

United States
Environmental Protection
Agency

Office of Air Quality
Planning and Standards
Research Triangle Park, NC 27711

EPA-450/2-91-011
June 1992



**REGULATORY IMPACT ANALYSIS
AND
REGULATORY FLEXIBILITY ACT
SCREENING
FOR
OPERATING PERMITS
REGULATIONS**



REGULATORY IMPACT ANALYSIS
AND
REGULATORY FLEXIBILITY ACT
SCREENING
FOR
OPERATING PERMITS REGULATIONS

By

Rosalina M. Rodriguez
Ambient Standards Branch

Air Quality Management Division

U.S. Environmental Protection Agency
Region 5, EPA-509 (909)
77 West Jackson Boulevard, 12th Floor
Chicago, IL 60604-3590

Office Of Air Quality Planning And Standards
Office Of Air And Radiation
U. S. Environmental Protection Agency
Research Triangle Park, NC 27711

June 1992

This report has been reviewed by the Office Of Air Quality Planning And Standards, U. S. Environmental Protection Agency, and has been approved for publication. Any mention of trade names or commercial products is not intended to constitute endorsement or recommendation for use.

ACKNOWLEDGEMENTS

The author wishes to acknowledge the assistance and supervision in preparation of this document of Allen Basala, Chief of the Economic Analysis Section. Technical support was provided by staff of the Economic Analysis Section and the Operating Permits Section, and by the Radian Corporation. Questions and comments on the document should be directed to the author:

**Rosalina M. Rodriguez
Telephone (919) 541-5298/FTS 629-5298
Economic Analysis Section
Ambient Standards Branch
Air Quality Management Division (MD 12)
Office Of Air Quality Planning And Standards**

EPA-450/2-91-011

TABLE OF CONTENTS

I. INTRODUCTION AND SUMMARY 1

II. THE NEED FOR AND CONSEQUENCES OF REGULATORY ACTION . . . 4

III. ALTERNATIVES EXAMINED 7

IV. ANALYSIS OF FEES, NUMBER OF SOURCES AND PAPERWORK
COSTS 10

V. ECONOMIC IMPACTS, REGULATORY FLEXIBILITY ANALYSIS,
AND PAPERWORK REDUCTION ACT ANALYSIS 22

VI. BENEFITS OF TITLE V 32

VII. NET BENEFITS 34

APPENDIX A 35

I. INTRODUCTION AND SUMMARY

A. MAJOR FINDINGS

Implementation of Title V requirements with this rulemaking will provide many benefits that will strengthen the framework for air quality management. The estimated annualized cost of such a program is nontrivial, amounting to over \$526 million in direct paperwork cost and fees. However, the use of statutory options such as general permits and deferred applicability will avert the potential for adverse impacts in many instances and mitigate this potential in other cases. Many States already have operating permit systems with fee provisions in place. Consequently, for affected sources in those States, the suggested cost and relative impacts may be overstated. A brief overview of the analysis is provided below.

B. RULE CLASSIFICATION AND ANALYTICAL METHODOLOGY

The estimated cost of this rule is anticipated to be in excess of \$100 million annually. According to Executive Order 12291, rules with such costs are classified as major and require a regulatory impact analysis.

The objective of Executive Order 12291 is to assess the cost-effectiveness and economic efficiency aspects of major rules to help encourage promulgation of rules with stronger economic attributes while not departing from the Congressional mandate under which the rules were developed.

By assuming no regulatory discretion for these rules and no existing operating permit programs in place, the analysis identified the potential consequences of not considering cost-effectiveness and economic efficiency. The potential consequences were adverse, especially for smaller entities. The discretionary regulatory measures averting and/or mitigating these adverse impacts adopted in this rulemaking were identified.

C. NEED FOR REGULATION

Chapter II describes the legal and economic arguments for the operating permits rule developed under Title V of the Clean Air Act (Act). This chapter also identifies the scope of this rule and distinguishes it from other requirements mandating the use of pollution control equipment.

D. ALTERNATIVES EXAMINED

Chapter III describes the regulatory options available in this rulemaking. These options include specific source permits, general permits, and deferred applicability.

E. ANALYSIS OF COSTS

Chapter IV includes the estimated explicit cost to the permitted sources, State and local permitting agencies, and the U.S. Environmental Protection Agency (EPA). The costs to the sources include the administrative burden in securing and modifying operating permits and permit fees designed to cover the costs that State and local agencies incur in administering the operating permit program. The costs to the State and local agencies are financed by the fee program and includes review of applications as well as issuance of permits. The costs to the EPA includes oversight on program implementation, permit issuance, and data management. The cost estimate excludes opportunity costs associated with any production delays attributed to permitting. The EPA has no data to quantify such costs.

Cost estimates are developed for the first 3 years¹ as well as the first 5-year period subsequent to rule promulgation. These estimates are summarized as follows:

| | <u>First 3 Years</u> | <u>First 5 Years</u> |
|-----------------|----------------------|----------------------|
| Sources | \$0 | \$512 Million |
| State and Local | \$26 Million | \$160 Million |
| U.S. EPA | \$3 Million | \$14 Million |

The estimates are equivalent annual costs. The assumed real interest rate for investment cost is 10 percent. Recognize that the above 5-year cost estimates are not additive. The State and local cost is financed by fee revenues collected from the sources. The total for the 5-year annual cost estimate is \$526 million.

F. REGULATORY FLEXIBILITY ANALYSIS

The Regulatory Flexibility Act requires Federal agencies to review the effects of their regulations on small entities. The analysis was conducted according to the analytical methodology

¹The Information Collection Request (ICR) required under the Paperwork Reduction Act is approved for a maximum of 3 years immediately following promulgation of the rule.

described in Section B and is discussed further in Chapter V. The major finding is that the prudent use of general permits and deferred applicability will avert and/or mitigate potential adverse impacts on small entities.

G. BENEFITS OF THE RULE

The many benefits of the operating permits rule are described in qualitative terms in Chapter VI. Examples include more efficient enforcement, fewer legal actions, and administrative savings from consolidating source requirements into one Federally-enforceable document.

H. NET BENEFITS

Chapter VII discusses the limitations of this analysis. Because the benefits are discussed in qualitative terms while the costs are described in quantitative terms, a definitive statement on the economic efficiency aspects of this rule is not possible.

II. THE NEED FOR AND CONSEQUENCES OF REGULATORY ACTION

A. LEGISLATIVE REQUIREMENTS AFFECTING THE IMPLEMENTATION OF THE TITLE V FEDERAL OPERATING PERMITS PROGRAM

Title V of the Act as amended November 15, 1990, establishes requirements for a new operating permits program. States are required to develop and submit to the EPA, programs for issuing operating permits to major stationary sources, sources covered by New Source Performance Standards (NSPS), sources covered by National Emission Standards for Hazardous Air Pollutants (NESHAPs), certain sources of hazardous air pollutants listed in section 112, and affected sources under the acid precipitation program.

Title V requires the EPA to promulgate, within 12 months of enactment, regulations that require and specify the minimum elements of State operating permit programs. Within 3 years of enactment, States are required to submit permit programs to the EPA for approval. The EPA has 1 year to act on the proposed programs. If a State fails to submit a fully approvable program by that date, the EPA must establish a program for that State within 2 years. Subject sources must submit a permit application within 1 year after the program is approved.

B. THE NATURE OF THE OPERATING PERMITS PROGRAM

The operating permits program is intended to serve as a framework for implementation of the various requirements of the Act. Under Title V, all of the applicable requirements for a subject source will be consolidated into a single, Federally-enforceable document. Title V, itself, does not impose any additional emissions limitations or control requirements.

Title V is modeled after a similar program under the Clean Water Act's National Pollutant Discharge Elimination System (NPDES). Adding such a program updates the Act, rendering it more consistent with other Federal environmental statutes that require sources of pollution to obtain operating permits.

C. THE NEED FOR REGULATORY ACTION

Title V of the Clean Air Act Amendments of 1990 calls for the EPA to promulgate operating permits regulations 12 months from enactment. The Operating Permits Program was designed to improve air quality management in several ways. First, Title V consolidates all applicable air program requirements for a source into one publicly-available permit, making enforcement (by State or local agencies, the affected public, and/or the EPA) more effective and less burdensome. Second, the permit program provides industry a clear indication of emissions limits they must meet, while affording sources operational flexibility to make certain periodic changes. Third, permits better facilitate State implementation of the criteria pollutant control programs as well as programs for control of acid precipitation and air toxics, including the expeditious adoption of new source-specific requirements. Finally, Title V allows States to charge permit fees to be paid by subject sources sufficient to recover the reasonable direct and indirect costs of developing and implementing the State's permit program.

The Title V program is intended to clarify the applicable requirements of the Act for subject sources, consolidate those requirements into a single Federally-enforceable document, and enhance compliance and enforcement activities by Federal, State, and local levels of government. Currently, in many cases, sources' pollution control obligations (ranging from emission controls and monitoring requirements to recordkeeping and reporting requirements) may be scattered throughout numerous provisions of the State Implementation Plan (SIP) or Federal regulations. In addition, regulations are often written to cover broad source categories, and may not make clear how a general regulation applies to a specific source. In many cases, sources are not clearly required by applicable provisions to submit periodic compliance reports to the EPA or the States. As a result, it may be time-consuming to identify the extent of a source's compliance or noncompliance.

Actual emission limits are mandated by other sections of the Act. Title V benefits society by providing a standardized and centralized system of permitting that provides coordination between various portions of the Act. The Title V permit program requires that all of a source's obligations under the Act be contained in a single permit. A permit system will provide the opportunity to reduce redundant paperwork and recordkeeping requirements, potentially avoid unnecessarily burdensome abatement requirements, and promote an integrated approach to meeting all of a source's air pollution obligations.

The Title V permits will also improve enforcement of the various air quality management regulations. Sources will clearly know what pollution control requirements apply to them, as well

as the criteria for determining whether or not they are in compliance with these requirements. They will be required to submit periodic reports of compliance. Detection of sources failing to meet their obligations will be more certain and less costly to the government unit charged with enforcing the regulations.

The Title V permits program described here will also be used to implement Phase II of the acid rain program set forth in Title IV of the Act. In Phase II, the States are required to administer a Federally-approved permit program, and will thus be in accordance with the process established in Title V, as supplemented by acid rain specific content regulations to be published separately. The allowance trading provisions of Title IV, utilizing the permitting provisions of Title V, will lower the cost of the acid rain improvements by allowing sources to find the lowest total cost through redistributing reduction requirements and encouraging technological innovation in sulfur-removing technology.

In summary, the Title V permit program mandated by the Act will provide an effective permitting process for all affected major sources subject to Title V, and will provide a basis for compliance determination and enforcement activities on the part of the State pollution authorities charged with implementing and enforcing the Act.

III. ALTERNATIVES EXAMINED

A. INTRODUCTION

The "alternatives" section of a Regulatory Impact Analysis (RIA), as outlined in Executive Order 12291, is intended to examine at a minimum the following alternatives:

- a) No regulation
- b) Regulations beyond the scope of present legislation
- c) Market-oriented alternatives
- d) Alternative control strategies

This specific methodology was not followed because of the prescriptive nature of the statute. The regulations must specify the minimum elements of State operating permit programs, required conditions for permit applications and permit issuance, provisions to ensure compliance and enforcement, and provisions for permit review and notification.

A primary objective of this program is the issuance of permits to applicable air pollution sources. The Title V legislation provides three distinct options for permit issuance. Thus, instead of providing a discussion of regulatory alternatives, Chapter III briefly describes the following options for permit issuance:

- (1) Specific Source Permit
- (2) Permanent Exemptions/Deferred Applicability
- (3) General Permit.

B. SPECIFIC SOURCE PERMIT

Most major sources and certain nonmajor sources will be required under Title V to obtain a specific (or individual) source permit. The activities involved in the permit issuance process include: submittal of a permit application by a source, drafting of the permit by the permitting authority, review by the EPA and notification of contiguous and affected States, issuance of the permit, and permit management (including reopenings and modifications).

The Act sets forth explicit requirements regarding the application process. Section 502(b)(1) and (6) require that State programs have standard application forms, criteria for determining completeness of applications, and procedures for

timely processing. Section 503(b) requires that compliance plans be submitted along with all applications.

Since many permitting authorities already use standard permit application forms, the EPA will not require a standard form for the Title V operating permits program in order to minimize disruption of existing programs. The acid rain program requires that sources submit a standard form for that program, however. State and local agencies will have considerable discretion to develop and use application forms that best meet their particular needs. The EPA will require that a minimum set of data elements be included in each application and submitted to the EPA. Standard data elements will include: general company information, plant description, emissions data, and air pollution control requirements. It should be noted that the smaller (in terms of emission points) and less complex (in terms of air pollution control equipment) sources will have a simpler specific permit than the large sources, and consequently, a less costly permit.

Applications must be accompanied by a compliance plan that describes how the source will comply with all the applicable requirements. Submission of these compliance plans is required for permit renewal and permit modifications. In addition, the permit application must contain, where applicable, a schedule for submission of compliance certifications.

C. PERMANENT EXEMPTIONS/DEFERRED APPLICABILITY

The EPA has authority under the Act to exempt nonmajor source categories, in whole or in part, from the requirements of Title V if the EPA finds that compliance with these requirements would be "impracticable, infeasible, or unnecessarily burdensome." The Agency's regulations for Title V initially provide for the exemption of two source categories (residential woodstoves and asbestos demolition/remodeling) and for the deferred applicability of all nonmajor sources for a period of 5 years from the date of State/local program approval. At the end of 5 years, all deferred sources will become subject to Title V, unless the EPA determines that a permitting exemption or extended period of deferral is appropriate.

D. GENERAL PERMIT

A general permit is a single, standardized permit which applies to many similar sources. A permitting authority with an approved program may determine whether to issue general permits for certain source categories. Key criteria in making this determination will include source size and similarity of sources within the same category. Categories comprised of numerous,

small, and nearly-identical sources are ideal candidates for general permits. General permits may also be issued for categories of numerous, identical emissions units within larger sources. A permit for a large manufacturing operation with numerous permitted emissions units could incorporate the terms of a general permit (e.g., for a degreaser) along with the terms drafted specifically for that source.

Sources covered by a general permit are still required to comply with all Title V requirements, including those for submitting a complete application and paying the appropriate fees. Depending upon the complexity of the source category being issued the general permit, permitting authorities may accept applications which are somewhat more simplified than specific permits. In this way, general permits provide an opportunity to reduce the administrative burden for sources required to obtain a permit. In addition, general permits will ease the burden associated with review of applications and final permits on both permitting authorities and the EPA.

IV. ANALYSIS OF FEES, NUMBER OF SOURCES AND PAPERWORK COSTS

A. INTRODUCTION

This chapter addresses the costs of the Title V Operating Permits Rule in terms of fees generated, number of sources, and administrative burden associated with implementing the program. Coverage includes: (1) the criteria air pollutants and their precursors--volatile organic compounds (VOC), ozone (O₃), particulate matter (PM-10), nitrogen oxides (NO_x), sulfur dioxide (SO₂), lead (Pb), and carbon monoxide (CO) to the extent it comes from major stationary sources; and (2) air toxic emissions regulated under Title III. The chapter also presents the methodology for determining administrative burden to the EPA, permitting agencies, and sources. The results are discussed in the last section.

It is important to emphasize the conservative approach used to estimate the costs associated with the implementation of Title V. Regulatory impact and regulatory flexibility analyses are intended to evaluate the additional burden imposed by a new rule. A majority (about 80 percent) of State and local air pollution control agencies already have some kind of operating permit program in place. Of those States with programs in place, 88 percent of the States issue permits to sources emitting at least 25 tons-per-year (tpy), and 79 percent of the States issue permits to all sources including those emitting less than 25 tpy. However, instead of calculating the incremental costs associated with implementing this regulation for each State and local agency (which would require extensive and long-term data collection and analysis), the regulatory analyses contained here describe the estimated total burden on sources, State and local agencies, and the EPA. As a result, the estimates in this report are conservative with the costs generally overstated.

B. FEE ASSESSMENT

For the purposes of the Act debate during the summer of 1990, the EPA prepared an estimate of total fees for the five criteria pollutants--VOC, PM-10, NO_x, Pb, and SO₂--amounting to \$309.6 million per year for some 8,176 sources emitting greater than 100 tpy, or greater than 1 tpy of lead emissions.¹ The basis for this estimate is the 1985 data from the EPA's National Emission Data System (NEDS). Fees are not required for CO emissions, because these are primarily emitted by mobile sources. Fees have not been estimated for air toxics in this report.

The 1985 NEDS inventory represents the most recent, quality-assured, and nationwide emissions data available for large sources. For this reason, 1985 data was used for the permit fee assessments in this study. However, the 1985 inventory primarily reflects only sources emitting greater than 100 tpy. The 1985 inventory data for major sources were used in the initial permit fee revenue projection. The 1985 inventory focused on major sources greater than 100 tpy. But, as noted in Section C, the operating permit rule also covers sources which are less than 100 tpy. The initial total fee projection of \$309.6 million will not underestimate revenue requirements as long as the State and local agency requirements are less. Section D indicates that this is the case.

C. NUMBER OF SOURCES

Table IV-1 includes a distribution of the number of sources estimated under Title V coverage. It is estimated that 34,324 major sources would be required to obtain a permit under Title V.² The following is a breakdown of these sources, a brief summary and a description of the data base used to arrive at the number estimates. Sources are described as major or nonmajor with respect to tons of emissions per year; they are described as large or small with respect to plant size, number of emission points, complexity of air pollution control equipment, and parameters other than tons of emissions per year.

- o Major/large sources = 9,160

Defined as greater than 100 tpy; estimate based on 1990 Aerometric Information Retrieval System (AIRS) Air Facility Subsystem (AFS).

- o Major/small sources = 21,414

Defined as nontoxic emitting less than 100 tpy; estimates based on 1990 AIRS' AFS with a correction for the South Coast Air Quality Management District (California) classification as an extreme nonattainment area.

- o Major toxic sources = 3,750

Defined as air toxics sources emitting more than 10 tpy (or 25 tpy combined); estimate based on Toxic Release Information System (TRIS). These sources are considered to be small in terms of emission points and complexity of air pollution control equipment, but major in terms of tpy of emissions. The large toxics sources are assumed to be included in the above 9,160 estimate.

A total of 350,000 nonmajor air toxic sources has been identified to be regulated under section 112(c)(1) of the Act. Regulations to control these sources are expected to be promulgated and implemented within the next 3 to 8 years. The operating permit rule allows the States to defer permit requirements for all of these nonmajor sources until the second 5-year cycle of implementation. The second 5-year cycle could begin as early as mid-1998. The permitting costs attributable to these nonmajor air toxic sources are presented in the form of a sensitivity analysis in Appendix A because the rule allows the States to defer permit requirements for these sources. It is expected that States will elect to require permits in the first cycle for at most 10 - 25 percent of these sources (35,000 - 88,000 sources) using the general permit type of permitting.

Results of this analysis show that adoption of general permits for 88,000 sources (25 percent of the total) will result in an increase in the cost of the Title V implementation of less than 5 percent for both permitting agencies and permitted entities. This scenario is pessimistic for the first 5-year implementation period, since the EPA expects the States to grant deferrals to those sources. Adoption of general permits for 100 percent of the 350,000 nonmajor air toxics sources, an unlikely event, will result in a moderate increase of 16 percent in the cost of administering the operating permits program and of 15 percent in the cost of the sources.

It should be noted that approximately 98 percent of these nonmajor toxic sources are suitable candidates for coverage under the general permit provision because they are homogeneous in terms of operation, process, emissions and air pollution control equipment.

Table IV-1. Estimates of Permits Issued and Administrative Burden for Respondents (Title V)

| Source Classification | Numbers of Sources | Initial Burden (Hours) | Recurring Burden (Hours/yr) | Facility Annualized Costs (\$/yr) | Total Annualized Costs (\$ Million/yr) |
|---|--------------------|------------------------|-----------------------------|-----------------------------------|--|
| Major Large Sources ¹ -specific permit | 9,160 | 1,221 | 180 | 22,594 | 207.1 |
| Major Small Sources ² -specific permit | 10,707 | 670 | 76 | 11,373 | 121.5 |
| Major Small Sources ² -general permit | 10,707 | 13 | 0 | 154 | 1.6 |
| Major Toxics ³ -specific permit | 1,875 | 670 | 76 | 11,373 | 21.3 |
| Major Toxics ³ -general permit | 1,875 | 13 | 0 | 154 | 0.3 |
| TOTAL: | 34,324 | | | | TOTAL:352 |

1 Major large sources, defined as greater than 100 tons-per-year, are based on 1990 Aromatic Information Retrieval System (AIRS) Air Facility Subsystem (AFS).

2 Major small sources, defined as smaller than 100 tons-per-year, are based on 1990 AIRS' AFS with a correction for the South Coast Air Quality Management District (California) classification as an extreme nonattainment area. There are an estimated 21,414 small sources that emit non-toxic emissions. "Small sources" here includes estimates of all sources emitting less than 100 tons and located in Title I serious, severe, and extreme nonattainment areas.

3 Major toxic sources information based on Toxic Release Information System. An estimate of 3,750 sources are considered to be small sources only, half of which would acquire specific permits and the remaining half general permits. Large sources are assumed to be included in the 9,160 estimate.

D. ADMINISTRATIVE BURDEN

Administrative burden costs are incurred by: (1) owners and/or operators of stationary sources, who apply for operating permits, (2) State authorities who review permit applications and issue permits, and (3) the EPA, which provides oversight on program implementation, permit issuance, data management, and enforcement. The total administrative burden to sources is estimated at \$352 million annually for the first 5-year implementation period. State/local agencies are estimated to incur administrative costs of \$26 million annually during the 3 years preceding implementation and of \$160 million annually during the first 5-year implementation cycle. The administrative cost to the EPA is estimated at \$3 million annually during the 3 years preceding implementation and at \$14 million annually during the first 5-year implementation period. See Tables IV-2 and IV-3. It should be noted that costs to the permitting authorities are offset by the fee mechanism provided by Title V.

The administrative costs in this analysis account only for the direct costs associated with permit issuance. Indirect costs related to air quality management such as program development, enhanced monitoring, emissions inventories, and enforcement are not included in the cost analysis.

E. METHODOLOGY

This section discusses the methodology used to estimate a source's burden associated with permit fees and administrative cost. This section discusses the approaches used to develop cost algorithms on a model plant basis for: 1) this chapter's nationwide estimate for administrative burden, and 2) analysis of economic impacts on small businesses in Chapter V.

Fee Assessments

As stated above, the estimate of nationwide permit fees was taken from a previous EPA study. For the purpose of conducting the Regulatory Flexibility Screening Analysis in Chapter V, the approach used to assess permit fees combined emissions data from the AIRS for each pollutant by industry classification with data from the Department of Commerce Bureau of Census Reports. The industry classification corresponded to the four digit Standard Industrial Classification (SIC) code. Emission estimates were extrapolated from AIRS for each 4-digit SIC industry and matched with reported data on establishments to derive an average emission per establishment. (For more information, refer to Chapter V). Total fees were estimated by multiplying \$25 per ton by the average emission per establishment.

Table IV-2. Summary of Administrative Burden Hours Assumptions Per Permit for Costs to Government Sectors. (Specific Permits Only - First 5-Year Implementation Cycle)

| Source Classification | State/Local Initial Burden (Hours) | State/Local Recurring Burden (Hours/year) | EPA Burden Initial Only (Hours) | EPA Burden Recurring (Hours) |
|-----------------------|------------------------------------|---|---------------------------------|------------------------------|
| Major Large Sources | 315 | 197 | 40 | 16 |
| Major Small Sources | 151 | 128 | 20 | 8 |

Table IV-3. Summary of Administrative Costs to Industry and Government Sectors for First 5-Year Implementation Cycle (\$ million / year)

| Source Type | Industry | State/Local | EPA | TOTAL |
|----------------------|----------|-------------|-----|-------|
| Major Large Sources | 207 | 87 | 8.3 | 302.3 |
| Major Small Sources | 143 | 72 | 5.7 | 220.7 |
| Major General Permit | 1.9 | .90 | .06 | 2.9 |
| Totals | 352 | 160 | 14 | 526 |

For purposes of this analysis, a fee of \$25 per ton of emissions per year is assumed. Permitting authorities may charge lower fees as long as they can demonstrate that, in the aggregate, they will collect sufficient fees to cover the costs of developing and implementing their program. In this way, State or local agencies may attempt to reduce the economic impact of the fee program on affected sources.

Administrative Burden

(a) Industry Sector.

Specific Permits. For the purpose of estimating administrative costs, a combination of the model for NSPS and NESHAPS regulations with actual permitting experience² was applied as the methodological tool for the specific source operating permit. The time period used for the RIA was 5 years. For the owner and/or operator of a stationary source, administrative costs consist of a one-time charge for processing a permit application and an estimated cost for annually recurring recordkeeping activities. The initial administrative burden includes the task of interpreting the regulations and generating data and information needed for the first permit application. For a detailed breakdown of initial and recurring tasks, see Reference 2. The one-time charge is annualized over the 5-year period of the permit. These costs are assumed to be constant per source (e.g., for large sources, a 100 tpy source incurs the same burden as a 1000 tpy source).

The basis for estimating resource costs for the industry sector was \$45 per hour. The rationale for this is the assumption that 70 percent of the resources expended by industry would be in-house resources assumed at a rate of \$41 per hour and 30 percent contracted with consultants at a rate of \$55 per hour.²

The algorithm for evaluating the cost of a specific permit to sources is as follows:

$$\text{Total Cost (\$/yr)} = \{ \$25/\text{ton times plant emissions, tons emitted/yr} \} + \{ \$11,373/\text{yr for a small source or } \$22,594/\text{yr for a large source} \}.$$

The assumptions for constructing the administrative costs (\$22,594/yr) for a large source are the following:

- o permit processing cost (1st year) = \$45/hr x 1,221 hr/yr, or \$54,945/permit
- o annualized value of permit processing based on capital recovery factor {10 percent, 5 yr} = \$14,494/yr
- o administrative cost (recurring for 5 yrs) = \$45/hr x 180 hr/yr = \$8,100/yr

The assumptions for constructing the administrative costs (\$11,373/yr) for a small source are:

- o permit processing cost (1st year) = \$45/hr x 670 hr/yr, or \$30,150/permit
- o annualized value of permit processing based on capital recovery factor {10 percent, 5 yr} = \$7,953/yr
- o administrative cost (recurring for 5 yrs) = \$45/hr x 76 hr/yr = \$3,420/yr

General Permits. The specific source operating permit may present a significant resource cost on the truly small source. The concept of a general operating permit is being considered, therefore, to mitigate the administrative burden for small sources.

For the general permit, the assumptions for arriving at the administrative costs for a small source (\$154/yr) are the following:

- o review of permit application and compliance plan (1st year) = \$45/hr x 13 hr/yr, or \$585/source
- o annualized value of permit application review capital recovery factor {10 percent, 5 yr} = \$154/yr

The total administrative burden to industry sources is presented in Table IV-1. It was assumed that half of all small sources listed in Table IV-1 would incur costs associated with issuance of a general permit. This assumption was validated by a group of permitting experts from the government and private sectors.

The total administrative burden to industry sources presented in Table IV-1 may be higher based on the scenarios discussed in Appendix A. Under the realistic/optimistic assumptions that 25 percent of the area sources considered in Appendix A will be permitted with low cost (\$154) general permits, the increase in cost to the sources will be \$13 million, or 4 percent of the total cost presented in Table IV-1. Assuming figures from midrange in the sensitivity analysis of Appendix A,

such as permitting 25 percent of the sources at a cost of \$4,000 per permit and another 25 percent of the sources at a cost of \$154 per permit, the increase in cost to the sources will be \$362 million, which is 103 percent of the total cost presented in Table IV-1.

(b) Government Sector

Estimates in this RIA represent the costs for the first 5-year cycle of Title V implementation. However, burden estimates for permitting agencies and the EPA for the 3-year period preceding implementation have been determined also.² The total annual administrative cost for years 1-3 is estimated to be about \$30 million: \$3 million for the EPA and \$27 million for the permitting agencies. See reference #2 for the detailed breakdown of these costs. A comparable analysis of years 1-3 was not done for the sources because pre-implementation costs were included in the 5-year analysis.

The approach for estimating State/local agency and the EPA burden is similar to that used for industry sources. Subtotals are derived by multiplying the unit costs by the estimate of sources for a source category (e.g., large sources).² An alternative approach would be to use the State/local agency as the unit of analysis. There are some 120 State/local agencies.² The basis for estimating resource costs--\$34 per hour--for the government sector is the Federal 1991 General Schedule for a Grade 11, Step 3 program analyst and applying a 110 percent overhead. Refer to Table IV-2 for a summary of the burden hour estimates.

For State/local agency burden, the assumptions for constructing the administrative costs for a large source (\$9,523/yr) are the following:

- o review of permit application and other tasks (1st year) = $\$34/\text{hr} \times 315 \text{ hr/yr}$, or \$10,710/source
- o annualized value of permit application review based on capital recovery factor {10 percent, 5 yr} = \$2,825/yr
- o progress review/certification cost and other tasks (recurring for 5 yrs) = $\$34/\text{hr} \times 197 \text{ hr/yr}$ = \$6,698/yr

For the EPA, the assumptions for constructing the administrative costs for a large source (\$903/yr) are the following:

- o review of permit application and compliance plan (1st year) = $\$34/\text{hr} \times 40 \text{ hr/yr}$, or \$1,320/source
- o annualized value of permit application review capital recovery factor {10 percent, 5 yr} = \$359/yr
- o review permit revisions (recurring for 5 yrs) =

$$\$34/\text{hr} \times 16 \text{ hrs}/\text{yr} = \$544/\text{yr}$$

For State/local agency burden, the assumptions for constructing the administrative costs for a small source-specific permit (\$5,706/yr) are:

- o review of permit application and compliance plan (1st year) = $\$34/\text{hr} \times 151 \text{ hr}/\text{yr}$, or $\$5,134/\text{source}$
- o annualized value of permit application review based on capital recovery factor {10 percent, 5 yr} = $\$1,354/\text{yr}$
- o progress review/certification cost (recurring for 5 yrs) = $\$34/\text{hr} \times 128 \text{ hr}/\text{yr} = \$4,352/\text{yr}$

For the EPA, the assumptions for constructing the administrative costs for a small source specific permit (\$451/yr) are the following:

- o review of permit application and compliance plan (1st year) = $\$34/\text{hr} \times 20 \text{ hr}/\text{yr}$, or $\$680/\text{source}$
- o annualized value of permit application review capital recovery factor {10 percent, 5 yr} = $\$179/\text{yr}$
- o review permit revisions (recurring for 5 years) = $\$34/\text{hr} \times 8 \text{ hr}/\text{yr} = \$272/\text{yr}$

The resources needed are relatively small for the administrative burden costs associated with the general permit. Only 8 hours of initial burden per source is estimated to be required for the State/local agency at a cost of \$72 per permit per year. For the EPA, a 0.5 hour initial burden per source is estimated at a cost of approximately \$5/yr for each permit.

F. DISCUSSION OF RESULTS

Table IV-3 presents a summary of the total annual administrative cost of the operating permit rules. The total cost to society is estimated at \$526 million annually. The annualized burden and fees incurred by industry sources nationwide are estimated to be \$512 million. This figure represents \$352 million for administrative burden and \$160 million in permit fees. The permit fees figure also represents the cost to the permitting agencies. Fees are charged to the sources to recover the administrative burden incurred by the permitting authorities. Cost to the EPA is estimated at \$14 million annually. In estimating industry costs, it was assumed that half of the major small sources--nontoxic and toxic--would obtain specific permits. If all of these sources (21,414 nontoxic and 3,750 toxic) would obtain general permits, then the estimates would decrease to a total annual cost of \$308.5 million. The total annual cost to sources would be \$300 million. This figure represents \$211 million for administrative burden and \$89 million in fees. The fee amount also represents the

administrative burden to the permitting agencies. Cost to the EPA would decrease to about \$8.5 million annually.

As discussed in Appendix A, the total administrative burden to industry sources presented in Table IV-1 may be higher based on the various possible scenarios of permitting nonmajor air toxic sources. If specific permits are required for more than 50 percent of these sources at a cost per permit of \$4000 (much higher than the expected \$500), then the burden increase to the sources could be more than \$700 million or a 200 percent increase. Assuming figures from midrange in the sensitivity analysis of Appendix A, such as permitting 25 percent of the sources at a cost of \$4,000 per permit and another 25 percent of the sources at a cost of \$154 per permit, the increase in cost to the sources will be \$362 million, or 103 percent of the total cost presented in Table IV-1. Under the realistic/optimistic assumptions that 25 percent of the area sources considered in Appendix A will be permitted with low cost (\$154) general permits, the increase in cost to the sources will be \$13 million, or 4 percent of the total cost presented in Table IV-1.

REFERENCES

1. Memorandum from William G. Laxton to John Calcagni, "*New Analysis of Projected Air Emissions Permit Fees*," Office of Air Quality Planning and Standards, U. S. Environmental Protection Agency, June 12, 1989.
2. Information Collection Request prepared for the Office of Management and Budget (SF-83) by the U. S. Environmental Protection Agency, January 10, 1991.

V. ECONOMIC IMPACTS, REGULATORY FLEXIBILITY ANALYSIS, AND PAPERWORK REDUCTION ACT ANALYSIS

A. INTRODUCTION

The Regulatory Flexibility Act requires Federal agencies to review the effects of their regulations on small entities and to involve these entities more actively in developing and reviewing regulations. The term "small entities" includes small businesses, small governmental jurisdictions, and small organizations. Through the EPA's proposal, public review, comment period, and promulgation process, provision is made for involvement of all affected parties. However, much involvement has been elicited already from local, State, environmental, and business groups.

The criteria for "smallness" applies to the entire firm, not to each of the facilities, plants, or establishments owned by the firm. The Small Business Administration (SBA) defines "small businesses" by SIC code in terms of annual sales or employment. Agencies are required to screen for potential adverse effects and to prepare a Regulatory Flexibility Analysis (RFA) if certain criteria are triggered. The following criteria are used as guidance regarding the need for a RFA. A "significant economic impact" is said to occur whenever all of the following are met:

1. A substantial number of small entities is impacted significantly. An impact of over 20 percent is generally considered significant, although this is not a fixed rule.

2. An annual compliance cost results in an increase of 5 percent or more of the total production cost or sales.

3. The potential for significant impact is disproportionate, i.e., the effect on small entities is approximately 10 percent more than the effect on large entities.

If none of these conditions result from the new regulation, then no RFA is required. If the economic impact of the new regulations results in any of these conditions, then impact mitigation strategies must be developed to the extent the objectives of the Act are not compromised.

Chapter V presents the methodology and results of a RFA screening analysis of the Title V operating permits program. The purpose of the screening analysis was to survey "high risk" industries within the small business community and identify the potential for adverse impact.

As a result of the screening analysis and comments from the Title V regulatory development work group, steps were also taken to propose regulations with features that mitigate adverse impacts on small businesses while still meeting the objectives of Title V.

B. METHODOLOGY

Industries were identified as potentially "high risk" and selected for the screening analysis based on whether an industry was comprised of predominantly small entities and whether the industry had expressed much concern over regulatory burden in the past. A list of industries that met these criteria was derived based on SIC codes for two criteria pollutants (PM-10 and VOC) and for air toxics regulated under the Act. Sources of other criteria pollutants such as NO_x and SO₂ were not included because of the nature of these emitters; namely, the emitters are mostly large sources and/or fuel combustion sources which could likely qualify for a general permit. Tables V-1 to Tables present the universe of "high risk" industries used for this analysis for PM-10, VOC, and air toxics, respectively.

For purposes of this screening analysis, the total cost of the permit program on air pollution sources was estimated based on the sum of permit fees (based on emissions) and administrative burden costs. The procedure for estimating these costs is explained in Chapter IV.

In this screening analysis, the impact of Title V on small businesses is measured in terms of cost as a percent of sales. The procedure for this analysis is as follows:

- (1) Obtain economic data (number of establishments, payroll, sales, and value added) for companies with less than 20 employees for the SIC's in the "high risk" categories.
- (2) Determine the cost of compliance with the Title V operating permits regulations as previously explained in Chapter IV.
- (3) Determine ratios of compliance costs per sales.

Estimates of sales for each small entity segment of the high risk industries were obtained from the 1982 Enterprise Statistics and the 1987 Census of Manufacturers. Where necessary, the following other sources were used:

- o 1987 Census of Service Industries (Subject Series)
- o 1987 Census of Construction Industries (Industry Series)
- o 1987 Census of Transportation (Geographic Area Series)
- o 1987 Census of Mineral Industries.

C. RESULTS

The results of this analysis are summarized in Tables V-1 to V-4 and in Figure V-1. As can be seen from Table V-4, about 38 percent (8 of 21) of the industries analyzed for PM-10 had estimated permitting costs higher than 3 percent of sales. The highest permitting cost/sales ratio was around 7 percent. For VOC, about 18 percent (3 of 17) of the industries analyzed had permitting costs higher than 3 percent of sales. The highest permitting cost/sales ratio was also in the 7 percent range. None of the industries studied for air toxics had permitting costs higher than 3 percent of sales.

Although these figures suggest the potential for adverse impact on a number of small entities, it should be noted that the methodology was deliberately designed to yield conservative estimates.

D. MEASURES TO AVERT IMPACTS ON SMALL FIRMS

The EPA may exempt one or several source categories, in whole or in part, from the requirements under Title V if it is determined that compliance with these requirements would be "impracticable, infeasible, or unnecessarily burdensome." Thus, the impacts of permitting on small firms will be averted completely for any source category which receives a Title V exemption. The Agency may under no circumstances exempt a major air pollution source. The EPA's draft regulations grant full exemptions for residential woodstoves and asbestos demolition/remodeling and deferred applicability for 5 years from the date of program approval for all nonmajor sources.

E. MEASURES TO MITIGATE IMPACTS ON SMALL FIRMS

The impact of permitting costs on small firms can be mitigated in four primary ways. The first measure is the implementation of small business stationary source technical and environmental compliance assistance programs as called for in section 507 of the Act (at the Federal and State levels). These programs may significantly alleviate the economic burden on small sources by establishing: 1) programs to assist small businesses with determining what Act requirements apply to their sources and when they apply, and 2) guidance on alternative control technology and pollution prevention for small businesses.

The second mitigation measure is deferred applicability or exemption of one or several source categories from the requirements of Title V. Small sources will benefit from the proposed initial 5-year deferral because they: 1) will not be

required to pay permit fees during this period, and 2) will not be required to obtain a permit during the first years after program approval, when the States and the EPA will be gaining experience in implementing their new Title V programs. It would be especially burdensome to require small sources, generally without the legal and technical resources at the level of major sources, to obtain permits at this time.

The third mechanism by which the impact of permitting activities on small sources can be mitigated is through the issuance of general permits. Permitting authorities are to issue general permits, where appropriate, to source categories comprised of numerous similar sources. It is anticipated that most general permits will be issued to categories made up primarily of small sources.

Permitting authorities will have the option to require less detailed applications from sources applying for a general permit, as long as they contain the minimum elements required under Title V. The reduced administrative burden associated with a general permit is expected to be a key benefit of general permits to small sources. In addition, general permits will typically require less administrative review by permitting authorities. This may prove to be an additional benefit to small sources because they should receive their approved permits in a more expeditious fashion.

Finally, the economic impact resulting from Title V on small businesses can be reduced through the discretion of the permitting authorities. Permitting authorities have the option to charge variable emissions fee rates based upon source categories or pollutants as long as they can demonstrate that, in the aggregate, they will recover sufficient fees to cover the direct and indirect costs of developing and implementing their permit program. In this way, State or local agencies may charge lower per-ton fees to certain source categories made up primarily of small sources to match their ability to pay and reduce the economic burden imposed on them.

F. PAPERWORK REDUCTION ACT

Under the Paperwork Reduction Act, Federal agencies must obtain Office of Management and Budget (OMB) clearance for collection of information from ten more non-Federal respondents. Each source subject to the requirements for obtaining a Title V operating permit will have to submit a permit application and will make periodic compliance reports. Part 70 regulations provide for the State/local permitting authorities to collect this information. Indeed, these requirements parallel what many sources are already reporting to State and local permitting authorities and what States report to the EPA. The effect of these regulations will be to subject more sources to such

requirements, primarily those required to obtain a permit due to classification as a major source. The Act specifies that major sources cannot be exempted from the requirement to obtain a permit.

G. CONCLUSIONS

There is a potential for Title V to adversely impact a substantial number of small entities. However, the number of small entities adversely affected by permitting costs suggested by this screening analysis may be due to the conservative nature of the analysis. Conservative assumptions were made consistently throughout this analysis and are explained below.

The first conservative assumption involves limiting the analysis only to "high risk" industries. Such an analysis is likely to yield "worst case" scenarios. A more comprehensive analysis of all potential industries comprised of small sources would likely reveal a lower percentage of industries with cost/sales ratios greater than 3 percent.

Second, the determination of permit fee costs used a conservative methodology as well. In order to determine the fee cost, total emissions reported for a SIC were divided by the total number of establishments (not firms) within that SIC for the size distribution being analyzed. Assuming that there are some large emitters in the population, the approach basically assigns more tons of emissions to an establishment than it actually emits. Since the permitting fee was calculated based on tons of emissions, the cost tends to be overestimated.

A third source of conservatism comes from the assumption that the permits concept is new to most sources and that the permit application process therefore will be extremely time consuming. Three-quarters of the States presently have their own laws requiring operating permits for most minor and major sources of air pollution. Over half of the existing State permit programs address both new and existing sources and require renewal of permits periodically. Approximately 20 programs closely match the basic intent of Title V and have the basic requirements for issuing permits, collecting fees, etc. Since title V permit regulations are being structured to minimize the disruption of those existing programs, the administrative cost assumptions used for this analysis may also be overestimated.

Fourth, the national scope of this analysis may also introduce a factor that skews the results in a conservative direction. The small sources likely to be affected by permitting regulations are those located in nonattainment areas. Assuming that most small sources are also defined as "small entities," the impact of permitting costs would be localized in nonattainment

areas and would not be an across-the-nation phenomena as this analysis assumes.

Finally, this analysis presents costs for obtaining initial permits and does not discuss costs for permit renewals. Permit renewals will invariably cost less for sources. The intent of the regulation is to limit information collection at the time of permit renewal to any major changes that may have occurred since the time of previous permit issuance.

TABLE V-1

High Risk Industries for PM-10 and
Screening Analysis Results

| SIC | Type of Industry | Cost/Sales(%) |
|------|---|---------------|
| 2911 | Petroleum Refineries | 0.10 |
| 2840 | Soap & Cleaners | 1.10 |
| 2449 | Wood Containers | 3.58 |
| 3211 | Grey Iron Foundries | 3.49 |
| 2951 | Asphalt Paving | 0.60 |
| 2611 | Pulp Mills | 0.16 |
| 3273 | Ready Mix Concrete | 7.28 |
| 3295 | Structural Clay Products | 2.67 |
| 2869 | Industrial Organic and Inorganic Chemicals | 0.79 |
| 2861 | Wood and Gum Chemicals | 0.74 |
| 2873 | Agricultural Chemicals | 1.06 |
| 3241 | Hydraulic Cement | 7.29 |
| 2621 | Paper Mills | 3.42 |
| 1422 | Crushed & Broken Stone | 6.33 |
| 2421 | Saw Mills | 2.76 |
| 3312 | Blast Furnaces/Steel Mills | 4.54 |
| 2732 | Bookprinting | 2.35 |
| 2813 | Industrial Gases | 0.64 |
| 2892 | Explosives | 0.85 |
| 1796 | General Contractors (Industrial Bldgs.) | 3.69 |
| 3313 | Electrometallurgical Products | 1.88 |

TABLE V-2

High Risk Industries for VOC
and Screening Analysis Results

| SIC | Type of Industry | Cost/Sales(%) |
|------------------------|--------------------------------|---------------|
| 2899 | Solvent Metal Cleaning | 1.02 |
| 2711 | Newspaper/Graphic Arts | 7.44 |
| 2842 | Perc & Petroleum Dry Cleaning | 0.51 |
| 2911 | Fixed Tanks | 0.54 |
| 4226 | Bulk Terminals | 0.00 |
| 3011 | Rubber and Tire Mfg. | 3.30 |
| 3479 | Auto and Truck Surface Coating | 2.62 |
| 2461 | Paper Surface Coating | 0.57 |
| 1799 | Architectural Coating | 2.08 |
| 2621 | Paper Products | 2.79 |
| 2511 | Wood Furniture | 5.86 |
| 5541 | Gas Service Stations | 1.23 |
| 2435, 2436 | Flat Wood Paneling | 1.46 |
| 3479 | Can Surface Coating | 1.53 |
| 1321 | Natural Gas Liquids | 0.63 |
| 2821, 2861 | SOCMI Fugitives | 2.98 |
| 2431, 2499, 2851 | Wood Finishing | 2.13 |

TABLE V-3

High Risk Industries For Air Toxics
and Screening Analysis Results

| SIC | Type of Industry | Cost/Sales(%) |
|------|---------------------------------|---------------|
| 2851 | Paint and Allied Products | 0.54 |
| 2869 | Organic & Inorganic Products | 0.61 |
| 2861 | Wood and Gum Chemicals | 0.61 |
| 2873 | Agricultural Chemicals | 0.44 |
| 2842 | Perc and Petroleum Dry Cleaners | 0.45 |
| 3011 | Rubber and Tire Mfg. | 1.01 |
| 2011 | Meat Packing | 0.39 |
| 2013 | Sausage and Other Meats | 0.47 |
| 2046 | Wet Corn Milling | 0.35 |
| 2231 | Weaving Mills | 1.41 |
| 2732 | Book Printing | 1.18 |
| 2813 | Industrial Gases | 0.46 |
| 3339 | Primary Nonferrous Materials | 0.44 |
| 2875 | Fertilizers | 0.41 |
| 2891 | Adhesives and Sealants | 0.61 |
| 3111 | Leather Tanning and Finishing | 1.34 |
| 3291 | Abrasive Products | 1.30 |
| 3861 | Photo Equip. and Supplies | 0.65 |

TABLE V-4
FINDINGS
COST OF PERMITTING AS PERCENT OF SALES

| | Percent of Industry with Estimated Permitting Cost ≥ 1 Percent of Sales | Percent of Industry with Estimated Permitting Cost ≥ 3 Percent of Sales |
|--------|--|--|
| PM-10 | 67% | 38% |
| VOC | 70 | 18 |
| Toxics | 28 | -- |
| TOTAL | 55% | 20% |

TABLE V-5
COST OF PERMITTING
AS PERCENT OF VALUE ADDED

| | Percent of Industry with Estimated Permitting Cost ≤ 1 Percent of Value Added | Percent of Industry with Estimated Permitting Cost ≤ 3 Percent of Value Added | Percent of Industry for Which More Assessment is Needed |
|--------|---|---|---|
| PM-10 | 14 | 50 | 50 |
| VOC | 14 | 50 | 50 |
| Toxics | 61 | 100 | - |

VI. BENEFITS OF TITLE V

A. INTRODUCTION

This chapter addresses the potential benefits associated with implementation of the Title V operating permits program. Generally, Title V was legislated in order to improve air quality management. To be more specific, the program is designed to:

- o improve the effectiveness of the current permitting system and facilitate the adoption of lower cost control strategies based on economic incentive approaches;
- o consolidate source requirements into one Federally-enforceable document, thereby providing greater certainty to sources regarding their applicable requirements under the Act and facilitating better Federal/State/local enforcement efforts;
- o facilitate implementation of other titles of the Act;
- o improve the quality of emissions data and other source-related data; and
- o update the Act for consistency with other environmental quality legislation that utilizes permit systems.

A formal quantitative benefits analysis for this rule should theoretically include the valuation of more efficient enforcement activities, fewer legal actions due to greater certainty for sources regarding their applicable requirements, administrative savings due to better emissions data and opportunities to consolidate reporting, and reduced emissions resulting from the permit fee requirement. Environmental benefits will be limited to reduced emissions resulting from permit fees and possibly from better compliance. As one can see, assigning monetary values for such benefits would be arbitrary at this point. For these reasons, the benefits analysis included in this study is mostly qualitative in nature.

The EPA estimates that this rule will impose additional costs of \$526 million per year. Comparison of these costs to the overall health and environmental benefits of the Act is inappropriate. Instead, these costs should be compared to the incremental benefits of the permits program. The incremental benefits associated with the operations permits rule include the following: more efficient enforcement, fewer legal actions and administrative savings. Environmental benefits will be limited

to reduced emissions resulting from permit fees and possibly from better compliance.

B. EXPECTED BENEFITS

A primary benefit of the Title V permit program is that it will consolidate all of the applicable requirements that apply to a particular source into a single, Federally-enforceable document. In the past, many sources and air pollution control agencies have lacked sufficient information to properly comply with or enforce applicable regulations. Currently, a source's obligations under the Act, ranging from emissions control and monitoring to recordkeeping and reporting, are identified in numerous provisions of the SIP Federal regulations. Lawsuits or protracted administrative appeals have occasionally resulted from conflicting interpretations of a source's applicable requirements.

Title V is designed to clarify this vital information. The permit program will enable the source, the State, the EPA, and the public to better understand the requirements to which the source is subject, and whether the source is meeting those requirements. The permit program will provide certainty to industry regarding their statutory obligations, resulting in increased source accountability. Because permits are to be Federally-enforceable, enforcement of the Act requirements should improve significantly, providing environmental benefits in terms of cleaner air and reduced human health problems and adverse welfare effects from air quality improvements. In addition, the EPA's ability to implement the Act and enhance air quality planning and control will be greatly strengthened, in part, by providing the basis for better emission inventories.

Another benefit of the permit program is that it provides a uniform vehicle for State and local agencies to administer other titles of the Act, such as the substantially revised Federal air toxics program and the new acid deposition program. Title V may be used to facilitate implementation of the early voluntary reduction program for air toxics as required in Title III. In addition, States will use Title V permits to implement Phase II of the acid deposition program. Operating permits will play a significant role in ensuring compliance with the requirements of this program.

The collection of permit fees is not considered a benefit of this rule. The permit fee provisions of Title V require that sources share the costs of developing and implementing the Operating Permits Program. However, to the extent that fees are based on emissions levels, the fees may provide an incentive for sources to reduce emissions. This emission-based fee system will help achieve the environmental quality goals of the Act.

VII. NET BENEFITS

The economic efficiency criterion states that society is better off relative to no regulation when the additional benefit of the regulatory action exceeds the additional cost. A necessary condition in applying the criterion is that the cost represents the least amount of resources necessary to achieve the regulatory objective.

This condition of cost-effectiveness is approximated in the operating permits rulemaking. With the features of operational flexibility, the use of general permits as opposed to specific permits, and deferred applicability, the expected cost of this regulation is lowered significantly.

With respect to benefits, the categories are several. They include clarification and consolidation of a source's applicable requirements into a single document, improved use of local, State, and Federal enforcement resources, increased source accountability, better emissions and source-related data, improved implementation of other Titles of the Act, and, to a lesser extent, emission reduction incentives. However, the overall improvement the operating permits rule gives to the air quality management program at the local, State, and Federal levels is not amenable to quantification. Consequently, the estimated benefit of the rule in monetary terms has not been developed.

With quantification of the costs and a qualitative assessment of the benefits, we cannot determine whether the benefits exceed the costs.

APPENDIX A

IMPACT OF PERMITTING AREA SOURCES (AKA TOXIC SOURCES EMITTING <10 TPY) ON THE COST OF THE OPERATING PERMITS RULE

● OBJECTIVE

To assess the potential impact on the cost of the proposed operating permit rule (\$160 million to permitting agencies and \$352 million to the sources) of permitting approximately 350,000 small air toxics sources identified under section 112(c) of the Act.

● QUALIFICATIONS

- The extent of Maximum Achievable Control Technology (MACT) coverage for these air toxics sources is presumably unknown and, consequently, the number receiving exemptions under MACT is unknown.
- The distribution of sources permitted under a general permit versus a specific permit is unknown and dependent on the State program.
- The number of sources receiving deferrals under the Permit Rule is unknown and dependent on the State program.

● METHODOLOGY

- Approximately 350,000 nonmajor air toxic sources were identified as possible candidates for requiring Title V permits. The estimate comes from a draft initial list of categories of sources under section 112(c)(1). The list was revised to screen out sources that would not fall under the requirements of Title V. Following are the source categories, the number of sources in each category, and a synopsis of the criteria used for the screening. It should be noted that these do not represent the universe of nonmajor sources. However, there is overlap between these nonmajor air toxic sources and nonmajor sources of VOC and PM-10 emissions. A significant number of nonmajor PM-10 sources (residential woodstoves and asbestos demolition/remodeling) are exempted from Title V permitting.

1. Commercial Sterilizers: 190 - 47 facilities considered major = 143 total
2. Hospital Sterilizers = 7,000 (up to 512 may be major sources)
3. Industrial Cooling Towers = 75 sources. From the 3,000 on the list, there are 2,800 (petroleum refineries, chemical manufacturers, primary metal producers) with 800 cooling towers in total, and only 10 percent use chromium. Therefore, there should be about 300 sources with 800 towers. It is estimated that 75 percent of these towers are part of major sources and that the other 25 percent (or 75 sources) should be considered area sources.
4. Chromium Electroplaters = 5,000. This category includes hard chromium electroplating, chromic acid anodizing, and decorative chromium electroplating. The list estimates 5,000 sources, some of which would be considered major with lesser quantity cutoffs (LQC's). At this time, the number of major cannot be clearly identified because the LQC list has not been finalized.
5. Stage I Gasoline Marketing = 191,066. The list estimates 286,573 area sources. Only 191,066 can be considered area sources requiring operating permits: 12,046 bulk terminals; 4,020 pipeline facilities; and 175,000 service stations.
6. Commercial Dry Cleaning (PCE) = 24,700. Numbers are not included in source category list. Dry cleaning regulation package estimates 24,700 commercial dry cleaners.
7. Halogenated Solvent Cleaners = 115,000. The list estimated 100,000 small cold cleaners, most of which are located in area sources such as service garages and auto body shops; 30,000 open top vapor cleaners, with 15,000 located at major sources; and 3,000 in-line cleaners which are also considered major.
8. Asbestos = 3,447. There are 430 processing sources; renovation and demolition are exempted from Title V; no construction sources; 3,017 waste disposal landfills that accept asbestos waste; and no destruction/conversion sources identified yet.

- A sensitivity analysis is performed to analyze scenarios according to:

1. Distribution of permitting "mix" in terms of specific permits vs. general permits. The following percent ratios of specific permit to general permit are presented in the attached tables: 100/0, 50/50, and 0/100.
 2. The percent of sources permitted : 100, 50, and 25.
 3. The cost of a specific permit. The annual cost of permitting to the permitting agency presented in the ICR is: \$72 for the general permit; \$9, 23 for the specific permit of a large source; and \$5,707 for the specific permit of a small source. The annual cost of permitting to the sources presented in the ICR is: \$154 for a general permit; \$22,594 for the specific permit of a large source; and \$11,373 for the specific permit of a small source. The analysis was done using the general permit and small source values and varying the cost of a specific permit to \$3000 and \$500 for the permitting agency; and to \$8000, \$4000, and \$500 for the sources. The \$500 cost figure is estimated to be the most realistic because of the nature of these sources: nonmajor sources reporting usually on just one emission unit and requiring less complex air pollution control equipment. The cost of the general permit was not changed.
- Total annual costs include initial costs amortized over a 5-year period with an interest rate of 10 percent, plus recurring costs.
 - Findings are reported as a percent increase over the total cost to the sources or to the permitting agencies, not over the total cost of the program.

● FINDINGS

- Adoption of 100 percent general permits for all of these area sources will result in a moderate increase in the cost of administering the operating permits program (16 percent) and in the total cost to the sources (15 percent).
- Use of exemptions and deferred applicability features, where consistent with other Act objectives, will reduce this moderate increase to less than 5 percent for both permitting agencies and permitted entities.

- Adoption of 100 percent specific permits (at a realistic permit cost of \$500 per permit) for these area sources will result in an increase in the cost of administering the operating permits program of about 100 percent and in the cost to the sources of about 50 percent.
- Approximately 98 percent of these sources are considered good candidates for coverage under the general permit provision because they are homogeneous in terms of operation, processes, emissions, and air pollution control equipment.
- If the cost of the specific permit is \$5,707 (from ICR), then the increase in cost to the permitting agency due to permitting area sources with a mix of general and specific permits could range from 4 percent to 1,250 percent (\$6 million to \$1.9 billion). SEE TABLE 1.
- If the cost of the specific permit is \$3,000 (approximately half of the ICR figure), then the increase in cost to the permitting agency due to permitting area sources with a mix of general and specific permits could range from 4 percent to 655 percent (\$6 million to \$1.45 billion). Notice that the lower bound does not change because it is determined by assuming a general permit for 100 percent of the sources and the cost of the general permit was not varied. SEE TABLE 2.
- If the cost of the specific permit is \$500, which is a more realistic estimate for nonmajor sources because they have less emission points and use less complex air pollution control equipment, then the increase in cost to the permitting agency due to permitting area sources with a mix of general and specific permits could range from 4 percent to 109 percent (\$6 million to \$175 million). Again, the lower bound does not change because the cost of the general permit was not varied. SEE TABLE 3.
- If the cost of the specific permit is \$11,373 (from ICR), then the increase in cost to the sources due to permitting area sources with a mix of general and specific permits could range from 4 percent to 1,129 percent (\$13 million to \$4 billion). SEE TABLE 4.
- If the cost of the specific permit is \$8000 (approximately two-thirds of what is used in the ICR), the increase in cost to the sources with a mix of general and specific permits would range from 4 percent

to 794 percent (\$13 million to \$2.8 billion). Notice that the lower bound does not change because it is determined by assuming a general permit for 100 percent of the sources and the cost of the general permit was not varied. SEE TABLE 5.

- If the cost of the specific permit is \$4,000 (approximately one-third of what is used in the ICR), the increase in cost to the sources with a mix of general and specific permits would range from 4 percent to 397 percent (\$13 million to \$1.4 billion). Notice that the lower bound does not change because it is determined by assuming a general permit for 100 percent of the sources and the cost of the general permit was not varied. SEE TABLE 6.

- If the cost of the specific permit is \$500, a more realistic estimate considering that most of these nonmajor sources have only one emission unit and less complex control equipment, then the increase in cost to the sources with a mix of general and specific permits would range from 4 percent to 58 percent (\$13 million to \$175 million). Again, the lower bound does not change because it is determined by assuming a general permit for 100 percent of the sources, and the cost of the general permit was not varied. SEE TABLE 7.

TABLE 1

IMPACT OF PERMITTING AIR TOXICS AREA SOURCES ON THE COST TO PERMITTING AGENCIES FROM THE OPERATING PERMIT RULE

(IMPACT SHOWN AS A PERCENT/\$MILLION INCREASE OVER THE ESTIMATED PERMIT RULE COST)

COST OF GEN PERMIT = \$72
 COST OF SPECIFIC PERMIT = \$5,707

| PERCENT OF SOURCES PERMITTED | PERMIT MIX: % SPECIFIC PERMIT VS % GENERAL PERMIT | | |
|------------------------------|---|--------------|----------|
| | 100/0 | 50/50 | 0/100 |
| 100 | 1,250%/\$1,900 | 631%/\$1,000 | 16%/\$25 |
| 50 | 616%/\$987 | 315%/\$505 | 8%/\$12 |
| 25 | 311%/\$498 | 157%/\$252 | 4%/\$6 |

TABLE 2

IMPACT OF PERMITTING AIR TOXICS AREA SOURCES ON THE COST TO PERMITTING AGENCIES FROM THE OPERATING PERMIT RULE

(IMPACT SHOWN AS A PERCENT/\$MILLION INCREASE OVER THE ESTIMATED PERMIT RULE COST)

COST OF GEN PERMIT = \$72
 COST OF SPECIFIC PERMIT = \$3,000

| PERCENT OF SOURCES PERMITTED | PERMIT MIX: % SPECIFIC PERMIT VS % GENERAL PERMIT | | |
|------------------------------|---|------------|-----------|
| | 100/0 | 50/50 | 0/100 |
| 100 | 655%/\$1,450 | 366%/\$537 | 16%/\$25 |
| 50 | 328%/\$524 | 183%/\$269 | 8%/\$12.5 |
| 25 | 164%/\$262 | 91%/\$134 | 4%/\$6 |

TABLE 3

IMPACT OF PERMITTING AIR TOXICS AREA SOURCES ON THE COST TO PERMITTING AGENCIES FROM THE OPERATING PERMIT RULE

(IMPACT SHOWN AS A PERCENT/\$MILLION INCREASE OVER THE ESTIMATED PERMIT RULE COST)

COST OF GEN PERMIT = \$72
 COST OF SPECIFIC PERMIT = \$500

| PERCENT OF SOURCES PERMITTED | PERMIT MIX: % SPECIFIC PERMIT VS % GENERAL PERMIT | | |
|---------------------------------|---|-----------|----------|
| | 100/0 | 50/50 | 0/100 |
| 100 | 109%/\$175 | 62%/\$100 | 16%/\$25 |
| 50 | 54%/\$88 | 31%/\$50 | 8%/\$12 |
| 25 | 27%/\$44 | 15%/\$25 | 4%/\$6 |

TABLE 4

IMPACT OF PERMITTING AIR TOXICS AREA SOURCES ON THE COST TO SOURCES FROM THE OPERATING PERMIT RULE

(IMPACT SHOWN AS A PERCENT/\$MILLION INCREASE OVER THE ESTIMATED PERMIT RULE COST)

COST OF GEN PERMIT = \$154
 COST OF SPECIFIC PERMIT = \$11,373

| PERCENT OF SOURCES PERMITTED | PERMIT MIX: % SPECIFIC PERMIT VS % GENERAL PERMIT | | |
|------------------------------|---|--------------|-----------|
| | 100/0 | 50/50 | 0/100 |
| 100 | 1,129%/\$4,000 | 572%/\$2,014 | 15%/\$54 |
| 50 | 564%/\$2,000 | 286%/\$1,007 | 7.5%/\$27 |
| 25 | 282%/\$993 | 143%/\$50 | 4%/\$13 |

TABLE 5

IMPACT OF PERMITTING AIR TOXICS AREA SOURCES ON THE COST TO SOURCES FROM THE OPERATING PERMIT RULE

(IMPACT SHOWN AS A PERCENT/\$MILLION INCREASE OVER THE ESTIMATED PERMIT RULE COST)

COST OF GEN PERMIT = \$154

COST OF SPECIFIC PERMIT = \$8,000

| PERCENT OF SOURCES PERMITTED | PERMIT MIX: % SPECIFIC PERMIT VS % GENERAL PERMIT | | |
|------------------------------|---|--------------|-----------|
| | 100/0 | 50/50 | 0/100 |
| 100 | 794%/\$2,795 | 404%/\$1,425 | 15%/\$54 |
| 50 | 397%/\$1,397 | 202%/\$713 | 7.5%/\$27 |
| 25 | 198%/\$700 | 101%/\$356 | 4%/\$13 |

TABLE 6

IMPACT OF PERMITTING AIR TOXICS AREA SOURCES ON THE COST TO SOURCES FROM THE OPERATING PERMIT RULE

(IMPACT SHOWN AS A PERCENT/\$MILLION INCREASE OVER THE ESTIMATED PERMIT RULE COST)

COST OF GEN PERMIT = \$154
 COST OF SPECIFIC PERMIT = \$4,000

| PERCENT OF SOURCES PERMITTED | PERMIT MIX: % SPECIFIC PERMIT VS % GENERAL PERMIT | | |
|------------------------------|---|------------|-----------|
| | 100/0 | 50/50 | 0/100 |
| 100 | 397%/\$1,398 | 206%/\$725 | 15%/\$54 |
| 50 | 198%/\$699 | 103%/\$362 | 7.5%/\$27 |
| 25 | 99%/\$350 | 51%/\$181 | 4%/\$13 |

TABLE 7

IMPACT OF PERMITTING AIR TOXICS AREA SOURCES ON THE COST TO SOURCES FROM THE OPERATING PERMIT RULE

(IMPACT SHOWN AS A PERCENT/\$MILLION INCREASE OVER THE ESTIMATED PERMIT RULE COST)

COST OF GEN PERMIT = \$154
 COST OF SPECIFIC PERMIT = \$500

| PERCENT OF SOURCES PERMITTED | PERMIT MIX: % SPECIFIC PERMIT VS % GENERAL PERMIT | | |
|------------------------------|---|-----------|----------|
| | 100/0 | 50/50 | 0/100 |
| 100 | 50%/\$175 | 32%/\$114 | 15%/\$54 |
| 50 | 25%/\$87 | 16%/\$57 | 7%/\$27 |
| 25 | 12%/\$43 | 8%/\$28 | 4%/\$13 |