BY THE U.S. GENERAL ACCOUNTING OFFICE

Report To The Administrator, Environmental Protection Agency

Wastewater Dischargers Are Not Complying With EPA Pollution Control Permits

The Clean Water Act's National Pollutant Discharge Elimination System limits the type and amount of pollution a municipal or industrial facility may legally discharge into the nation's waterways. Based on a review of 531 randomly selected major dischargers in six states, GAO estimated that 82 percent of these dischargers exceeded their permit limits at least once during an 18-month period and that 31 percent of the dischargers in the six states that exceeded permit limits for one or more pollutants did so by 50 percent or more for at least 4 consecutive months.

The Environmental Protection Agency (EPA) relies on self-monitoring by dischargers to detect and report noncompliance. Because such information is not always provided or is incomplete, EPA and the states are not aware of all permit noncompliance and, thus, who should be subject to enforcement action. EPA and state enforcement policies frequently allow noncompliance to continue for long periods of time. In addition, EPA and state enforcement actions have declined.

GAO makes several recommendations to the Administrator, EPA, for improving the permit program.

GAO/RCED-84-53
DECEMBER 2, 1983

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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

RESOURCES, COMMUNITY,
AND ECONOMIC DEVELOPMENT
DIVISION

B-200800

The Honorable William D. Ruckelshaus
Administrator, Environmental
Protection Agency

Dear Mr. Ruckelshaus:

This report discusses some problems the Clean Water Act's National Pollutant Discharge Elimination System is experiencing that we believe reduce its potential for cleaning up the nation's waterways. To address these problems, the report contains recommendations to you on pages 42 and 43.

As you know, 31 U.S.C. §720 requires the head of a federal agency to submit a written statement on actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to appropriate House and Senate committees; Members of Congress and Senators from states mentioned in this report; and the Director, Office of Management and Budget. We will also make copies available to interested organizations, as appropriate, and to others upon request.

Sincerely yours,

J. Dexter Peach
Director

GENERAL ACCOUNTING OFFICE
REPORT TO THE ADMINISTRATOR,
ENVIRONMENTAL PROTECTION
AGENCY

WASTEWATER DISCHARGERS ARE NOT COMPLYING WITH EPA POLLUTION CONTROL PERMITS

D I G E S T

Water pollution control permits issued to municipal and industrial facilities represent the principal tool for enforcing the nation's clean water program. These permits establish limits on the concentration and quantity of specific pollutants that may legally be discharged into waterways. GAO found, however, that noncompliance with permit limits was widespread, frequent, and significant. In addition, thousands of dischargers have not been issued permits or hold expired permits. Federal funding of water quality programs has declined significantly in recent years.

The Clean Water Act established the National Pollutant Discharge Elimination System permit program in 1972. The program is managed by the Environmental Protection Agency (EPA) and, in cases where program management has been delegated to the states by EPA, by the states. As of October 30, 1982, more than 68,000 permits had been issued. Facilities receiving permits are classified as "major" or "minor" based on the volume of their discharge, the type of pollutants discharged, and--with respect to municipal treatment plants--the population the facility serves.

In view of the permit program's importance in meeting the nation's clean water goals, GAO examined the program to identify areas needing improvement.

NONCOMPLIANCE WITH PERMIT LIMITS WAS WIDESPREAD

Based on a random sample of 531 major dischargers--274 municipal and 257 industrial dischargers--in six states,[1] GAO estimated that 82 percent of these dischargers exceeded their monthly average permit limits at least

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[1]Iowa, Louisiana, Missouri, New Jersey, New York, and Texas.

once during the 18-month period ending March 31, 1982. Most exceeded their permit limits for more than 1 month, many for more than 6 months during the period.

More important, GAO estimated that 31 percent of all dischargers exceeding permit limits in the six states were in significant noncompliance at some point in time during the 18-month review period. GAO defined significant noncompliance as exceeding permit limits for one or more pollutants by 50 percent or more in at least 4 consecutive months.

To determine why municipal and industrial facilities were discharging more pollutants than allowable, GAO examined 62 of the 130 municipal and industrial dischargers in its sample which were in significant noncompliance with permit limits and reviewed prior studies concerning noncompliance. The most prevalent causes of permit noncompliance were

--treatment plant operation and maintenance deficiencies, including limited staffing, training for plant operators, and laboratory facilities;

--equipment deficiencies, such as improperly functioning chlorination systems; and

--treatment plants handling more waste than they were designed to treat. (See pp. 7 to 15.)

FULL EXTENT OF NONCOMPLIANCE MAY NOT BE KNOWN

For the permit program to be successful, EPA and appropriate state agencies must know when permit limits are exceeded so that action to bring about compliance can be initiated. The reliability of the discharger self-monitoring system--on which the permit program relies--to accurately report noncompliance has been reduced for various reasons. For example,

--40 dischargers (8 percent of GAO's sample) did not submit one or more required discharge monitoring reports and 196 dischargers (37 percent of GAO's sample) submitted incomplete reports during the 18 months reviewed;

--studies by EPA in 1980 and 1982 showed that 68 percent and 58 percent, respectively, of the laboratory analyses done for municipal and industrial dischargers sampled nationwide did not report results within acceptable limits for one or more pollutants analyzed; and

--efforts by EPA and the states to verify the accuracy of self-monitoring data are being reduced or are already at low levels. (See pp. 16 to 22.)

CURRENT ENFORCEMENT PRACTICES ALLOW NONCOMPLIANCE TO CONTINUE FOR LONG PERIODS

Compliance with permit conditions is the primary goal of the enforcement system. GAO's review in six selected states showed that noncompliance with permit limits continued for extended periods before formal enforcement action was taken by EPA or the state and in some cases continued for years even after enforcement action was taken. In addition, formal enforcement actions by EPA declined 41 percent from 1980 to 1982.

Municipal noncompliance presents a unique situation. Both EPA and the states have had a general policy that exempts from enforcement municipalities that have applied for federal funds to upgrade existing or build new treatment facilities. This policy allows noncompliance to continue as long as grant funds are pending or construction is underway.

Currently, EPA cannot assess fines directly for permit noncompliance but must refer all such cases to the Department of Justice for litigation. This is a time-consuming and expensive process, particularly for small cases, and is not as effective a deterrent as the ability to assess a fine in a timely manner.

Department of Justice officials stated that, in the past, EPA referrals of cases involving permit noncompliance were not always timely and data included in the referral package were often a year or more old. Justice officials believe the situation has improved during the past year and that referrals are now more timely and better supported.

According to EPA and state officials, resource shortages have also limited enforcement efforts

by EPA and the states. This manifests itself in various ways, including limited enforcement against minor dischargers and increased emphasis on voluntary compliance. (See pp. 23 to 31.)

THOUSANDS OF DISCHARGERS HAVE NO PERMIT OR HOLD EXPIRED PERMITS

The Clean Water Act requires that every public and private facility that discharges waste directly into navigable waters must file an application and obtain a permit and that permit limits must be upgraded at least every 5 years.

None of the six states GAO reviewed had a systematic process for identifying non-filers. The states were relying on a variety of measures, like citizen complaints and information obtained from various state agencies, to identify non-filers. Most EPA and state officials GAO contacted believed that major dischargers had applied for permits and that any non-filers were small dischargers.

Large backlogs of permit applications existed. Unpermitted dischargers are not subject to the pollution limits and monitoring requirements imposed by a permit. Data GAO obtained from states and EPA regional offices showed that large backlogs of applications existed in four of six states reviewed. Many of those applications were more than 18 months old.

EPA headquarters statistics reflected more than 16,000 applications awaiting processing as of October 30, 1982, including 215 major and more than 15,800 minor dischargers. EPA believed, however, that the backlog was significantly overstated because--among other things--it included facilities not requiring a permit. However, EPA had no estimate of the actual number of applicants that needed a permit.

Another issue involves expired permits that have not been reissued. In October 1982, EPA reported that about 34,000 permits had expired or would expire before the end of 1982 and had not been reissued. Of these, 87 percent involved minor dischargers and 13 percent involved major dischargers. Fifty-four percent had expired before January 1981. If these permits were reissued, it is likely that many would contain stricter pollution limits, since the expired permits focused on the control of

conventional pollutants, like oxygen-demanding substances. New permits would include toxics, like chemicals and heavy metals. The fact that EPA has not promulgated guidelines for writing industrial permits in a timely manner has contributed to the backlog. (See pp. 32 to 40.)

RECOMMENDATIONS TO THE ADMINISTRATOR, EPA

Improvements are needed to make the permit program more effective in meeting the goals of the Clean Water Act. Some improvements can be made within existing resource constraints at the federal and state levels while others could require substantial additional resources to implement. GAO recommends that the Administrator, EPA, determine to what degree limited resources contribute to continued high noncompliance and enforcement problems in the permit program and present this analysis to the Congress for its consideration in determining whether additional resources should be provided to improve the program's effectiveness. To address problems in the permit program that can be mitigated without substantial additional resources, GAO is recommending several corrective measures. (See pp. 42 and 43.)

AGENCY COMMENTS

Generally, EPA found the report to be a useful document in a number of important areas. For example, EPA stated that the report accurately reflects the current status of EPA efforts to reissue expired discharge permits and documents some of the major causes of the permit backlog problem--past delays in issuing effluent guidelines and the need for increased resources. EPA also commented that the report points out the necessity for the Agency to exercise careful and continuous oversight of its compliance reporting system. EPA did not comment on the report's recommendations.

EPA took serious issue with the fact that GAO used a different definition of significant noncompliance in its analysis than EPA uses to report compliance. EPA's analysis of GAO's data showed lower noncompliance rates than GAO's for two reasons. First, in arriving at its universe, EPA excludes permittees with enforceable interim permit limits--permittees upgrading their plants. Second, dischargers in compliance during the last month of a quarter

are not counted as in noncompliance by EPA even though they may have been in noncompliance during the first 2 months.

GAO believes its data more accurately reflect the state of compliance with discharge permits because it includes compliance data on all dischargers with permits. The GAO data also show a more useful historical perspective on noncompliance for municipal and industrial dischargers. (See pp. 10 to 12.)

The Department of Justice stated that the report presents a very comprehensive analysis of dischargers' compliance with their permits and documents evidence of major noncompliance and enforcement problems. Justice took serious issue with the report section on EPA enforcement case referrals to Justice, stating that these referrals are now more timely and better supported. GAO updated this section of the report in recognition of Justice's comments. (See p. 31.)

Contents

ABBREVIATIONS

BAT	best available technology
BPT	best practicable treatment
CSI	compliance sampling inspections
DMR	discharge monitoring report
EPA	Environmental Protection Agency
GAO	General Accounting Office
NPDES	National Pollutant Discharge Elimination System
NRDC	Natural Resources Defense Council, Inc.

GLOSSARY

Conventional pollutants	Includes BOD (biological oxygen demand), suspended solids, fecal coliform bacteria, and pH (acidity).
Effluent	The wastewater discharged by an industry or municipality.
Effluent limitations	Restrictions established by a state or EPA on quantities, rates, and concentrations of chemical, physical, biological, and other constituents discharged from point sources.
Nonpoint sources	Sources of pollution that are difficult to pinpoint and measure. Common examples include runoff from agricultural and forest lands, runoff from mining and construction, and storm runoff from urban areas.
Point sources	Specific sources of pollution that can be readily identified, such as factories and sewage treatment plants.
Pollution (of water)	Contamination or other alteration of the physical, chemical, or biological properties of water, including changes in temperature, taste, color, or odor or the discharge into the water of any liquid, gaseous, radioactive, solid, or other substance that may create a nuisance or render such water detrimental or injurious to public health, safety, or welfare.
Pretreatment	Processes used to reduce the amount of pollution in water before it enters the sewers or the treatment plant.
Secondary waste treatment	Treatment using biological processes to accelerate the decomposition of sewage. The process removes 75 to 90 percent of suspended solids.
Toxic substances	A chemical or mixture that may present a risk of injury to health or the environment.

CHAPTER 1

INTRODUCTION

Pollution reduces the recreational and economic values of the nation's waters, contaminates drinking water supplies, and poses other risks to human health and the health of aquatic life. Water pollution comes from point sources--like municipal and industrial waste treatment facilities--and from nonpoint sources, including runoff from agricultural and urban landscapes. The Federal Water Pollution Control Act Amendments of 1972 initiated a broad federal effort to restore and maintain our waterways, including the creation of a permit program under the act's National Pollutant Discharge Elimination System to regulate and reduce point-source pollution. Since 1972, the Congress has appropriated $37.9 billion to assist municipalities to build or upgrade facilities to meet the act's requirements. Industry has also expended billions of dollars on water pollution control. Construction of the needed facilities, however, is just the first step. Those facilities must continually accomplish the level of pollution reduction mandated by their permits if the cleanup is to be sustained over the long term and if waterways are to be fit for their designated beneficial uses.

FEDERAL WATER POLLUTION CONTROL ACT

The Federal Water Pollution Control Act, as amended, known as the Clean Water Act, is the current basis for the nation's clean water program. The act sets two specific national goals. An interim goal, commonly referred to as the "swimmable-fishable" goal, is to restore polluted waters, whenever attainable, to a quality that allows for the protection and propagation of fish, shellfish, and wildlife and for recreational use by July 1, 1983. The other goal is to eliminate all discharges of pollutants into the nation's navigable waters by 1985. To achieve these goals, two basic control strategies are employed: required point-source controls for municipal and industrial dischargers and largely voluntary controls for nonpoint sources of water pollution.

Municipal dischargers were to meet secondary waste treatment requirements by July 1, 1977, and to install certain waste treatment technology by July 1, 1983. Some municipal dischargers, however, have been given extensions to the secondary treatment deadline to July 1, 1988. Industrial dischargers were to install certain types of waste treatment technology by July 1, 1977, and by July 1, 1983.

The 1977 amendments to the act reflected congressional recognition that dangerous toxic pollution--including chemical contamination of rivers and lakes--was going unabated while much attention was focused on less serious forms of pollution. The amendments therefore resulted in a much greater emphasis on the control of toxic pollutants. The Environmental Protection Agency

(EPA) was required to publish a list of toxic chemicals to be controlled under the act and, by July 1, 1980, to set effluent limitations resulting from the best available technology economically achievable for those chemicals. Industry is required to meet those effluent limitations no later than July 1, 1984.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

The National Pollutant Discharge Elimination System (NPDES) provided the first major direct enforcement procedure against polluters. It is illegal for point sources to discharge pollutants into the nation's navigable waters without an NPDES permit.

An NPDES permit specifies (1) discharge limitations for specific pollutants or substances, (2) schedules setting forth the types of actions required and time frames necessary to comply with the discharge limitations, (3) requirements for self-monitoring of wastewater flows and of specified pollutants, and (4) periodic reporting of compliance. These permits are to be renewed, and upgraded, at least every 5 years. Dischargers are subject to civil penalties of up to $10,000 a day for exceeding permit conditions. Willful or negligent noncompliance is subject to even more severe penalties, including imprisonment.

The NPDES permit program is managed by EPA, or the appropriate state agency in the case of state-managed programs. As of December 31, 1982, 35 of 56 states and territories had received NPDES delegation from EPA.

As of October 30, 1982, more than 68,000 NPDES permits had been issued, as follows:

Discharger type	Discharger classification		Total permits issued
	Major	Minor	
Municipal	3,573	12,336	15,909
Industrial	3,954	37,513	41,467
Other[a]	285	10,752	11,037
Total	7,812	60,601	68,413

[a]Includes federal, state, and public nonmunicipal facilities.

EPA classifies facilities as "major" or "minor" based on the volume of their discharges, the type of pollutants in their discharges, and the number of people served by the facility. A major municipal facility is one that serves a population of 10,000 or more or discharges one million gallons or more of wastewater per day. Industrial facilities are classified as major based on a numerical rating each facility receives. Factors considered in the rating include the facility's potential for discharging toxic

pollutants, the volume and type of wastewater discharged by the facility, the amount of traditional pollutants in the discharged wastewater, and whether the water receiving the discharges is used for drinking water. The list is updated semi-annually.

DECLINING EPA RESOURCES

Between 1971 and 1981, EPA's operating budget to develop and implement programs under major environmental legislation steadily grew, reaching $1.35 billion in fiscal year 1981. But subsequent budgets and budget proposals have reversed this funding trend. EPA's fiscal year 1982 budget was reduced 15 percent to $1.086 billion, to $1.040 billion in fiscal year 1983, and was proposed at $949 million for fiscal year 1984, a 30 percent decline over the 1981-84 period. The Congress, however, provided EPA with an additional $295 million for fiscal year 1984.

The water quality program under which the NPDES permit program is funded has been cut even more drastically than the overall EPA budget--by 52 percent over the same 4 fiscal years. For fiscal year 1984, EPA requested $152 million for water quality versus the $318 million it received in fiscal year 1981.

Section 106 funds under the Clean Water Act provide grants to states which are delegated the responsibility for NPDES permitting, monitoring, and enforcement, as well as other water quality activities. The section 106 and related state expenditures for permit activities declined significantly from fiscal year 1981 to 1982, as follows:

Fiscal year	Program activities			
	Issuance	Enforcement	Monitoring	Total
	(millions)			
1981[a]	$26.3	$22.4	$29.5	$78.2
1982[b]	20.3	20.9	23.9	65.1
Reduction	$ 6.0	$ 1.5	$ 5.6	$13.1
(percent)	(22.8)	(6.6)	(19.0)	(16.8)

[a]47 states reporting.
[b]43 states reporting.

In the 21 states and territories where EPA carries out permit program activities, resources have also declined. For example, EPA enforcement activities were funded at $19.2 million in fiscal year 1981, $17.6 million in fiscal year 1982, $13.5 million in fiscal year 1983, and EPA requested $13.6 million for fiscal year 1984. Permit issuance resources have been fairly constant at an $11 million level for fiscal years 1981, 1982, and 1983; for

fiscal year 1984, EPA requested $13.4 million. Of the $295 million in additional funds provided by the Congress to EPA for fiscal year 1984, $2.2 million was allocated to permits issuance. No additional funds, however, were allocated to water enforcement activities.

OBJECTIVES, SCOPE, AND METHODOLOGY

The objectives of this assignment were to examine the status of certain major aspects of the NPDES permit program, including:

--Is noncompliance with permit limits widespread and, if so, what are the causes of noncompliance?

--What measures are employed by EPA and the states to monitor compliance with permit limits and what assurance is there that noncompliance is reported?

--What enforcement actions against noncomplying permittees are available, used, and with what results?

--What controls exist to assure that all point sources of water pollution apply for and receive permits and have permit limits upgraded when required?

Our work was performed at EPA headquarters in Washington, D.C.; in three EPA regions--region II (New York), region VI (Dallas), and region VII (Kansas City); and in six states: Iowa, Louisiana, Missouri, New Jersey, New York, and Texas. Four of the states (Iowa, Missouri, New Jersey, and New York) have been delegated responsibility for administering the NPDES Program. EPA administers the program in Texas and Louisiana.

The EPA regions and states were not selected scientifically. They were selected, however, to provide a broad geographic distribution. In addition, the six states accounted for about 21 percent of the more than 68,000 permits issued as of October 30, 1982, including 23 percent of all major dischargers. The six selected states also represented a mix of EPA- and state-managed permit programs.

To assist in providing a broad, nationwide perspective on the NPDES Program, we obtained and reviewed pertinent studies and held discussions with officials of various environmental, public interest, and trade organizations, including the Association of State and Interstate Water Pollution Control Administrators; Chemical Manufacturers Association; Citizens for a Better Environment; Conservation Foundation; Environmental Defense Fund; Interstate Sanitation Commission of New York, New Jersey, and Connecticut; Natural Resources Defense Council; Public Interest Research Groups of New Jersey and New York; and Trial Lawyers for Public Justice.

We also reviewed two prior GAO reports[1] that discussed various aspects of the NPDES permit program.

The methodology used during our review varied on an issue-by-issue basis. To assess the extent of noncompliance with NPDES permit limits, we examined the discharge monitoring reports (DMRs) for a random sample of 531 major permittees in the six states reviewed, for the 18-month period ending March 31, 1982. The results of the sample in each state were weighted because the universe sizes varied from state to state. We concentrated on major dischargers because they receive the bulk of monitoring and enforcement efforts by EPA and the states.

We analyzed the DMR data to determine (1) the number of dischargers in noncompliance with one or more permit limits during the period and (2) the frequency of noncompliance. We also developed a list of municipal and industrial dischargers in each state which were in significant noncompliance during the period. We defined significant noncompliance as exceeding one or more permit limits by 50 percent or more for at least 4 consecutive months during the 18-month period reviewed.

We selected 62 of the 130 dischargers--34 municipal and 28 industrial--determined to be in significant noncompliance and, through discussions with EPA and state officials, attempted to identify the most prevalent causes of permit noncompliance. We also reviewed selected studies on the causes of treatment plants being unable to meet permit limits performed by us, EPA, and the Natural Resources Defense Council.

To determine whether it is likely that noncompliance with permit limits is communicated to the states and EPA, we examined the extent to which the 531 dischargers included in our sample did not submit or submitted incomplete DMRs during the 18-month review period. We identified the types of compliance monitoring activities undertaken by EPA and the states and examined records on the results of compliance sampling inspections in two states to determine how much noncompliance those activities disclosed. We also reviewed the results of nationwide performance evaluations by EPA of laboratories that provide data for DMRs.

With respect to enforcement, we reviewed present and past EPA enforcement strategies and identified the available enforcement tools. Using selected dischargers that we found in significant noncompliance with permit limits, we identified for how long noncompliance continued before enforcement action was taken, what factors precluded taking formal enforcement action, and what resulted when enforcement action was taken.

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[1]More Effective Action by the Environmental Protection Agency Needed To Enforce Industrial Compliance With Water Pollution Control Discharge Permits (CED-78-182, Oct. 17, 1978); Costly Wastewater Treatment Plants Fail To Perform as Expected (CED-81-9, Nov. 14, 1980).

We discussed with EPA and state officials the programs they have established to identify dischargers who should but do not apply for a permit. We also developed information on the estimated 16,000 applicants who were not issued permits and attempted, through discussions with EPA and state officials, to determine the reasons these permits were not issued.

Since about 34,000 permits had expired but had not been rewritten at the time of our review, we developed nationwide and regional statistics on the backlog. Through discussions with EPA and state officials, we identified the major factors contributing to creating the backlog. We also examined the potential impact of not reissuing expired permits in a timely manner.

Our review was performed during the period from July 1982 to January 1983 in accordance with generally accepted government auditing standards.

CHAPTER 2

NONCOMPLIANCE WITH PERMIT LIMITS IS WIDESPREAD

We reported in 1978 that significant noncompliance with permit limits existed at major industrial facilities and in 1980 that significant noncompliance with permit limits existed at major municipal facilities. Our current review showed that noncompliance with permit limits remains widespread, frequent, and significant. Based on a random sample of 531 major dischargers--274 municipal and 257 industrial dischargers--in six states, we estimated that 82 percent of these dischargers exceeded their permit limits at least once during an 18-month period. We also estimated that 31 percent of the dischargers exceeding permit limits were in significant noncompliance with permit limits. We defined significant noncompliance as exceeding one or more permit limits by 50 percent or more in at least 4 consecutive months during the 18-month review period. About 69 percent of the dischargers in significant noncompliance were municipal dischargers and 31 percent were industrial dischargers. The causes of noncompliance varied considerably, and correcting some of the problems can be costly and time consuming. The federal water pollution control program has achieved positive results to date. However, significant noncompliance will prevent the nation from deriving the expected amounts of pollution reduction from the billions of dollars invested in municipal and industrial treatment facilities, and some of our waterways may not be available for their intended uses.

EXTENT OF NONCOMPLIANCE

NPDES permits prescribe limits on the allowable concentration and quantity of specific pollutants in the effluent discharged from municipal and industrial waste treatment facilities into receiving waters like rivers, lakes, streams, and the coastal oceans. The permits also require dischargers to report to the permitting agency (EPA or the state) on compliance with those limits at set intervals. We reviewed discharge monitoring reports submitted by 531 major municipal and industrial dischargers in six states for the 18-month period ending March 31, 1982, to get a picture of the extent of noncompliance.

How widespread was noncompliance?

Based on our random sample of the 531 dischargers in six states, we estimated that 82 percent of the major dischargers in those states exceeded their permit limits at least once during the 18-month review period. Overall, municipal noncompliance was 86 percent and industrial noncompliance was 79 percent. The following table summarizes the results of our review.

Summary of Permit Noncompliance in Six Selected States
October 1, 1980 - March 31, 1982

Discharger type	Universe size	Sample size	Estimated number of dischargers with at least one instance of noncompliance	
			Number	Percent
Municipal	814	274	698	86
Industrial	715	257	563	79
Total	1,529	531	1,261	82

The extent of noncompliance varied by state and by type of discharger. In Iowa, 95 percent of municipal dischargers sampled exceeded their permit limits at least once during the 18-month period; in Texas the level of noncompliance was 80 percent. Likewise, the extent of noncompliance by industrial dischargers ranged from 89 percent in Missouri to 76 percent in New Jersey and New York. Details on the levels of noncompliance by municipal and industrial dischargers in the six states appear in appendix I.

How frequent was noncompliance?

While 444 of 531 dischargers exceeded their permit limits at least once during the 18-month period covered, most dischargers exceeded their permit limits for more than 1 month. We analyzed the noncompliance in terms of allowable concentration limits and quantity limits.

Of our sample, 48 percent of the municipal and industrial dischargers exceeding the concentration limits of their permits did so for more than 6 months during the 18-month period; 23 percent of these dischargers exceeded those limits during more than 12 months. Of the dischargers exceeding quantity limits, 42 percent exceeded the limits during more than 6 months and 17 percent of these dischargers exceeded the limits during more than 12 months of the 18-month period. Municipal dischargers exceeded their permit limits more frequently than industrial dischargers. For example, about 59 percent of the municipals exceeded their concentration limits for more than 6 months while only 33 percent of industrials exceeded those limits for more than 6 months in the 18-month period reviewed.

The following table summarizes the frequency of permit noncompliance in the six states reviewed. Details on the frequency of permit noncompliance in individual states appears in appendix I.

Frequency of Noncompliance
One or More Permit Limits
October 1, 1980 to March 31, 1982

Discharger type	Sample size	Frequency of noncompliance in months: 1 to 3		4 to 6		7 to 9		10 to 12		Over 12		Total	
		C[a]	Q[b]	C	Q	C	Q	C	Q	C	Q	C	Q
Municipal	274	59	44	35	29	30	20	35	13	70	33	229	139
Industrial	257	72	63	42	24	22	19	13	15	20	14	169	135
Total	531	131	107	77	53	52	39	48	28	90	47	398	274

[a]C=concentration.
[b]Q=quantity.

How significant was noncompliance?

According to EPA, any instance of noncompliance with an NPDES permit is noncompliance with the Clean Water Act for which the permittee is strictly liable. Still, we wanted to determine what percent of the dischargers in noncompliance with their permit limits at some point during the 18-month review period could be considered in significant noncompliance. We considered a discharger in significant noncompliance when concentration or quantity limits were exceeded by 50 percent or more for at least one permit parameter in at least 4 consecutive months during the 18-month period. We used this definition in our 1980 report on municipal treatment plant operation and maintenance, at which time EPA characterized it as conservative. At the time our current review began, EPA had not finalized its definition of significant noncompliance.

Based on these criteria, our review showed that 88 of 238 municipal dischargers that exceeded their permit limits were in significant noncompliance. Forty-two of 206 industrial dischargers that exceeded their permits were in significant noncompliance. Overall, we estimated that 31 percent of dischargers in the six states sampled that exceeded their permit limits during the 18-month period were in significant noncompliance.

Levels of significant noncompliance varied in the six states. Significant noncompliance for municipal dischargers ranged from a high of 47 percent in New York to a low of 19 percent in Texas. For industrial dischargers in our sample, significant noncompliance ranged from a high of 32 percent in New Jersey to a low of 11 percent in Texas.

The following table summarizes the significant noncompliance with permit limits in the six selected states. Details on individual states appear in appendix II.

Summary of Significant Permit Noncompliance
in Six Selected States
October 1, 1980 - March 31, 1982

Discharger type	Universe size	Sample size	Estimated number of dischargers in significant noncompliance	
			Number	Percent of total noncompliers
Municipal	814	274	265	38
Industrial	715	257	121	21
Total	1,529	531	386	31

AGENCY COMMENTS AND OUR EVALUATION

EPA responded to our draft report on August 18, 1983. (See appendix III.) To evaluate our data on noncompliance, EPA had requested and was granted a 21-day extension to the 30-day comment period we generally provide.

EPA said the draft report pointed out the necessity for EPA to exercise careful and continuous oversight of its compliance reporting system and that our comments would help refine the system. EPA said, however, that it had serious concerns with the compliance section of the report because EPA's analysis of our data showed the noncompliance rates to be from 7 to 12 percentage points lower than our rate.[1] EPA disagreed with our definition of significant noncompliance and said its data showed slow but continuous improvement in compliance rates during the period covered by our study and since that time.

Because EPA had not defined the term significant noncompliance when this review began, we used a definition we previously applied in our November 1980 study on municipal treatment facilities: exceeding the permit limits for one or more pollutants by 50 percent or more in at least 4 consecutive months during the review period. In October 1982, EPA informally provided the regions and the states with a definition of significant noncompliance: exceeding the monthly average permit limit by more than 40 percent for conventional pollutants and 20 percent for toxic pollutants in any 2 months of a 6-month period.

[1]EPA's 7 to 12 percent refers to the 29 percent noncompliance rate shown in our draft report. We revised our overall rate to 31 percent to reflect weighting of our sample results. Weighting is necessary when universes vary in size.

Our significant noncompliance rate differs from EPA's rate because of differences in the universe analyzed and in the reporting methodology. In arriving at its universe, EPA excludes permittees on "interim" permit limits, and evaluates compliance only for permittees on final effluent limits. Interim limits are given to facilities that are upgrading their plants to meet more stringent limits. About 25 percent of the permittees in our sample had interim limits. EPA excludes interim permittees on the basis that (1) these permittees are normally on a construction schedule in order to meet more stringent final effluent limits and (2) EPA considers permittees on final limits to be higher priority. We included both types of permittees in our analysis because both interim and final permits are legally enforceable and, if exceeded, result in the discharge of more pollution than allowable. Excluding interim permittees does not provide a complete picture of the permit program's effectiveness in controlling pollution of our nation's waters. We consider the exclusion of interim permittees to be a deficiency in EPA's reporting of permit program results.

EPA derives its quarterly significant noncompliance rate by dividing the number of permittees not meeting the criteria at the end of a particular quarter by the total number of permittees. For example, if a permittee is in significant noncompliance for April and May but returns to compliance in June, the end of the quarter, that permittee would not be reported as being in significant noncompliance. The reporting method EPA uses shows only the compliance at a specific point in time; it does not show that permittees may have been in significant noncompliance for many months before the reporting month.

Our use of an 18-month review period is intended to overcome this end of the quarter "snapshot" limitation by presenting significant noncompliance data over a much longer historical time frame. EPA expressed its concern that our data are cumulative and does not show that a particular discharger that was in significant noncompliance at the beginning of our review period may no longer be in noncompliance later on in the review period, but would still be considered in noncompliance in our rate. While EPA makes a valid point, some permittees were in significant noncompliance more than once during our 18-month review period, and some for extended periods. For example, as we discuss on page 27, four of five municipal dischargers in Louisiana had been in significant noncompliance with their permit limits for from 16 to 18 months during our 18-month review period. All five of the industrial dischargers were in significant noncompliance for from 12 to 18 months during the review period.

EPA said that by using our data base and its definition of significant noncompliance, it derived substantially higher rates of compliance that we did. EPA's data, however, showed just the opposite for municipal dischargers: their significant noncompliance rate increased over the five reporting quarters, from 30 percent in March 1981 to 35 percent in March 1982. Over the same

time frame, the noncompliance rate for industrials decreased from 14 percent to 10 percent.

EPA also said that as of March 1983, the significant noncompliance rate for the six states we reviewed had dropped to 13 percent for major municipals on final effluent limits and to eight percent for industrials. Unlike EPA's analysis of our sample data, EPA did not obtain each permittee's monthly discharge monitoring reports, but relied on data the states report each quarter. We did not verify the accuracy of EPA's data.

As support for its statement that there was slow but continuous improvement in overall compliance rates during our review period and since then, EPA provided us nationwide compliance rates for major permittees on final effluent limits. The data are shown below.

	Municipals	Industrials
	(percent)	
June 1981	76	85
September 1981	73	82
December 1981	77	84
March 1982	76	82
June 1982	78	84
September 1982	77	84
December 1982	78	85
March 1983	82	84

For the period covered by our review (October 1980 through March 1982), the above statistics indicated that the compliance rate for municipals stayed the same (76 percent) and the rate for industrials decreased slightly. From March 1982 through March 1983, the compliance rate for municipals improved by 6 percent to 82 percent, while the rate for industrials increased slightly. The Chief of EPA's Compliance Branch, Enforcement Division, told us that the improvement in compliance for municipals can be attributed to EPA's national commitment to give more attention to enforcement of municipals, and to EPA's emphasis on municipals resulting from our November 1980 report which also prompted EPA to establish its own definition of significant noncompliance.

In summary, we believe that our data are useful in showing a historical perspective on noncompliance for both municipal and industrial permittees. We question EPA's compliance data because EPA excludes a significant number of dischargers with enforceable interim permit limits and because EPA's reporting methodology can understate the extent of significant noncompliance. We believe that our data more accurately reflect the state of compliance with discharge permits.

CAUSES OF NONCOMPLIANCE VARY CONSIDERABLY

To obtain an understanding of what causes noncompliance with permit limits, we discussed with EPA and state officials 62 of the 130 municipal and industrial dischargers we found in significant noncompliance. We also reviewed prior studies in the area performed by EPA, us, and the Natural Resources Defense Council, Inc. (NRDC).

The most prevalent causes of noncompliance with permit limits for the 62 dischargers were as follows:

--Operation and maintenance deficiencies. This category can include limited staffing, training for plant operators, and laboratory facilities, and not enforcing sewer use ordinances.

--Equipment deficiencies. One municipal plant in New Jersey, for example, exceeded its fecal coliform limit for more than 18 months by from 5 to 831 times because its chlorination system was not functioning properly.

--Treatment plant overloading. The cause of noncompliance for seven of eight municipal plants in Texas found in significant noncompliance involved overloading of the system. The plant for the City of Dallas, for example, was handling an average of 158 millions of gallons per day but was designed to treat only 115 millions of gallons per day.

Other causes cited for the permit noncompliance on the 62 facilities included (1) design deficiencies, (2) plant accidents and changes in industrial processes, and (3) startup problems.

Our November 1980 report on municipal wastewater treatment plants highlighted the fact that many of these treatment facilities have had operational and equipment problems for years. The report concluded that usually not just one but a combination of problems limit a plant's ability to treat raw waste. These problems, the report pointed out, include (1) design deficiencies, (2) equipment deficiencies, (3) industrial waste overloads, (4) operation and maintenance deficiencies, and (5) infiltration/inflow[2] overloads. Overloads of these types produce more flow than the plant can handle so that much of the waste bypasses the treatment process.

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[2]Infiltration is ground water entering a sewer system through defective sewer pipes, joints, connections, or manhole walls. Inflow is water discharged into a sewer system from sources such as cross connections from storm sewers and combined sewers.

EPA and NRDC studies identified similar causes

Other studies also show the difficulties municipal and industrial treatment plants have in complying with permit limits. For example, in October 1981, EPA Region II examined the causes of noncompliance for 64 municipal dischargers which were then considered candidates for enforcement action. EPA developed the following rankings:

Cause	Number of dischargers
Industrial contribution	17
Operation and maintenance	12
Funding delays	11
Design deficiencies	4
Equipment/construction problems	3
Multiple above reasons and other	17
Total	64

EPA is not the only organization concerned with noncompliance. In 1982, NRDC examined the causes of noncompliance for 40 industrial permittees in New York and New Jersey considered to be significant noncompliers. According to NRDC officials, the primary causes of noncompliance identified were

--operation and maintenance problems,

--poorly designed plants,

--lack of expertise or negligence by company engineers, and

--improper equipment for the given treatment process.

NEW YORK STATE OPERATION AND MAINTENANCE SUBSIDY PROGRAM

In the six selected states, we attempted to identify innovative techniques being used to encourage compliance with NPDES permit limits. Of the six states, New York was the only state with an incentive program that paid for part of the costs of properly operated municipal plants.

In 1964 New York State established an operation and maintenance incentive program for municipal treatment plants--the only one of its kind in the nation. The objective is to assist municipalities in protecting the quality of the state's waters and increasing the waters' availability for use by requiring efficient operation of treatment facilities. By providing financial aid to wastewater treatment plants which consistently meet their permit limits, the state is attempting to reward good operation, management, maintenance, and performance. Since the inception of the

program, the reimbursement rate has varied from a high of 33.3 percent of a plant's costs to the present level of 16.6 percent. In 1982, about $35 million in grants was awarded to more than 400 municipal treatment plants.

Currently, the subsidy program operates on a fixed-rate method of reimbursement. Reimbursement is received in full or not at all. The state is considering modifying the program so that awards are made in direct proportion to actual plant performance. Plants which perform well will receive more aid than those which do not. The state believes this program modification will provide a better incentive for improving performance and will also reduce program costs. For example, a study submitted to the state legislature found that

--67 percent of the 463 plants studied would have received increased aid under the proposed sliding-scale program;

--about 33 percent, or 150, of the plants would have received less aid; and

--of the 150 plants receiving less aid, 32 would have been denied aid completely.

State officials said that the program has contributed to increased compliance with permit limits. Although they acknowledge that the full extent of that contribution has not been formally studied, they believe case studies developed in prior years--as well as the experience of state environmental personnel--adequately link the subsidy program and improved treatment plant performance.

In commenting on the draft report, EPA stated that it had activities underway in this area that should be recognized. Among these are the Office of Water Program Operations' certification and training programs which have been set up to ensure that municipal treatment plants meet permit requirements. The certification program requires that, after 1 year of operation, the municipality operating the plant affirmatively certify that the plant is meeting its design specification and permit requirements. If requirements are not being met, it would be necessary for the municipality to take corrective action at other than federal expense. EPA also pointed out that the Clean Water Act established a program which trains state personnel to diagnose treatment plant process operation and design problems and a program to provide on-site operation and management training to correct problems at facilities that are out of compliance. In addition, EPA has provided funds and assisted 28 states and territories in constructing training facilities to train treatment plant operators.

CHAPTER 3

EPA AND THE STATES MAY NOT KNOW THE FULL EXTENT OF PERMIT NONCOMPLIANCE

For the NPDES Program to succeed in reducing water pollution, EPA and appropriate state agencies must know when permit limits are exceeded so that an enforcement action to bring about compliance can be initiated. For the most part, NPDES relies on self-monitoring by the dischargers to detect and report instances of permit noncompliance to EPA and the states. However, assurance that EPA and state agencies are informed of all noncompliance with permit limits has been reduced. For example,

--many discharge monitoring reports were not submitted or were submitted incomplete,

--EPA studies disclosed that DMR data provided by a large percent of laboratories are inaccurate, and

--inspections by EPA and the states to independently verify the accuracy of DMR data are being reduced or are already at low levels.

An EPA official advised us that EPA regulations require that all facilities with NPDES permits monitor their effluents and report the results to EPA or the delegated states on a DMR. The facility's permit specifies the monitoring and reporting frequencies--usually monthly or quarterly. EPA regulations require that such reporting occur at least annually.

MANY DMRs WERE NOT SUBMITTED OR WERE SUBMITTED INCOMPLETE

EPA and the states rely heavily on complete and accurate DMRs to inform them of permit noncompliance. Not submitting or submitting incomplete DMRs, in our opinion, could conceal serious discharge noncompliance. Of the 531 major municipal and industrial dischargers in our sample, 40 dischargers--or 8 percent--did not submit one or more DMRs and 196 dischargers--or 37 percent--submitted one or more incomplete DMRs during an 18-month period. Of the 40 dischargers that did not submit DMRs, 10 either did not submit more than three quarterly DMRs or more than five monthly DMRs. Of the 196 dischargers which submitted incomplete DMRs during the 18-month period, 61 submitted incomplete data on more than three quarterly or five monthly DMRs. The data that were not submitted included information on the quantities of toxic and conventional pollutants actually discharged, therefore making it impossible for EPA and the states to determine if there was noncompliance with specific permit limits for the period covered by the report.

Statistics with respect to individual states varied. Dischargers in Iowa and New Jersey accounted for about 68 percent

of all nonsubmissions disclosed in the six states reviewed. The following table reflects the percent of dischargers sampled in each state which submitted one or more incomplete DMRs during the 18-month period.

Percent of Selected Dischargers
Submitting Incomplete DMRs
October 1980 - March 1982

State	Percent of dischargers		
	Municipal	Industrial	Overall
Missouri	63	27	46
New York	40	44	42
Iowa	32	52	40
New Jersey	35	41	38
Louisiana	45	26	34
Texas	19	30	24

While followup procedures generally existed for missing DMRs, incomplete DMRs were not handled consistently. For example:

--Missouri treats incomplete DMRs as noncompliance instances but allows regional personnel to use their judgment as to whether the matter is serious enough to warrant followup.

--Iowa procedures state that no specific effort is required to review DMRs for completeness because of the time that would be required for manual review. Instead, this review is done during the preparation for inspecting a facility.

--EPA Region VI (Dallas) does not review DMRs submitted by minor dischargers for completeness.

We reported previously on the nonsubmission of DMRs in our October 1978 report on industrial dischargers. We found that 38 of 165 dischargers reviewed (23 percent) did not submit one or more DMRs during a 15-month period. Our current review showed that 16 of 257 industrial dischargers (6 percent) did not submit one or more DMRs during the period reviewed. While this shows a reduced level of nonsubmissions, we believe the large percentage of dischargers submitting one or more incomplete DMRs to EPA and the states should be a matter of concern.

THE RELIABILITY OF DMR DATA IS QUESTIONABLE IN MANY CASES

In addition to numerous cases in which required DMR data were not submitted, EPA studies have disclosed unacceptable performance by laboratories providing DMR data to major municipal and industrial facilities. A summary of results of EPA's Discharge Monitoring Report Quality Assurance Program--based on samples sent out in 1980 and 1982--showed that laboratory analyses for 68 percent and 58 percent, respectively, of the municipal and industrial

dischargers sampled nationwide did not show acceptable results for one or more pollutants analyzed.

EPA's Discharge Monitoring Report Quality Assurance Program is an attempt to determine the analytical capabilities of laboratories serving major NPDES facilities and the validity of laboratory-determined results reported on the DMRs. Under the program, performance samples containing known contaminant levels made up by EPA's Cincinnati laboratory are sent to each major facility's laboratory, which is instructed to analyze the samples for those pollutants that are actually specified in the facility's permit. EPA compares those results with the actual levels in the samples and notifies the state, the respective EPA regional office, and the laboratory of how well the analyses were performed.

The Laboratory Quality Assurance Program came about as a result of a pilot study in New Jersey and Minnesota in 1978 and 1979 that showed that the analytical accuracy of the laboratories was very poor. In October and November 1980, EPA expanded the program nationwide and performance samples were sent to about 7,400 major NPDES facilities. About 75 percent of the facilities responded. The results disclosed that in 26 percent of the cases, all of the pollutant levels determined by the laboratories were either higher or lower than the acceptable limits established by EPA. In addition, analyses for 68 percent of the facilities did not show acceptable results for one or more parameters. Seventy-five percent of all analyses performed were within acceptable limits.

Inspections performed by EPA and the states include examinations of laboratory procedures and sampling techniques. To determine if the analytical capabilities of the laboratories had improved, EPA sent out a second set of performance samples to all major facilities in May and June 1982. The results of the study showed that the reliability of DMR data is still questionable. In 21 percent of the cases, all of the pollutant levels determined by the laboratories were outside acceptable limits, and 58 percent of the permittees did not report acceptable results for one or more parameters. Eighty percent of all analyses performed, however, were within acceptable limits.

Results of EPA's studies for the six states we reviewed were as follows:

State	Percent of permittees not reporting acceptable results for one or more parameters	
	1980	1982
Iowa	84	68
Louisiana	59	65
Missouri	69	71
New Jersey	67	49
New York	62	54
Texas	65	54

In its comments on the draft report, EPA stated that in follow-on audits of the poor-performing laboratories, its regional inspectors found that many of these laboratories actually made only reporting errors. EPA acknowledged that reporting errors affect the quality of the DMR data base but do not reflect on the analytical accuracy of the laboratories. EPA also commented that the exact number of laboratories with only reporting errors was not yet available.

A third laboratory quality assurance test was carried out during 1983 but had not been finalized as of the end of our review. A statistician in the Quality Assurance Branch at EPA's Cincinnati Environmental Monitoring and Support Laboratory told us that with the third set of performance sample results, EPA will have sufficient data to develop trends on individual laboratory performance in the quality assurance tests. No trend data have been developed by EPA based on the 1980 and 1982 quality assurance tests.

EPA AND STATE EFFORTS TO VERIFY DMR DATA ARE BEING REDUCED

Self-monitoring by the discharger is not always an effective means for determining compliance with permits. As indicated previously, there are cases where required data are not submitted and where analyses are not performed accurately. In addition, fraudulent DMR data may be submitted. In 1982, for example, a New York State firm was fined $200,000 after pleading guilty to 11 criminal violations of the Clean Water Act, including falsely reporting to EPA that certain pollutants were discharged from a facility at or below the required permit limits. However, the number of routine sampling inspections performed by EPA and the states to verify the accuracy of DMR data is being reduced. Limited resources are a contributing factor.

Types of inspections carried out at NPDES facilities

Three types of inspections are performed of NPDES facilities to evaluate their performance and compliance with permit conditions, although only the compliance sampling inspection directly verifies the accuracy of DMR data. These inspections are:

--Compliance evaluation inspection: includes a walk-through of the facility and a review of the discharger's records, but no independent sampling and analysis of the effluent.

--Performance audit inspection: an inspection of the discharger's sampling and laboratory analysis techniques, not including sampling and analysis of effluent.

--Compliance sampling inspection: independent sampling and analysis of discharger's effluent.

EPA's regulations establish requirements for inspection programs. Specifically, the regulations require that periodic inspections be performed in a manner designed to determine compliance or noncompliance with the permit conditions, to verify the accuracy of information--including monitoring information--submitted by the permittee, and to verify the adequacy of sampling and monitoring methods used by permittees in developing the information. Although the regulations require that major NPDES facilities be inspected at least annually, they do not specify which type of inspection should be performed.

The Director of EPA's Compliance Division told us that, for the most part, EPA and state inspections consist of either compliance evaluation inspections or performance audits. Sampling inspections, he said, are very resource intensive and generally are focused on those facilities against which EPA or the states are considering or planning enforcement action, as opposed to routine monitoring. In addition, EPA has proposed eliminating the requirement for annual inspection of major NPDES facilities. No federal requirement currently exists for regular inspection of minor facilities.

EPA and the states are performing fewer compliance sampling inspections

Compliance sampling inspections (CSIs)--unlike the other types of inspections performed at NPDES facilities--directly test the accuracy of DMR data submitted by dischargers. They also will disclose if pollutants not covered by the permit are being discharged. The number of CSIs being performed by EPA and the states is declining or at low levels, and EPA and state officials, as well as others, told us that more are needed. Limited resources were cited as a contributing factor by those officials.

Nationwide statistics on compliance inspections by EPA show a significant decline in the number of compliance sampling inspections performed in fiscal year 1981 compared to 1979 and an increase in the other types of inspections of NPDES facilities, as follows:

Type of inspection	Number			Percent increase (decrease)
	FY 1979	FY 1980	FY 1981	
Compliance sampling:				
Municipal	307	247	247	(20)
Nonmunicipal	466	264	240	(48)
Compliance evaluation:				
Municipal	390	435	628	61
Nonmunicipal	464	505	557	20
Performance audit	22	142	276	1,255
Compliance sampling for toxics	0	74	67	-
Biomonitoring	0	190	154	-

Comments from agencies covered by our review also disclosed a reduction in CSIs and problems with overall inspection coverage:

--An EPA Region VI (Dallas) official confirmed a trend away from time-consuming and costly sampling inspections.

--An Iowa official said the state has cut back on the amount of sampling inspections because of resource cutbacks. He would like to see more 24-hour composite sampling inspections.

--An EPA Region II (New York) official said limited resources have caused EPA to shift from CSIs to quality assurance inspections not requiring sampling. For example, only 7 percent of major dischargers in New Jersey received CSIs in fiscal year 1982.

--New York State scheduled 75 CSIs in 1982, providing coverage to only about 5 percent of the significant dischargers.

--The number of inspections performed by Missouri between fiscal years 1980 and 1982 declined about 30 percent. The chief NPDES permitting official in the state said they do not have the manpower to determine whose DMRs are deficient.

The results of CSIs performed in prior years provide some indication of their potential for turning up noncompliance. For example, CSIs performed by New York State in fiscal years 1981 and 1982 found 39 percent of the dischargers inspected in noncompliance with permit limits. In New Jersey, according to an EPA official, CSIs performed in fiscal years 1980-82 by EPA Region II identified noncompliance with permit limits at 90 percent of the municipal facilities and at 50 to 75 percent of the industrial facilities inspected.

Representatives of various organizations--including the Environmental Defense Fund; the Interstate Sanitation Commissions

of New York, New Jersey, and Connecticut; and the Public Interest Research Groups in New Jersey and New York--believed more compliance sampling inspections were needed to verify DMR data produced by the self-monitoring system.

AGENCY COMMENTS

EPA stated that the report points out the necessity to exercise careful and continuous oversight of its compliance reporting system. EPA acknowledged that because it must rely on voluntary compliance reporting by municipal and industrial sources, potential for false reporting or nonreporting exists if EPA and the state agencies to whom the program has been delegated do not exercise appropriate care in policing the system. EPA further pointed out that this is a large and complex undertaking and believes that a number of comments we made in our report will be helpful as it makes further refinements in the compliance reporting system over the next several months.

CHAPTER 4

CURRENT ENFORCEMENT POLICIES ALLOW PERMIT NONCOMPLIANCE TO CONTINUE FOR LONG PERIODS

Compliance with permit conditions is the primary goal of the NPDES enforcement system. Our review in the six sampled states showed that many instances of noncompliance continued for extended periods before formal enforcement action was taken and in some cases continued for years even after enforcement action had been taken. EPA believes enforcement efforts would be more effective if the Administrator had the authority to fine noncompliers directly without going through the Department of Justice.

APPROACH TO ENFORCING NPDES PERMIT LIMITS

EPA and states with delegated programs have a number of formal and informal enforcement tools available to them. Informal measures include (1) phone calls, (2) warning letters, and (3) meetings with the dischargers. Formal actions include (1) administrative orders, which demand compliance within a specified time period, (2) consent orders, by which the noncomplier agrees to comply by a certain date, and (3) referrals to federal or state prosecutors for civil or criminal prosecution. Some states have the authority to assess monetary penalties without taking the case to court; however, EPA does not have this authority for the NPDES permit program. Through the Federal Contractor Listing Program, EPA can prohibit industrial facilities that exceed their permit limits from receiving federal contracts, grants, or loans. Only four facilities have been listed, however, since the program's inception in 1975.

For the most part, EPA and states with state-managed NPDES Programs are informed of permit noncompliance through the self-monitoring reports submitted by the dischargers. When received by EPA or the state, reports of major dischargers are reviewed for compliance with permit limits. The review of reports of minor dischargers varies. EPA Region II (New York), for example, does not review for compliance self-monitoring reports submitted by minor dischargers. New York State does not even require many of its minor industrial dischargers to submit self-monitoring reports. EPA and state officials stated that resource limitations prevent them from reviewing all DMRs.

Various criteria have been developed for reviewers of DMRs to use to "flag" significant or priority noncompliers of permit limits. These criteria can relate to single pollution events, weekly averages, or recurring events over a period of months. For example:

--EPA defines as one type of significant noncompliance the exceedance of a monthly average limit by 20 or 40 percent (depending on the pollutant) in any 2 of 6 months.

--New York considers as priority a discharge that exceeds a limit for three consecutive DMR reporting periods or for any four of six consecutive reporting periods in excess of the acceptable standard deviation for that parameter.

--Missouri uses exceedance of the weekly average limit by a factor of two as its principal criterion in targeting for possible enforcement action.

In addition to the use of varying criteria to rank noncompliance, EPA regional offices and state agencies have a great deal of discretion in deciding when enforcement action is necessary and what form enforcement action should take, e.g., formal or informal. EPA's Enforcement Policies and Procedures issued in February 1982 established specific time frames as to when informal actions should cease and more formal enforcement actions, including litigation, should commence. These time frames were not part of the procedures when they were revised in July 1982. We were told that the enforcement counsel who drafted the February 1982 version was replaced by an individual who did not believe that specific enforcement time frames were required.

Under Section 309 of the Clean Water Act, EPA has the authority to intervene in instances where the state has not taken appropriate action against a discharger. EPA monitors state enforcement programs through the use of the Quarterly Noncompliance Report. The report, which is submitted by states to EPA, provides the name, location, and permit number of the discharger, as well as a description of the noncompliance and when it occurred. The report also identifies any action taken by the state, the current status (resolved/unresolved), and any mitigating factors. The report, however, does not provide a complete picture of permit noncompliance in a particular state. For example, noncompliance by minor dischargers is not covered, and minors comprise about 89 percent of total NPDES permittees.

EPA enforcement efforts have declined

The number of enforcement actions by EPA has shown a definite downward trend since 1977. Between fiscal years 1977 and 1979, enforcement actions under NPDES declined by more than half, from 1,523 to 736; they declined 41 percent from 1980 to 1982. The following are EPA statistics on enforcement actions taken by EPA under NPDES for the latest 3 fiscal years:

Type of action	Fiscal year 1980	1981	1982
Administrative orders	569	533	300
Notices of violation	89	69	72
Referrals to Justice	39	46	38
Total	697	648	410

EPA headquarters lacks complete information on the outcome or effectiveness of administrative orders and notices of violation in correcting NPDES deficiencies. The Chief, Compliance Division, and the Chief, Information Management and Evaluation Branch, believed, however, that the regional offices should submit this information and that EPA headquarters has been remiss in not assuring that the data were submitted. They believed this information would be useful to them in assessing the overall effectiveness of the enforcement program.

Part of the explanation for the significant drop in enforcement actions in 1982 can be attributed to changes in EPA enforcement policy during that year. For example:

--In January 1982, a headquarters policy memorandum directed the regions to settle enforcement cases in a nonconfrontational manner (voluntary compliance).

--A July 1982 headquarters policy memorandum advised the region to administer a strong, aggressive, and fair enforcement program and to use all available enforcement means.

--Another policy memorandum, issued in September 1982, acknowledged that some persons had misconstrued the approach to enforcement set out in the July 1982 memorandum. It stated that EPA's initial approach should not be confrontational and that the regulated community must be dealt with on a presumption of good faith and in an attempt to achieve voluntary compliance.

EPA's current enforcement philosophy for NPDES still centers around voluntary compliance and the nonconfrontational approach established in 1982.

Enforcement statistics for fiscal years 1980-82 were not available for two of the three state-managed programs covered by our review. New York was not able to provide overall statistics for any of the 3 fiscal years, and in Missouri, enforcement statistics were available for calendar years 1981 and 1982 only. In Iowa, statistics were available for the 3 years and indicated a 10 percent increase in formal enforcement actions in 1981 compared to 1980 and a projected increase of about 20 percent in

1982 over 1981. While overall enforcement actions in Iowa increased, referrals to the State Attorney General's Office decreased, with formal negotiations and administrative orders increasing.

ENFORCING AGAINST SIGNIFICANT NONCOMPLIANCE WITH PERMIT CONDITIONS CAN TAKE YEARS

We followed up on 62 selected municipal and industrial dischargers from the 130 dischargers in significant noncompliance with their NPDES permits. In some cases, formal enforcement action was not taken for years after noncompliance began. In other cases, noncompliance had continued for years even after EPA or the state took enforcement action.

Municipal noncompliance presents a unique situation. Both EPA and the states have had a general policy that exempts from enforcement municipalities that have applied for federal funds to upgrade existing or build new treatment facilities. This policy allows noncompliance to continue as long as grant funds are pending or construction is underway, which can take years.

In November 1982, EPA issued its draft National Municipal Policy, which would modify its handling of municipal dischargers. The policy states that, to the extent possible, all municipal facilities will meet statutory Clean Water Act requirements by July 1988, regardless of the availability of federal grant funds. The policy further requires that all noncomplying municipal facilities, including constructed facilities that have not achieved sustained compliance with their permit effluent limits, develop a Municipal Compliance Plan no later than July 1985 that will show how and when the facility will come into compliance.

In commenting on the draft report, EPA stated that there is no identifiable written EPA policy to the effect, but that, as a matter of fact, EPA and the states have not generally required municipalities to construct treatment works unless federal grant funds were available. EPA also pointed out that it has brought several enforcement actions in the past year which reflect the new approach embodied in the draft National Municipal Policy.

The following brief summaries of some significant noncompliance instances in six states show for how long noncompliance continued both before and after formal enforcement action was taken.

Iowa

Six municipal and four industrial dischargers were reviewed. Exceeding the permit limits for three of six municipal dischargers began in 1976 and 1977; for the other three, noncompliance began in 1980 and 1981. Formal enforcement action had been taken against two of six facilities. In one

case--in which noncompliance began in 1976--a consent decree was signed in July 1982 placing the discharger on a compliance schedule. Bids had been let to upgrade this plant, and a state official believed this would correct the problem. In the second case--in which noncompliance began in 1977--a state administrative order was issued in March 1981. With the closing of a major industrial discharger in May 1982, the state noted some improvement in meeting permit limits. Overall, five of six plants were still in noncompliance with permit limits at the time of our review, although certain actions--like applying for federal funds and beginning to upgrade the plant--had been taken in an attempt to move toward compliance. These steps, however, can be time consuming. For example, design funding for one plant is not expected until fiscal year 1984. No noncompliance was noted at the sixth plant during the second quarter of 1982, the quarter immediately following the end of our review period.

Noncompliance for the four industrial dischargers began in 1979 and 1980. Formal enforcement action was taken in two of four cases. One case involved a court order issued in April 1981 under which the facility was fined more than $400,000 in civil penalties. In the other case, the state issued a letter of noncompliance to the facility. The state informed us that improvements were noted at three of four facilities; however, they are still in noncompliance with permit limits. The fourth discharger was given less stringent permit limits and was in compliance with those limits.

Louisiana

We reviewed five municipal and five industrial dischargers. Four of five municipal facilities were in significant noncompliance with their permit limits for from 16 to 18 months during our 18-month review period. Four facilities had been issued warnings or other letters, and an administrative order was issued against the fifth discharger. Corrective action for three facilities involved construction under EPA grants. Improvements and repairs were made to the other two facilities. At the time of our review, all five were out of compliance; however, no further action was contemplated on the three facilities in the EPA construction grants program.

The five industrial dischargers reviewed had been in significant noncompliance with their permit limits for from 12 to 18 months of the 18-month period. Four of the five had been subject to formal enforcement action, including two dischargers that paid penalties totaling $6,000 and $510,500, respectively. Three of these four facilities have taken corrective action to improve their treatment systems. At the time of our review, however, all four facilities were continuing to exceed their permit limits. The fifth facility had received a court ruling staying its permit limits, which are not now legally in effect.

Missouri

We reviewed five municipal and five industrial dischargers that were in significant noncompliance with permit limits. Of these 10 cases, the state took formal action against only one discharger. The action--an abatement order issued in September 1981 to an industrial discharger--resulted in corrective action that brought the facility into compliance. Of the remaining four industrial dischargers, noncompliance continued through the first quarter of 1982 at one facility and through the second quarter of 1982 at another facility. The other two facilities were in compliance with permit limits.

Noncompliance continued at two of five municipal dischargers reviewed through the second quarter of 1982 and at two others through the first quarter of 1982. Noncompliance did not occur during the first and second quarters of 1982 at the fifth facility. One facility will be eliminated upon completion of other projects in the St. Louis area. The other four facilities are depending on federal funds to make the necessary improvements. One facility has received federal construction grant funding, and another is scheduled to receive funding during 1983. The other two facilities are seeking federal funds, but those projects have a low funding priority and it is unknown when funds will be available. Missouri has taken the position, however, that once federal funds are applied for, a municipality has done all it can and no further formal enforcement action is warranted.

New Jersey

We reviewed five municipal and five industrial dischargers. Three of the five municipal plants (the three that were expected ultimately to tie into a regional facility, according to an EPA attorney) have been exceeding their permit limits since the early 1970's. Even with formal enforcement efforts by EPA--including court orders calling for needed repairs and improved operations--discharges of raw sewage believed to pose a potential health hazard have continued. The EPA attorney said that the planned tie-in to the regional facility has now been called off and these three facilities will have to be placed on compliance schedules. EPA agreed to take no action against one of the two other facilities due to a delay in the facility's receiving federal grant funding. The fifth municipal facility was asked to identify the source of the illegal discharge of industrial waste to the plant that was causing equipment malfunctions. No formal enforcement action was taken against that facility.

Only one of five industrial dischargers was subject to a formal enforcement action--a show cause order--and then only after exceeding permit limits for 15 months. In three of four other cases, EPA officials agreed that formal enforcement action should have been taken but was not. In one of those cases, the

discharger exceeded the permit limits for cyanide by more than four times for 6 months. Through July 31, 1982, this discharger had notified EPA of 97 instances of permit noncompliance.

New York

At the time of our review, the five municipal dischargers had been in significant noncompliance with permit limits for from 18 to 21 months. According to state officials, the state generally had no plans to enforce against these facilities and, we were informed, improvements were being made at four of the five plants. EPA, however, had targeted one of these facilities for a show cause order.

Situations varied at the five industrial dischargers reviewed. One exceeded its permit limits for 14 of 18 months in the period ending in March 1982, but the state took no formal enforcement action. EPA targeted the facility for a Notice of Violation in November 1982 because of continued noncompliance. Of the other industrial dischargers, New York State officials said that one closed down operations, one is in compliance with its permit limits, and one signed a consent order in April 1982 to install a new treatment system by December 1983. The state is working with the fifth industrial discharger reviewed--which exceeded permit limits for 15 consecutive months--to solve its problems.

Texas

We reviewed eight municipal and four industrial dischargers that were in significant noncompliance with their permit limits. In three cases, permit noncompliance at the municipal facilities dated back to the late 1970's. Enforcement actions against the eight municipal facilities included informal letters sent to one facility, warning letters to three, and administrative orders to another three. No action was taken against one facility. At the time of our review, one facility was in full compliance with its permit limits and one was complying with interim limits. The other six facilities were continuing to exceed their permit limits. Two of these facilities had completed upgrading projects but were experiencing operation and maintenance problems. Plant expansion was underway at three other facilities, but one facility had not yet begun corrective action.

Administrative orders were issued against three of four industrial dischargers reviewed, and one of these was also referred to the Department of Justice. No action was taken against the fourth noncomplier. At the time of our review, only one facility was still exceeding its permit limits.

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Some state and EPA officials informed us that resource shortages had affected their enforcement programs. This manifests itself in various ways, including limited enforcement against minor dischargers, emphasis on voluntary compliance, and the establishment of criteria by which significant noncompliance would be targeted for possible enforcement action.

MEASURES TO IMPROVE NPDES ENFORCEMENT PROGRAM

During our review, two factors were brought to our attention that could improve the effectiveness of NPDES enforcement efforts. These factors were

--the need to give EPA authority to assess administrative penalties for noncompliance of NPDES permit limits and

--the need for EPA to improve the quality of its case referrals to the Department of Justice.

EPA should have authority to assess monetary penalties for noncompliance

EPA believes the effectiveness of the NPDES enforcement program would be improved if it had the authority to assess fines for noncompliance. At the present time, EPA cannot assess such penalties. If EPA believes a discharger should be fined, the case must be referred to the Department of Justice for litigation, regardless of the size of the case or the nature of the noncompliance. This is a time-consuming and expensive process, particularly for small cases, and not as effective a deterrent as the ability to assess a fine in a timely manner after the noncompliance occurs.

EPA has previously requested that the Congress give it authority to administratively assess penalties against noncompliers. In July 1977 EPA proposed that the amount of the penalty equal the monetary benefits the permittee realized by not complying with permit conditions. EPA believed this method of assessing penalties would (1) improve the efficiency of existing enforcement methods, (2) promote compliance by rendering investments for installing, operating, and maintaining control facilities as financially attractive as noncompliance, and (3) end the unfair competitive advantage noncomplying industrial sources have over complying sources.

The Clean Water Act of 1977 did not give EPA the authority to administratively assess noncompliance fees. One Senate manager of the Clean Water Act said such authority was unnecessary at the time but that subsequent review of compliance under the act and the success of EPA in implementing its penalty policy through the courts may indicate that the administrative assessment mechanism will become necessary in the future. EPA has this authority under other programs, including the Clean Air Act.

In 1982, EPA again requested the authority to assess administrative civil penalties of up to $5,000 per day for noncompliance with the Clean Water Act that may not be serious enough to warrant judicial action. The Congress did not act on this request.

An attorney-advisor in EPA's Office of Legislation told us that EPA has drafted proposed amendments to the Clean Water Act which are substantially similar to the proposal made in 1982. The proposal includes a provision giving EPA authority to administratively assess fines. The new Administrator supports this legislative initiative. In commenting on the draft report, the Department of Justice agreed that EPA should have the statutory authority to assess penalties administratively.

Referrals to the Department of Justice

Officials of Justice's Division of Land and Natural Resources told us in 1982 that the types of NPDES cases referred by EPA and the timeliness of EPA referrals are often problems that affect their potential for successful prosecution. The Chief of the Environmental Defense Section informed us that because EPA does not have specific criteria as to what justifies referral to Justice, EPA officials have referred cases for prosecution based on their own criteria or judgment. An Assistant Chief in Justice's Environmental Enforcement Section told us that DMR data included in the referral package are often a year or more old and must be updated. This official believed that Justice attorneys should become involved in EPA cases much sooner and not wait until EPA has developed all the paperwork for the case.

EPA's comments on the draft report did not discuss the statements made by the Department of Justice officials concerning case referrals. However, the Department of Justice, in its comments, stated that the section of the draft report on case referrals was historical and not reflective of the current state of referrals. Justice stated that of late, EPA's referrals have been more timely and have included current discharge monitoring reports and inspection reports. Further, they commented that unlike the position the Department advocated a year ago, they no longer consider early Justice involvement in all cases warranted.

In our draft report, we proposed that the Administrator, EPA, work with the Department of Justice to improve procedures for referring permit noncompliance for civil or criminal prosecution. This proposal was based on the comments made by the Justice officials concerning the types and timeliness of EPA case referrals. Since Justice commented that EPA case referrals are now more timely and better supported, we are not making any recommendation for improving case referral procedures.

CHAPTER 5

THOUSANDS OF DISCHARGERS HAVE NOT BEEN ISSUED PERMITS OR HAVE PERMITS THAT HAVE EXPIRED AND NOT BEEN REWRITTEN

The Clean Water Act requires that every public and private facility that discharges wastes directly into navigable waters must have a permit. None of the six states we reviewed had a systematic process for identifying non-filers. Further, thousands of applications had been received by EPA and the states--many predating January 1981--for which permits had not been issued as of October 30, 1982. These applicants, therefore, may be discharging wastes without the pollution limits and monitoring requirements of a permit. In addition, thousands of permits had expired but had not been rewritten. The existence of these situations reduces the potential of the NPDES Program to control and reduce surface water pollution in the nation.

EPA AND STATES NEED PROGRAMS FOR IDENTIFYING NON-FILERS

At the time of our review, none of the six states had a formal program to identify non-filers. In the absence of a formal program, the states were relying on a variety of measures to uncover non-filers, including citizen complaints, state agency field activities, and cooperative agreements between state agencies. In Missouri, for example, the Department of Social Services, Division of Health, will not issue licenses to hotels and motels discharging wastes into streams unless an NPDES permit has been issued.

Officials of the six states, as well as those at EPA headquarters and regional offices contacted, had the common belief that major dischargers had applied for NPDES permits. While conceding that some minor dischargers had not applied for permits, these same officials characterized the non-filers as small, insignificant dischargers.

The Chief, NPDES Program Branch, EPA Permits Division, said that EPA and the states have highly publicized the program and that all facilities should be aware of the requirement to apply for a permit. He told us that EPA and the states have made no concerted effort to identify additional minor facilities that require permits. Because of a lack of resources, they concentrate on the major facilities and pick up the minors as they come across them. The Chief, Information Management and Evaluation Branch, EPA Compliance Division, said that minor facilities are generally

not much of a problem from an environmental standpoint and may not be of much concern if not permitted.

Comments from others supported the above views. For example:

--The NPDES Permits Branch Chief in EPA Region VI said that the Branch already has more applications than it can permit so it does not look for non-filers.

--Water Management Division personnel in EPA Region VII said that, given the complexity and expense of the permit process and limited resources, a program to identify non-filers is not warranted.

--A New York State Department of Environmental Conservation official said that some facilities may be discharging without a permit but these are considered insignificant, both in terms of discharge volume and content.

We identified several situations that suggested that the significance of the non-filer issue may be greater than perceived by EPA and state officials or that its overall significance was unknown. In New Jersey, a streamwalk conducted in 1980 in Essex County by the Public Interest Research Group identified 52 questionable dischargers and found that 39 had not applied for an NPDES permit. Based on these results, the New Jersey group concluded that hundreds of additional non-filers may exist in the state. A representative of Citizens for a Better Environment, headquartered in Chicago, told us that the lack of active programs by the states in EPA Region V may be the reason the non-filers issue has not surfaced as a problem in those states. She said the states just do not have the resources to actively pursue non-filers.

THOUSANDS OF APPLICANTS HAVE NOT BEEN PERMITTED

EPA statistics reflect that 16,062 NPDES permit applications were awaiting processing as of October 30, 1982. Of these, 215 applications were from major dischargers and 15,847 were from minor dischargers. While EPA's Permit Division believed the backlog was overstated because it included facilities not requiring a permit, the Division had no estimate of the actual number of applicants that needed a permit.

Data we obtained from states and EPA regional offices on four of the six states reviewed showed large backlogs of unpermitted applications. With respect to the other two states, Missouri officials said they had no backlog of unpermitted applications, while in New York it was not possible based on existing records to determine the exact size of the backlog.

The following table summarizes the data we obtained on the number of applicants that were not permitted for the six states, as of June 30, 1982. For our analysis, we also identified the percentage of those applications which predated January 1, 1981, i.e., were more than 18 months old.

Applicants Not Permitted as of June 30, 1982

	Municipal			
	Applicants not permitted		Percent received before 1/1/81	
State	Major[a]	Minor[b]	Major	Minor
Iowa[c]	2	10	0	10
Louisiana	1	243	100	88
Missouri	0	0	0	0
New Jersey	0	15	0	40
New York[d]	-	-	-	-
Texas	2	247	0	79
Total	5	515	20	81

[a]Major dischargers.
[b]Minor dischargers.
[c]Iowa data is as of September 1, 1982.
[d]Data unavailable for New York.

State	Industrial: Applicants not permitted — Major[a]	Industrial: Applicants not permitted — Minor[b]	Industrial: Percent received before 1/1/81 — Major	Industrial: Percent received before 1/1/81 — Minor
Iowa[c]	2	358	0	96
Louisiana	0	1,785	0	91
Missouri	0	3	0	0
New Jersey	0	195	0	57
New York[d]	-	-	-	-
Texas	1	1,814	100	84
Total	3	4,153	33	87

[a]Major dischargers.
[b]Minor dischargers.
[c]Iowa data is as of September 1, 1982
[d]Data unavailable for New York

The great majority of the applicants which had not been permitted involved minor municipal and industrial dischargers. We were told by EPA and state officials that permitting priorities and limited resources were the primary reasons for permits not being issued. In EPA Region VI (Dallas), the Chief of the Permit Branch, Water Management Division, for example, said that the region has the largest backlog of permit applications in EPA but it has never been provided resources to issue all permits. As a result, it sets up a priority system to issue major permits first, then minor permits. Since the region gets about 50 new applications a month, it issues only major permits and never gets to the minors. The Director of the Texas Department of Water Resources Permits Division said EPA's attempt to permit every discharger may explain the backlog but it is the state's policy to issue only those permits to dischargers which it can adequately monitor.

In Iowa--where at the time of our review 93 percent of the applicants not permitted predated January 1981--we were told that most involved minor nonmunicipal applications received during 1977 and 1978. They have not been processed because their priority status is low and resource limits have prevented work on them. The state said it planned to issue permits for 190 of 358 applications from minor industrial dischargers during fiscal year 1983.

Region II Water Management Division officials said the backlog in New Jersey resulted from EPA's focus on permitting majors and the high turnover of engineers. The state--which "inherited" the backlog when the program was delegated to it by EPA in April 1982--said it has serious resource problems. With its current staff, it could take several years to eliminate the backlog, especially since the first priority is to permit new sources.

In commenting on our examination of applications that have not received permits, EPA stated that its numbers for "unissued" major permits may be too high and its numbers for "unissued" minor permits may be too low. EPA commented that this situation highlighted an issue and a possible problem that the Office of Water Enforcement and Permits will now focus on. EPA stated that it would make a review to determine what the actual permit backlog numbers should be and if the data are no longer valid, the permit compliance system will be corrected.

THOUSANDS OF DISCHARGERS HOLD EXPIRED PERMITS

Thousands of municipal and industrial permits--involving both major and minor dischargers--have expired and not been reissued. Resource limitations and the fact that EPA has not promulgated guidelines for writing industrial permits in a timely manner have contributed to the backlog. While expired permits are generally enforceable, they may not be accomplishing the level of pollution reduction envisioned by the Clean Water Act. For example, since the limits in expired permits focused on conventional pollutants, adequate control over toxic pollutants discharged by these permittees may not be accomplished until the permits are rewritten. This could take years considering the need for states and EPA regional offices to also handle new permit applications.

How large is the backlog of expired permits?

Most initial permits under NPDES were issued in 1973 and 1974 and were set to expire in 1978 and 1979. In October 1982, EPA reported that about 34,000 permits had expired or would expire before the end of 1982 and not been reissued. Of these, 29,614 (87 percent) involved minor dischargers and 4,385 (13 percent) involved major dischargers. Fifty-four percent of those permits had expired before January 1, 1981. Another 16,500 permits are scheduled to expire in calendar years 1983 and 1984.

The following table reflects the expired permit situation in the six states we reviewed.

Expired Permits as of June 30, 1982

State	Municipal: Expired permits Major[a]	Municipal: Expired permits Minor[b]	Municipal: Percent expired before 1/1/81 Major	Municipal: Percent expired before 1/1/81 Minor
Iowa[c]	10	67	20	39
Louisiana	18	211	100	95
Missouri[d]	4	72	75	58
New Jersey	26	15	46	67
New York[e]	-	-	-	-
Texas	16	634	94	94
Total	74	999	68	87

State	Industrial: Expired permits Major[a]	Industrial: Expired permits Minor[b]	Industrial: Percent expired before 1/1/81 Major	Industrial: Percent expired before 1/1/81 Minor
Iowa[c]	2	11	50	45
Louisiana	76	311	30	57
Missouri[d]	20	380	50	49
New Jersey	98	228	69	24
New York[e]	-	-	-	-
Texas	93	804	31	68
Total	289	1,734	45	56

[a]Major dischargers.
[b]Minor dischargers.
[c]Iowa data is as of September 1, 1982.
[d]Missouri data is as of September 7, 1982.
[e]Data unavailable for New York.

What caused backlog of expired permits?

Factors cited by EPA and State officials as contributing to the creation of the backlog of expired permits included the following:

--lack of best available treatment (BAT) guidelines on which to base effluent limits in industrial permits;

--difficulties establishing industrial permit effluent limits based on best professional judgment in the absence of BAT guidelines;

--shortage of resources to rewrite permits;

--permits not rewritten pending the development of general permits for certain industrial categories;

--low priority on rewriting permits of minor dischargers; and

--negotiation with permittees on effluent limits.

EPA and state officials said the lack of BAT guidelines was a factor contributing to the backlog of unreissued industrial permits. A brief discussion of the controversy surrounding their development follows.

The Federal Water Pollution Control Act Amendments of 1972 required that each industrial discharger meet effluent limitations based on the capability of the treatment technology available to that industry. Industrial dischargers were required to achieve best practicable treatment (BPT)--the average of the best existing waste treatment performance within each industry category or sub-category--by July 1, 1977, and the more stringent best available technology by July 1, 1983.

Concerned over the lack of progress toward meeting the above objectives, NRDC and other environmental groups sued EPA. In June 1976, the court approved a settlement which required EPA to develop BAT and other effluent guidelines for 65 classes of chemicals--subdivided into 129 "priority pollutants"--covering 21 industrial categories. The guidelines were to be promulgated during the period March through December 1979 to provide the industrial dischargers sufficient time to have the technology in place by the July 1, 1983, BAT deadline. In 1977, the Congress replaced the July 1, 1983, industry deadline for achieving BAT for all pollutants with a July 1, 1984, deadline for achieving BAT for the 129 priority pollutants.

As of March 1979, EPA had not proposed BAT guidelines for any of the 21 industrial categories. Consequently, on March 9, 1979, EPA and the other parties to the original settlement agreed to expand from 21 to 34 the number of industrial categories, and the court-sanctioned deadline for promulgating all BAT guidelines was extended from December 1979 to May 1981. As of August 1981, EPA had proposed BAT guidelines for 12 of the 34 industrial categories but had promulgated guidelines for only 1. In June 1982, EPA filed a revised schedule with the court as required, and in October 1982 the court approved the schedule requiring the

promulgation of effluent guidelines for the remaining industrial categories by June 1984. As of December 15, 1982, EPA had promulgated final BAT guidelines for 12 industrial categories, was allowed to exclude 10 industries, and was still required to promulgate guidelines for the remaining 17 industries by June 1984.

Various factors were cited as contributing to the delays described above. In a November 1981 report, EPA's Office of Inspector General stated that the program was extremely complex and in some cases the necessary analytical capability and methodology did not exist and had to be developed. The Inspector General also cited poor contractor performance, procurement problems, and bad data from industry as contributing factors. EPA's Office of Management Systems and Evaluation cited ineffective and redundant internal EPA review procedures as another factor delaying the guidelines.

What is the potential impact of not reissuing an expired permit?

Expired permits are generally enforceable with existing effluent limits if the discharger has reapplied for a permit in a timely manner. If these permits were rewritten, however, it is likely that many would contain stricter pollution limits, especially since the permits that have expired focused on controlling conventional pollutants and not toxics.

Tests conducted by EPA personnel in two of its regions showed that frequently toxics can have lethal effects on aquatic life. Results of samples taken at 551 industrial sites during the period 1975-82 showed that in about 62 percent of the cases the toxic chemicals in the discharge were sufficient to have a lethal effect on the aquatic environment in the stream. We were told by the Chief, Ecological Support Branch, Environmental Support Division, EPA Region IV, that in almost all cases the 551 sites had first-round permits and that second-round permits--if properly developed--would bring the toxic chemicals under control.

The Chief of the Permits Branch, EPA Region VI Water Management Division, estimated that 90 percent of second-round industrial permits would be more stringent, either by imposing limits on additional pollutants or by making more stringent the effluent limits on existing parameters.

In June 1982 EPA directed its regions to develop a list of priority permits they expected to issue during fiscal year 1983, with emphasis on facilities where water use impairment problems had been identified. Also, although the policy applied only to EPA-issued permits, it directed EPA regional offices to work with

the states to develop similar priority lists. The overall list subsequently compiled included 276 permits in various industrial categories. Interestingly, about 10 percent of the priority permits covered minor industrial dischargers. This indicates that minor dischargers--which account for 87 percent of the backlog--can have a serious impact on the quality of receiving waters. EPA acknowledged that some minor permits were included on the priority list when it was first developed and that some of these permits were subsequently reclassified as majors.

In commenting on the issue of expired permits, EPA stated that permits it issues are automatically extended when they reach their expiration dates, provided the discharger submitted a timely and complete application for a new permit. The same is true for many state-issued permits because many states have similar provisions in their laws. EPA agreed, however, that most "expired" permits need to be reviewed and modified to require control of toxic pollutants, to upgrade controls for conventional pollutants, to assure proper operation and maintenance is required, and to address other concerns that the "expired" permits do not adequately cover.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The NPDES permit program has been in existence for more than 10 years but is still experiencing problems that reduce its overall effectiveness in controlling water pollution from municipal and industrial point sources. As a result, the intended uses of some waterways for economic and recreational activities may be compromised. Equally important, the billions of dollars expended by federal, state, and local governments and industry to build needed facilities may not produce the desired benefits.

Noncompliance with NPDES permit limits by both municipal and industrial dischargers has been and continues to be a problem. Measured in terms of numbers of major dischargers exceeding their permit limits, the frequency of the noncompliance, and the margin by which permit limits are exceeded, the problem is significant. Correcting the varied causes of noncompliance can be costly and time consuming.

Although EPA and state agencies need to be informed promptly of permit noncompliance so that needed enforcement action can be taken, there are still numerous occasions when dischargers' self-monitoring reports are not submitted or are submitted incomplete. In addition, the performance of many laboratories preparing input for the dischargers' self-monitoring reports is unacceptable, and independent efforts by the states and EPA to verify the accuracy of these reports are being reduced or are already at low levels.

Enforcement of NPDES permit limits also poses problems. While the ultimate goal of the enforcement program is to ensure compliance with permit limits, current enforcement practices in many cases allow permit noncompliance to go on unabated for extended periods of time--in some cases, years. Noncompliance by municipalities poses special problems due to their reliance on federal funds to upgrade their treatment facilities. EPA does not have the authority to fine noncompliers directly without referring the matter to the Department of Justice for litigation. In addition, resource shortages at both the federal and state levels have translated into an overall reduction of enforcement efforts.

Finally, thousands of municipal and industrial dischargers--primarily minor dischargers--either have not applied for a permit or have applied and have not been issued a permit by EPA or the appropriate state agency. In addition, as of December 1982, about 34,000 NPDES permits had expired and had not been reissued. The failure of EPA to promulgate guidelines for writing pollution limits for industrial permits and resource shortages contributed to creating the backlog. It is likely that these expired permits,

if rewritten, would contain stricter pollution limits, since the expired permits focus mostly on conventional pollutants, not toxics.

In summary, we are concerned that if the permit program continues to exhibit its present high noncompliance rates and other shortcomings, dischargers may lose further incentive to operate treatment plants in accordance with their permits, knowing that little or no effective enforcement will occur. In addition, the many billions of dollars already spent to construct municipal and industrial treatment facilities will not realize their full potential.

We anticipate that the program's problems will continue because the underlying causes of many of these problems lie in the area of limited resources at both the federal and state levels. The discharge monitoring reports need continual independent assessments of accuracy and completeness. Laboratory data need improvement. Stronger enforcement against permit noncompliance is needed. Expired permits need rewriting to include toxics control and to update conventional pollutant levels. The backlog of permit applications needs attention. All these improvements are resource intensive. What can be expected, therefore, in the foreseeable future of the permit program is continued high noncompliance and inadequate enforcement unless significant resources are directed to the program.

Some improvements in the program are possible, however, without substantial additional resources. These include use of innovative techniques to encourage permit compliance, requiring followup on missing or incomplete discharge monitoring reports, issuing guidance on use of informal and formal enforcement measures, and better use of laboratory test results.

RECOMMENDATIONS TO THE ADMINISTRATOR, EPA

We recommend that the Administrator, EPA, determine to what degree limited resources contribute to continued high noncompliance and enforcement problems in the permit program and present this analysis to the Congress for its consideration in determining whether additional resources should be provided to improve the program's effectiveness.

To address problems in the NPDES permit program that can be mitigated without substantial additional resources, we recommend that the Administrator, EPA:

--Develop information on New York State's subsidy program for treatment plant operation and maintenance to determine if the program does in fact improve compliance rates. If significant contributions have been made by the subsidy program, EPA should communicate the results of the program to all the states.

--Require EPA regional offices and encourage the states to follow up in a timely manner on missing and incomplete discharge monitoring reports.

--Provide trend data from EPA's Laboratory Quality Assurance Program to regions and states to help them upgrade the quality of performance of laboratories providing data for discharge monitoring reports.

--Issue guidance to EPA regions and states which establishes specific time frames when voluntary compliance efforts should end and when formal enforcement measures should be undertaken.

--Submit legislative proposals to the Congress which would give EPA authority to assess monetary penalties for permit noncompliance.

AGENCY COMMENTS AND OUR EVALUATION

EPA did not comment on the recommendations included in the draft report. With respect to the resources issue, however, EPA commented that most, if not all, of the resource problems for permits and enforcement discussed in the report will be substantially resolved starting in fiscal year 1984 as a result of resource allocations approved by the Congress. EPA pointed out that the Congress has added $295 million to EPA's budget request for fiscal year 1984 and that water permitting and enforcement activities would likely receive an additional allocation of resources from this pool.

Information EPA provided us subsequent to its comments showed that permit issuance activities would receive an additional 69.5 staff years and $2.2 million. EPA water enforcement activities, however, did not receive any additional resources. Also, the Section 106 Grant Program, which states use to fund water quality program management activities, including permit and enforcement activities, would receive an additional $30.2 million.

The allocation of additional funds to EPA permit issuance activities and the Section 106 Grant Program should help to address some of the problems discussed in our report. However, the fiscal year 1984 funding level for water enforcement will remain at $13.6 million, or $5.6 million less than the $19.2 million EPA spent on water enforcement during fiscal year 1981. Thus the enforcement problems which are discussed in chapter 4 will likely continue.

Although the supplemental fiscal year 1984 funds for permit issuance and other permit program activities should help, the question still remains as to whether the resources committed to these activities at the federal and state levels are sufficient to overcome the problems discussed in our report. The Chief, Water Branch, EPA Office of the Comptroller, told us that a workload

model was used in determining the additional resources allocated to permit issuance and that in his opinion, these additional resources should be sufficient to eliminate the backlog of unissued permits by the end of fiscal year 1985 in states where EPA administers the program. The Chief also told us that EPA has not, to his knowledge, determined whether the resources allocated to the states are sufficient to carry out the permit issuance and enforcement activities.

We believe that our recommendation that EPA determine what impact limited resources have had on the compliance and enforcement aspects of the permit program and present this analysis to the Congress is still valid.

APPENDIX I

SUMMARY OF NPDES PERMIT NONCOMPLIANCE

BY SELECTED DISCHARGERS DURING THE

PERIOD OCTOBER 1, 1980, TO MARCH 31, 1982

State	Discharger type	Sample size	At least one noncompliance instance, concentration or quantity	Percent of dischargers with at least one noncompliance instance	Significant noncompliers	Significant noncompliance as percent of total noncompliers
Iowa	Municipal	38	36	95	13	36
	Industrial	25	20	80	4	20
Louisiana	Municipal	38	33	87	15	45
	Industrial	50	40	80	5	13
Missouri	Municipal	43	39	91	15	38
	Industrial	37	33	89	8	24
New Jersey	Municipal	51	44	86	17	39
	Industrial	49	37	76	12	32
New York	Municipal	50	43	86	20	47
	Industrial	50	38	76	9	24
Texas	Municipal	54	43	80	8	19
	Industrial	46	38	83	4	11

APPENDIX II

SUMMARY OF FREQUENCY OF NPDES PERMIT NONCOMPLIANCE BY SELECTED DISCHARGERS DURING THE PERIOD OCTOBER 1, 1980, TO MARCH 31, 1982

State	Discharger type	Sample size	Frequency in months: 1 to 3 C[a]	1 to 3 Q[b]	4 to 6 C	4 to 6 Q	7 to 9 C	7 to 9 Q	10 to 12 C	10 to 12 Q	Over 12 C	Over 12 Q	Total dischargers C	Total dischargers Q
Iowa	Municipal	38	9	7	7	4	3	7	5	2	10	9	34	29
	Industrial	25	8	1	4	2	2	2	3	1	3	1	20	7
	Total	63	17	8	11	6	5	9	8	3	13	10	54	36
Louisiana	Municipal	38	3	3	5	5	4	5	8	2	13	9	33	24
	Industrial	50	13	15	9	4	5	5	4	1	2	5	33	30
	Total	88	16	18	14	9	9	10	12	3	15	14	66	54
Missouri	Municipal	43	11	0	7	0	8	0	2	0	11	0	39	0
	Industrial	37	11	8	4	1	5	2	4	1	6	1	30	13
	Total	80	22	8	11	1	13	2	6	1	17	1	69	13
New Jersey	Municipal	51	10	11	6	8	5	3	7	6	11	5	39	33
	Industrial	49	8	12	4	8	3	3	1	5	3	5	19	33
	Total	100	18	23	10	16	8	6	8	11	14	10	58	66
New York	Municipal	50	12	6	2	5	4	4	6	0	19	6	43	21
	Industrial	50	13	14	12	5	4	2	1	6	5	1	35	28
	Total	100	25	20	14	10	8	6	7	6	24	7	78	49
Texas	Municipal	54	14	17	8	7	6	1	7	3	6	4	41	32
	Industrial	46	19	13	9	4	3	5	0	1	1	1	32	24
	Total	100	33	30	17	11	9	6	7	4	7	5	73	56
Total	Municipal	274	59	44	35	29	30	20	35	13	70	33	229	139
	Industrial	257	72	63	42	24	22	19	13	15	20	14	169	135
	Total	531	131	107	77	53	52	39	48	28	90	47	398	274

[a]C=concentration.
[b]Q=quantity.

APPENDIX III

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 18 1983

OFFICE OF
POLICY AND RESOURCE MANAGEMENT

Mr. J. Dexter Peach
Director
Resources, Community and
Economic Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

The Environmental Protection Agency (EPA) has reviewed the General Accounting Office (GAO) draft report entitled "Widespread Noncompliance With EPA Water Pollution Control Permits Exists." Public Law 96-226, as you know, requires the Agency to review and comment on the draft report. Because the definition used by GAO to determine noncompliance in this report is fundamentally different from that used by EPA, the GAO provided the Agency with some additional time to analyze the GAO data using its own standard methods and definitions. We wish to thank GAO for this exceptional courtesy.

We are providing below our general comments on this report along with specific comments on various matters of concern to the Agency. In addition, we are providing further, more detailed comments which we are referencing to specific pages of the report in an enclosure. I hope all of this information is helpful to you and your staff as you prepare your final report.

Generally, EPA finds the draft report to be a useful document in a number of important areas. It accurately reflects the current status of our effort to issue "second round" National Pollutant Discharge Elimination System (NPDES) permits, and documents some of the major causes of the problem we are currently experiencing with permit backlogs -- past delays in issuing effluent guidelines and, more recently, the need for increased resources. In addition, the report points out the necessity for the Agency to exercise careful and continuous oversight of our compliance reporting system. Because the Agency must rely on voluntary compliance reporting by regulated municipal and industrial sources, potential for false reporting or non-reporting does exist if EPA and the State agencies to whom the program has been delegated do not exercise appropriate care in policing the system. This is a large and complex undertaking and we believe that a number of the comments GAO has made in the draft report will be helpful to us as we make further refinements in our compliance reporting system over the next several months.

Notwithstanding our basic agreement in these areas, however, we do have serious concerns with the compliance section of the draft report as written. Our review of the data in the report's compliance section has led us to a conclusion that is markedly different from that reached by GAO. Hence, we have major reservations concerning the wording of that section of the draft and the Executive Summary of the report as currently written. Using GAO's data base and our own standard definition of significant noncompliance, we derive substantially higher national rates of compliance than does the draft report. EPA was provided the data base used in the report by GAO on July 22, 1983, and utilized it to develop compliance rates based on EPA's definition of "Significant Noncompliance." We are enclosing a summary of findings resulting from this analysis for your perusal. In summary, using EPA's definition of significant noncompliance and applying it to the GAO data base, we found the composite noncompliance rates to be seven to twelve percentage points lower than the composite rate indicated in the GAO draft report. We are assuming these differences in reporting on compliance rates for the water permit program will be acknowledged and appropriately discussed in the final GAO report.

The basic issue here is the fact that the GAO report uses a different definition of significant noncompliance than does EPA. Hence, GAO's draft report yields results quite different from those reported by EPA. The draft report states that the definition of noncompliance used by GAO is "more conservative" than EPA's, and would probably produce a smaller number of permittees in noncompliance than would the use of EPA's definition. This does not appear to be the case, in that it is obvious the GAO report used an 18-month cumulative definition of compliance, while EPA always measures compliance at a specific point in time (the end of the quarter).

By using an 18-month cumulative period for determining noncompliance, the draft report would show a facility which was out of compliance at the beginning of the 18-month period (and then brought back into compliance as a result of Federal or State action), as still not in compliance. This approach inflates the total percentage of facilities labeled "not in compliance" since it is obvious that all of the facilities reported by GAO as being in significant noncompliance were not in violation at the same time, but were spread out over the full 18-month period.

It is more accurate to say that GAO is measuring cumulative noncompliance for the 18-month period covered in the draft report. But the report, as written, does little to make this crucial distinction apparent to the reader. More importantly, there is language in the draft report's Executive Summary that is somewhat misleading in its implications for the Agency's water compliance program. This language ought to be revised since it could prompt speculations about the integrity of our compliance reporting systems that simply are not accurate. The fact is our own data show slow, but continuous improvement in compliance rates for major municipal and industrial sources during the period covered by the draft report and for the past 20 months since GAO stopped collecting compliance data. We hope that GAO will take appropriate notice of these conclusions when drafting its final report.

With respect to the draft report's discussion on our program for Discharge Monitoring Report-Quality Assurance (DMR-QA), we understand that GAO intends to revise some of its current language in response to comments presented by EPA. These revisions should include data from DMR-QA Study 2 and data on the total number of acceptable analyses currently being performed in permittees' laboratories. While it is indeed true that only 32% of the permittees surveyed were able to analyze all of the performance samples they were given, almost 75% of all analyses performed by permittees under this program were within the acceptable limits established by our laboratory. Language currently in the draft report seems to imply that 68% of the data received from permittees could be considered inaccurate when the data really implies that only 25% of the permittee data may be of questionable precision and accuracy. Furthermore, the draft report could have taken more notice of the significant, on-the-record improvements that were made between the first and second quality assurance studies conducted by EPA. In the second study, carried out last year after numerous actions had been taken on deficient permittees, the acceptance rates improved to the 80% level for all analyses, with 42% of all permittees submitting data that was completely acceptable for all of the analytical parameters. As a matter of current emphasis, we believe that some acknowledgement of this improving trend should also be included in the final report.

Chapter 2 of the draft report correctly states that operation and maintenance (O&M) problems are a significant cause of noncompliance and goes on to cite New York's O&M subsidy program as a noteworthy and innovative initiative that has led to improved compliance in that State. Without in any way denigrating New York's effort -- which does what GAO says it does -- there are activities underway at EPA in this area which should not go unrecognized. Among these are the Office of Water Program Operations' certification and training programs which have been set up to ensure that

publicly owned treatment works (POTWs) meet permit requirements. The certification program (required by section 204(d) of the 1981 amendments to the Clean Water Act) requires that, after one year of operation, the municipality operating the POTW affirmatively certify that a POTW is meeting its design specification and permit requirements. Should a POTW not meet these requirements, and not submit a certification, it would be necessary for the municipality to take corrective actions, at other than Federal expense, so that the facility can meet these requirements. Under section 104(g)(1) of the Clean Water Act, EPA also has established a program which trains State personnel to diagnose treatment plant process operation and design problems and a program to provide on-site operation and management training to correct problems at facilities that are out of compliance. EPA has developed a program which utilizes computerized diagnostic tools and is aimed primarily at effluent predictive modeling for small Federally funded facilities. Under section 109(b) of the Clean Water Act, EPA has provided funds and assisted 28 States and Territories in constructing training facilities to train POTW operators.

Generally, the report (especially in Chapter 5) accurately reflects the current status of permit issuance and identifies the major reasons for permitting backlog problems -- past delays in issuing effluent guidelines and more recently, the need for increased resources. We believe that most, if not all, of the resource problems for permits and enforcement discussed in the GAO report will be substantially resolved starting in FY 1984 as a result of resource allocations requested by the Agency and approved by Congress. The draft report's discussion of this issue was based on budget figures used in the President's February 1983 budget submission to Congress (for FY 1984). Since that time, however, Congress has added $295.5 million and 1,100 permanent workyears to the Agency. Of that amount, 800 workyears and the necessary salaries and expenses are to be allocated for operating programs. Water permitting and enforcement activities are likely to receive an additional allocation of resources from this pool. While the exact amount applicable to this program is still being determined, the Administrator intends to decide on this matter by the end of August.

Once again, we are grateful for the extraordinary degree of courtesy shown to us by GAO in permitting review by Office of Water Enforcement and Permits staff of the data used by GAO in the draft report.

We appreciate the opportunity to provide comments on this draft and express the hope that GAO will take appropriate notice of our contributions in its preparation of the final report.

Sincerely yours,

John M. Campbell, Jr.
Acting Associate Administrator
for Policy and Resource Management

Enclosures

1) OWEP Analysis of GAO Data Base
2) Specific Comments on GAO Draft Report

APPENDIX III

ENCLOSURE 1

FINDINGS
OWEP Review of GAO Data Base

In analyzing permittee discharge data for their report "Widespread Noncompliance with EPA Water Discharge Permits Exists", GAO developed and used a definition of significant noncompliance different than the definition used by EPA. The GAO version is: "Exceeding permit limits for one or more pollutants by 50 percent or more in at least four consecutive months during the 18-month review period."

The Office of Water Enforcement and Permits (OWEP) examined the discharge data of the same permittees reviewed by GAO using the same 18-month period (October 1980 through March 1982), but analyzed the data as normally prepared for the NPDES Quarterly Noncompliance Reports. This QNCR data is the basis for all reports on the progress of the NPDES program. Our normal analysis uses the definition of significant noncompliance developed by OWEP, which considers both the duration and magnitude of violations. Compliance status reported under the OWEP definition of significant noncompliance is a snapshot of compliance at the end of each quarter. Thus, when significant noncompliance is resolved by the end of the reporting period, it is not counted.

The results of our evaluation indicate that the GAO definition of significant noncompliance produces higher noncompliance rates. It should be noted, however, that in EPA's evaluation only those permittees on final effluent limits (i.e., effective statutory) were included in the significant noncompliance statistics. Permittees on interim limits are normally under construction. They are building facilities to meet final limits, and their compliance status is measured against their progress in meeting their construction schedules. GAO considered permittees on both interim and final limits. In the GAO sample there were 531 permittees. EPA's sample excluded those facilities on interim limits (133) and, therefore, our sample totalled 398.

Using their definition, GAO found that the overall noncompliance rate for the 18-month period reviewed was 29%. Using the EPA definition to evaluate the data in the same manner our reports are normally prepared, OWEP found generally lower noncompliance rates as follows:

[GAO NOTE: Some page references have been changed to reflect those in the final report.]

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ENCLOSURE 1

	Municipal	Industrial	Total Municipal and Industrial Composites
March 1981	30%	14%	22%
June 1981	24%	14%	19%
September 1981	25%	10%	17%
December 1981	27%	11%	19%
March 1982	35%	10%	22%

These data indicate that significant noncompliance in the municipal area was a major concern. The most recent data show significant improvement in municipal compliance. As of March 1983, municipal significant noncompliance with final effluent limits for all major permittees in the six States examined by GAO was 13% and industrial significant noncompliance with final effluent limits was 8%, using OWEP's definition. The composite of all major permittees, both industrial and municipal in significant noncompliance in the six States as of March 31, 1983, was 10%.

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ENCLOSURE 2

Specific Comments on the GAO Draft Report, "Widespread Noncompliance With EPA Water Pollution Control Permits Exists"

Page v, first paragraph. There is an error where "chemicals and heavy metal" are referred to as "non-toxics".

Page 1. The draft report accurately refers to "best practicable waste treatment technology," which the 1972 Clean Water Act required municipal dischargers to meet by July 1, 1983. The report should note that some municipalities (those not eligible for sections 301(i) extensions) are still required to meet the original Clean Water Act July 1, 1977 deadline, while others (those eligible for section 301(i) extensions) may have extension of the deadline to July 1, 1988.

Pages 3 and 4. We recommend that GAO delete the section of its analysis from the draft that links major decreases in the overall water budget with increases in noncompliance in its six State sample. Most of the major resource decreases since FY 1981 in the water program had no effect on permits or enforcement, such as the decrease of $33.5 million in section 208 grants and large decreases in construction grant workyears due to increasing delegation of this program to the States.

For these reasons, GAO should carefully draw its conclusions about parallel decreases in overall water program funding and increases in noncompliance rates. GAO should not compare the decreases in these areas to resource problems associated with noncompliance rates. Following are the actual decreases in the permits and enforcement areas as displayed in the FY 1984 President's Budget.

Permits & Enforcement

Fiscal Year	Permits		Enforcement	
	PFTE	Total $M	PFTE	Total $M
1981	209	$11.4	454	$19.2
1982	177	11.7	441	17.6
1983	202	11.1	326	13.4

Note: In 1982 $1.4 million was moved from Enforcement to the Office of Legal & Enforcement Counsel.

Total decreases for permits and enforcement from FY 1982 to FY 1983 total $4.8 million and 90 PFTE.

As noted earlier, Federal section 106 grants for State water programs remained constant for the three-year period studied by GAO. GAO did not consider increased state grant support under sections 205(g) ($6-7 million annually) and 205(j) (for monitoring) grants for permitting, enforcement, and monitoring in its discussion of section 106 support for these activities. EPA estimates of grant use are that these activities will be funded at constant or increasing levels.

Page 7, first paragraph last sentence. This sentence is misleading and paints a false picture of historical trends. The number of major facilities in compliance has increased and many water bodies have had their uses restored over the past several years.

Pp.17-18. At the time this document was being drafted, Discaharge Monitoring Report-Quality Assurance (DMR-QA) studies 1 and 2 had been completed relative to analysis of performance evaluation samples. Analytical performance appeared to be poor, as reported by GAO. However, in follow-on audits of the poor-performing laboratories, EPA's Regional inspectors found that many of the laboratories which had been identified to have poor performance, actually made only reporting errors. Reporting errors effect the quality of the DMR data base, but do not reflect on the analytical accuracy of the laboratories. The exact number of laboratories identified with only reporting errors is not yet available.

Page 19, second paragraph. DMR-QA study 3 is well under way and data reduction from the performance evaluations may be available in August 1983. It will be of great interest to see how much improvement there is in data quality due to expected reductions in reporting errors. Further, the apparent improvement in analytical proficiency shown between studies 1 and 2 will, hopefully, be verified in study 3.

Page 19. The statement "...only the compliance sampling inspection verifies the accuracy of DMR data." is incorrect. Both compliance evaluations inspections and performance audits are conducted to verify DMR data by analyzing records and procedures used to develop the data. This procedure provides a less resource intensive alternative to compliance sampling inspection and thus allows greater coverage.

APPENDIX III

ENCLOSURE 2

Page 26. The draft report states that "both EPA and the States have had a general policy that exempts from enforcement municipalities that have applied for federal funds to upgrade existing or build new treatment facilities." The report should explain that there is no identifiable written EPA policy to this effect, but, that as a matter of fact, EPA and the States have not generally required municipalities to construct treatment works unless Federal grant funds were available. The report correctly notes, on page 26, that EPA's draft National Municipal Policy would change this approach. The report should also note that EPA has already brought several enforcement actions in the past year which reflect this new approach.

Pages 30-31. The report correctly notes that EPA should have authority to assess administrative penalties for permit violations, and that EPA sought such authority from Congress in 1982. The report should update this comment by noting that the new Administrator also supports this legislative initiative, and that such a provision has passed the Senate subcommittee, and will be considered by the entire Senate this session.

Page 32. The report states that since EPA and the States have not acted on many permit applications, those applicants "can continue to discharge wastes without the pollution limits and the monitoring requirements of permit." The report should explain that submission of a permit application does not give a new discharger the legal right to discharge before a permit is issued and becomes effective. As a practical matter, however, it is unlikely that EPA would bring an enforcement action against such a facility if (a) it submitted a timely application, (b) it is an existing facility and not a new discharger, and (c) it is meeting the effluent limitations and other requirements that would be imposed in a permit.

Pages 32, 39, and elsewhere in the report. The report refers to backlogs of "expired" permits. The report should expand its discussion beginning on page 39, by explaining that EPA-issued permits which reach their expiration dates are automatically extended under 5 U.S.C. section 558(c), provided that the discharger submitted a timely and complete application for a new permit. Thus, the effluent limitations, monitoring requirements, and other requirements of the "expired" permit continue to be enforceable. The same is true for many State-issued National Pollutant Discharge Elimination System (NPDES) permits, because many States have similar provisions in their State laws. However, it is true that most "expired" permits need

to be reviewed and modified to require control of toxic pollutants, to upgrade controls for conventional pollutants, to assure proper operation and maintenance is required, and to address other concerns that the "expired" permit does not adequately cover.

Page 34, Table. The significance of the statistics quoted for the category "applications received before January 1981 that have not received permits" is somewhat unclear. The data from the GAO survey of the six states seems to indicate that EPA's numbers for "unissued" major permits may be too high, and EPA's numbers for "unissued" minor permits may be low. This highlights for us an issue and a possible problem that the Office of Water Enforcement and Permits (OWEP) will now focus on resolving by determining if EPA's permit compliance systems (PCS) information on older applications is still valid. After such a review, we will determine what the actual permit backlog numbers should be, adding any of these that still must be issued to the current total. If the data are no longer valid, PCS will be corrected.

Pp.39-40. The discussion concerning minor permits on the permit priority list should be clarified. The report indicates that, since these permits are on the priority list, minor may be a misnomer and, in fact, they could have a serious impact on water quality. The report should indicate that although some minor permits were included on the priority list when it was first developed, these minors were subsequently either reclassified as majors or dropped from the list.

APPENDIX IV

U.S. Department of Justice

Washington, D.C. 20530

August 10, 1983

Mr. William J. Anderson
Director
General Government Division
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Anderson:

This letter responds to your request to the Attorney General for the comments of the Department of Justice (Department) on your draft report entitled "Widespread Noncompliance With EPA Water Pollution Control Permits Exists."

The draft report to the Congress addresses the Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES), thus involving primarily the activities of that Agency. However, GAO has asked that the Department focus particularly on those portions of the report concerned with Justice's litigation of NPDES cases, which are discussed at page 31 of the draft, and on the report's conclusions and recommendations, which are discussed at pp. 41 and 42.

Based on our review, we believe GAO's report presents a very comprehensive analysis of dischargers' compliance with their NPDES permits, and documents evidence of major and widespread noncompliance and enforcement problems. On the whole, the report appears to be an objective and accurate appraisal based upon an examination of a random sample of over 500 major dischargers. However, those sections dealing with the case referral process, that is, EPA's referral of cases to the Department for litigation, are not on a par with the rest of the report. In fact, those sections are not entirely accurate, are harmful of our client relations and, most significantly, could undermine our enforcement efforts on EPA's behalf. In short, we feel very strongly that the problems with that section of the draft, particularly page 31, are so extensive as to be irremediable. This memorandum first suggests several revisions or deletions we strongly recommend be made in the report, then outlines our concerns with GAO's analysis relating to EPA's referral of cases to the Department for litigation at pages 31, 41 and 42 of the report.

Recommended Report Revisions and Deletions

1. The last two full paragraphs on page iii should be revised to read:

   "At the present time, EPA can issue administrative orders but cannot assess fines directly for permit violations and must refer all such cases to Justice for litigation. This is a time consuming and expensive process, particularly for small cases. Authorizing EPA to assess fines would maximize the deterrent effect of the Agency's actions.

[GAO NOTE: Some page references have been changed to reflect those in the final report.]

"In the past, EPA referrals of cases involving permit violations were not always timely and data included in the referral package was often a year or more old. EPA officials agree that some improvements can be made in the quality and timeliness of permit violations referred for formal civil or criminal prosecution."

2. The definition of "Point sources" in the Glossary should be revised to read: "Specific sources of pollution from any discernible, confined or discrete conveyance, such as a pipe, ditch or other conduit."

3. The definition of "Toxic substances" in the Glossary is not consistent with § 502(13) of the Clean Water Act, 33 U.S.C. § 1362(13), which does not embody an "unreasonable risk" element.

4. The first sentence in the third para. on p. 1 should be revised to read: "Municipal dischargers were to meet secondary treatment requirements by July 1, 1977, with extensions available to July 1, 1983 under the 1977 amendments, and to July 1, 1988 under the 1981 amendments."

5. In the first para. on p. 13, GAO states that they reviewed prior studies performed by EPA, GAO and the Natural Resources Defense Council in the area of noncompliance with permit limits. Specific identification of these studies would be helpful to us and to others who would like to refer to them.

6. The "Referrals to Justice" reported in the table on page 25 are incorrect. The figures for 1980 should be 43, 1981 should be 32, and 1982 should be 32.

7. The last two sentences in the third paragraph on page 30 should be revised to read:

"If EPA believes a discharger should be fined, the case must be referred to the Department of Justice for litigation, regardless of the size of the case and the nature of the violation. This is a time-consuming and expensive process and does not have the same deterrent effect as swift assessment and collection of penalties."

8. The second paragraph on p. 31 refers to EPA's proposed draft amendments to the Clean Water Act and indicates the proposal is awaiting action by the new Administration. We recommend this section be updated to reflect the current status of EPA's proposal.

9. We recommend the entire section on page 31 pertaining to "referrals to the Department of Justice" be deleted.

10. The fourth sentence in the last paragraph on page 41 should be revised to read: "EPA does not have the authority to fine violators directly without referring the matter to the Department of Justice for litigation."

11. The fifth recommendation to the Administrator, EPA, on page 42 should be deleted.

[GAO COMMENT: In our draft report, we recommended that the Administrator, EPA, work with the Department of Justice to improve procedures for referring permit noncompliance for civil or criminal prosecution. This recommendation was based on the comments made by the Justice officials concerning the types and timeliness of EPA case referrals. Since Justice commented that EPA case referrals are now more timely and better supported, we are not making any recommendation for improving case referral procudures.]

Discussion of EPA Case Referrals to the Department

The draft report identifies two factors which could improve the effectiveness of NPDES enforcement efforts. They are: (1) providing EPA with statutory authority to assess penalties administratively, and (2) improving the quality and timeliness of referrals to the Department. We concur with EPA's need to be able to levy penalties administratively and have supported EPA's current proposal to amend the Clean Water Act to provide for such authority. The section of the report entitled "EPA should have authority to assess monetary penalties for permit violations" (p. 30) is essentially acceptable, although we have made some minor language changes to underscore the significance of this important tool. However, as indicated below, we take issue with many of the statements made about EPA's case referrals to the Department and with the recommendations made in the report.

1. The section on case referrals is historical, and not reflective of the current state of referrals.

In researching this section, the GAO investigator interviewed the Chief, Environmental Defense Section, and an Assistant Chief, Environmental Enforcement Section, of the Land and Natural Resources Division. Those interviews were conducted well over a year ago. Consequently, in many respects the report is out of date. As noted by EPA's Associate Enforcement Counsel, in the last year, EPA has placed greater emphasis on enforcement actions and the quota system referred to in the report does not exist. Moreover, of late, many of EPA's referrals have been more timely and have included current discharge monitoring reports (DMR) and inspection reports. Unlike the position the Department advocated a year ago, we no longer consider early Justice involvement in all NPDES cases warranted.

2. The section on case referrals is neither objective nor thorough, and not on a par with the high caliber of the other portions of the report.

Unlike the other sections of the draft report, which reflect a detailed analysis of a random selection of dischargers, this section is apparently based only on personal interviews with four individuals: two individuals from the Department, and two from EPA. The investigator did not review specific cases which were litigated or settled, but rather based his conclusions on the subjective views of these four individuals. As the section indicates, and as one might expect, the views of the two individuals from the Department and the two individuals from EPA are not entirely in accord and the discussion in the report takes on the adversarial back and forth of a tennis match. Even assuming these statements were timely and correct, we consider this report and this debate-like approach an inappropriate vehicle for communication of the Government's views on enforcement.

Moreover, the section on referrals takes many of the Department's statements out of context and presents an unnecessarily and incorrectly negative view of the process. (The investigator only asked us to criticize EPA.) The report treats summarily and without analysis a few aspects of a multifaceted process. It considers only (1) an ostensible quota system for case referrals, which rewards the EPA regions for the number of cases without regard to case merit, (2) EPA's heavy reliance on DMR's for determining

compliance, and (3) EPA's failure to use Section 308 of the Clean Water Act, which is its statutory information gathering authority; and on the basis of these considerations concludes that EPA should improve the timeliness and quality of referrals. Clearly, this conclusion is not well documented. These three topics and the report's sketchy and negative consideration of them do not do justice to a highly complicated process.

3. The discussion is harmful of client relations.

We understand that EPA's Enforcement Counsel has already complained about our comments. In view of our recent efforts to improve our working relationship with EPA and our success in that regard, we should not allow this one report to jeopardize an ongoing, long-term relationship, especially in light of the major inaccuracies in the report.

4. The section undermines the deterrent effect of the Department's enforcement effort.

By highlighting the Department's ostensible criticism of the referral process and the quality and timeliness of referrals, the report undermines the deterrent effect of our efforts to bring violators into compliance with the law. The report does not refer to our accomplishments--favorable precedent setting, hard fought litigation and numerous settlements--and consequently, minimizes what we have already accomplished and can accomplish in the future. By acknowledging problems inherent in the referral process to the regulated community, the report will make litigation a less serious threat, thereby making it more difficult to resolve cases amicably.

In summary, this section of the report is neither accurate nor constructive. In fact, it detracts in large measure from a report grounded in well-reasoned analysis and thorough investigation. The section on referrals adds nothing in substance to the report. Therefore, we have strong objection to the report's treatment of the case referral process on page 31 of the report and the related conclusions and recommendations on pages 41 and 42 of the report.

* * * * * * *

In concluding our remarks, we strongly urge that GAO, for the reasons identified above, excise p. 31 of the report and modify the conclusions accordingly. Should you desire to meet with Department officials to further discuss the seriousness of our concerns, please feel free to contact me.

We appreciate the opportunity given us to provide comments on the report at this stage of its development.

Sincerely,

Kevin D. Rooney

Kevin D. Rooney
Assistant Attorney General
for Administration

(089192)