided. The Task Force also recommends that the Enforcement, Engineering and Analysis, and Permits Divisions at EPA be involved in the development of the format for the summary sheets and/or annual report format to ensure that the information collected meets their program's needs.

The Task Force believes that the summary sheets and/or reformatted annual reports will provide benefits for improving efficiencies in other EPA programs such as reporting of Significant Noncompliance (SNC) and the types and numbers of non-categorical industries regulated by POTWs.

6. Other Recommendations

Recommendation 6.1. Feedback from Stakeholders.

With regard to plans for revising effluent guidelines, EPA should obtain feedback from permit writers and control authorities, industry, and professional/trade associations regarding

their satisfaction with the effluent guidelines in terms of ease of administration and effectiveness.

The information could be obtained through formal and/or informal means. A formal feedback mechanism should be included in promulgated effluent guidelines so that adjustments or corrections to a rule can be made after promulgation.

This recommendation will be expanded in future Task Force reports.

Recommendation 6.2. Retrospective Studies of Effluent Guidelines.

A provision should be included in all effluent guidelines which provides adequate funding and directs EPA to routinely conduct a retrospective evaluation of the impacts of promulgated regulations. The evaluation would assess the economic impacts on the regulated industries; what the industries have undertaken to comply with the regulations; and what the administrative impacts have been on the control authorities implementing the regulation (e.g., what works and what doesn't). The evaluations should be jointly conducted by the Engineering and Analysis Division and the Office of Wastewater Management.

Recommendation 6.3. National Meetings.

Both EPA and AMSA's national pretreatment coordinators' meetings should be scheduled so that they overlap with time devoted to discussing both technical issues and planning issues pertaining to the effluent guidelines program. EPA should also utilize other forums for feedback such as annual conferences sponsored by the Association of State and

Interstate Water Pollution Control Administrators, Water Environment Federation, American Institute of Chemical Engineers, Air and Waste Management Association, American Society of Civil Engineers and trade associations.

These meetings represent valuable opportunities to collect information and feedback on all aspects of the guidelines development process. A similar suggestion was made in Recommendation 5.3.

Recommendation 6.4. Input During Rule Development.

As effluent guidelines are developed, EPA should disseminate more information on which industries will be affected by the guidelines and how the rules will be implemented to facilitate obtaining feedback from state and local regulators and the regulated community. The Metal Products and Machinery (PM&M) rule should be used as a case study in this regard.

During the development of the MP&M rule, EPA staff have spoken before professional societies, trade association meetings and at EPA pretreatment conferences, and will be holding a general public information meeting to explain the Agency's efforts.

Recommendation 6.5. Centralized Waste Treatment Facilities.

For the forthcoming Centralized Waste Treatment (CWT) regulations, EPA should

consider how these regulations will mesh with existing and future guidelines; how to define CWTs to avoid the creation of future regulatory problems; and how the rule will affect the dynamics of waste generation, treatment and disposal in the future. This is of particular importance for both approval authorities and control authorities in terms of how to regulate categorical industries that have zero discharge limits, or other categorical industries that send wastes to CWTs. It is also important for industries that send wastes to CWTs in lieu of on-site treatment or waste minimization, and CWTs in terms of cost and compliance issues.

EPA should revise the present guidance for CWTs for the interim period between promulgation of the guidelines regarding the issue of what standards should be applied to CWTs treating wastes from categorical industries.

The present guidance is contradictory to existing regulations and has created a great deal of confusion for control authorities on what limits to set for CWTs. AMSA has sent EPA a formal request regarding this issue¹³, and EPA staff have requested that feedback be obtained from permit writers to see if there are provisions that could be added to the guidelines that would make them more useful. AMSA will contact EPA staff to discuss how this effort could be organized.

IV. Other Criteria Considered But Not Recommended

1. Cost of Wastewater Controls.

In considering the investment cycles criterion (Recommendation 2.7), the Task Force discussed the possibility of using “cost of wastewater controls” as a selection criterion. This item has been

mentioned in EPA's previous Effluent Guidelines Plans. The problem that arose is that current information on costs is not readily available for specific industries, and it did not appear that this type of evaluation could be done quickly. Unless significant resources are deployed to develop new information (see Recommendations 5.2 and 6.1), EPA must rely on existing information to make cost assessments and this information has limitations in terms of being out of date, and not including new technologies or pollution prevention measures.

2. Worker Health and Safety.

The Task Force has no recommendation at this time regarding the use of industry worker health and safety as a selection criterion. Preliminary discussions have revealed that Occupational Safety and Health Administration (OSHA) regulations are usually directed at equipment and work place practices rather than industrial categories. However, in some cases the regulations may be developed for processes that span across many industrial categories. Numerical regulations are typically air related and establish permissible exposure levels and action levels based on eight hours of worker exposure. The issue is still under consideration by the Task Force with the primary focus on what information would be available and applicable to evaluate or target industries, how the information would be used, and what resources would be required.

3. Discharges to POTWs With Combined Sewer Overflows (CSOs).

The Task Force has no recommendation at this time regarding the issue of industrial discharges to POTWs with combined sewerage systems. This issue is still under consideration.

Appendices

Effluent Guidelines Task Force Membership - 1993

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References

1. Pub. L. 92-500, Oct. 18, 1972; 33 U.S.C. 1251 et seq.
2. Sections 301, 304, 306 and 307; 33 U.S.C. 1311, 1314, 1316, and 1317.
3. Pub. L. 92-217, Dec. 27, 1977.
4. *NRDC v. Train*, 8 E.R.C. 2120 (D.D.C. 1976), modified 12 E.R.C. 1833 (D.D.C. 1979).
5. Report to Congress on the Discharge of Hazardous Wastes to Publicly Owned Treatment Works, EPA-530/SW-86-004, February 1986.
6. The National Dioxin Study: Report to Congress. EPA-530/SW-87-025, August 1987.
7. Pub. L. 100-4, February 4, 1987.
8. Notice of Plan to Review and Promulgate Effluent Guideline Regulations, 55 FR 80, January 2, 1990.
9. Preliminary Data Summary for the Drum Reconditioning Industry, EPA 440/1-89/102; Preliminary Data Summary for the Hazardous Waste Treatment Industry, EPA 440/1-89/100; Preliminary Data Summary for the Hospitals Point Source Category, EPA 440/1-89/060n; Preliminary Data Summary for Industrial Laundries, EPA 440/1-89/103; Preliminary Data Summary for the Machinery Manufacturing and Rebuilding Industry, EPA 440/1-89/106; Preliminary Data Summary for the Paint Formulating Point Source Category, EPA 440/1-89/050; Preliminary Data Summary for the Pharmaceutical Manufacturing Point Source Category, EPA 440/1-89/084; Preliminary Data Summary for the Solvent Recycling Industry, EPA 440/1-89/102; Preliminary Data Summary for the Transportation Equipment Cleaning Industry, EPA 440/1-89/104; Preliminary Data Summary for the Used Oil Reclamation and Re-Refining Industry, EPA 440/1-89/014.
10. *NRDC and Public Citizen, Inc. V. Reilly*, D.D.C. 89-2980.
11. The proposed Pulp and Paper rule was published at 50 FR 66078, December 17, 1993.
12. Pub. L. 96-511, as amended; 44 U.S.C. 3502 (4).
13. March 4, 1993 letter to Michael B. Cook, Director, EPA Office of Wastewater Enforcement and Compliance; and Thomas P. O'Farrell, Director, EPA Engineering

and Analysis Division, Office of Science and Technology; from Guy M. Aydlett, Chair, AMSA Pretreatment and Hazardous Waste Committee.