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General Accounting Office
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Resources, Community, and
Economic Development Division

B-275290

December 6, 1996

The Honorable Lauch Faircloth
Chairman, Subcommittee on Clean Air,
Wetlands, Private Property, and Nuclear Safety
Committee on Environment and Public Works
United States Senate

Dear Mr. Chairman:

The Environmental Protection Agency (EPA) is required by executive order to prepare regulatory impact analyses (RIA),¹ which assess the potential benefits, costs, and alternatives for each economically significant regulatory action that the agency takes.² RIAs are intended to add value to the regulatory process by providing decisionmakers with the analytical results of studies on the benefits and costs of various regulatory alternatives. In recent years, the Congress has given considerable attention to the use of benefit-cost analyses and has passed legislation that requires federal agencies to conduct benefit-cost analyses for certain new regulations.

¹RIAs must provide an assessment and analysis of the potential benefits and costs of a significant regulatory action, including any benefits and costs that cannot be quantified in monetary terms. They must also provide an assessment and analysis of the benefits and costs of potentially effective and reasonably feasible alternatives to the planned regulation along with an explanation as to why the planned regulatory action is preferable to the identified potential alternatives.

²A significant regulatory action is any regulatory action that is expected to (1) have an annual effect on the economy of \$100 million or more; (2) adversely affect the economy in a material way; (3) adversely affect the environment or public health and safety or state or local governments; (4) create serious inconsistency or interfere with regulatory actions by another agency; (5) alter the budget impact of entitlements, grants, and user fees; or (6) raise novel legal or policy issues.

Concerned about the costs that EPA incurs in preparing RIAs to support EPA's implementation of the Clean Air Act Amendments of 1990, you asked us to determine (1) whether EPA has a systematic way to identify and track the costs of preparing RIAs and (2) what have been EPA's costs to prepare RIAs for implementing regulations required by the 1990 amendments. Based on interviews with EPA program officials and examination of EPA's database, we identified 27 RIAs that were issued after enactment of the 1990 amendments.³ We included these RIAs in our review to ensure representation among the four program offices of EPA's Office of Air and Radiation. Even though EPA's other offices are also responsible for preparing RIAs, we limited our review to the RIAs prepared by the Office of Air and Radiation because your request focused on the implementation of the 1990 amendments.

RESULTS IN BRIEF

EPA's Office of Air and Radiation, which has four program offices, does not have a systematic way to identify and track all of its costs for preparing RIAs.⁴ Only two of the program offices are currently identifying and tracking the contract costs associated with preparing RIAs. None of the program offices are identifying and tracking the in-house costs of preparing RIAs. Because none of the offices had a systematic way to identify and track total costs, we requested program officials to provide us their best available cost data for preparing the 27 RIAs issued after enactment of the Clean Air Act Amendments of 1990. According to program officials, the data on contract costs were generally based on the cost estimates in the contract work assignments and the data on in-house costs were based on the project officers' best estimates.⁵

³One RIA we reviewed was prepared to support EPA's "Environmental Radiation Protection Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level, and Transuranic Wastes" regulation, under the authority of various statutes governing the protection of the environment from radioactive materials, rather than under the authority of the 1990 amendments.

⁴The four program offices are the offices of Air Quality Planning and Standards, Mobile Sources, Atmospheric Programs, and Radiation and Indoor Air.

⁵The position titles of the persons responsible for preparing the RIAs differed for each of the four program offices, however, we have used the term "project officer" when referring to these persons.

Total estimated cost to prepare the 27 RIAs exceeded \$13 million. Costs to prepare specific RIAs ranged from \$46,000 to \$3.8 million.⁶ The types of contract costs that project officers included varied for the 27 RIAs. For example, the cost estimates for some RIAs included only the costs to prepare regulatory and economic impact analyses, while other estimates included these costs as well as the costs to study health effects, collect and analyze emissions data, and develop modeling data that had been developed specifically for the RIAs. According to Office of Air and Radiation program officials, the costs to prepare the 27 RIAs varied because (1) some RIAs supported regulations that were controversial or complex, thus requiring the program offices to develop more economic, health, and modeling information to support EPA's regulatory decisions; (2) some RIAs used data that were already available, so the program offices did not have to develop the data; and (3) some project officers were inconsistent in the type of cost data they included in their estimates.

BACKGROUND

Since 1971, a series of executive orders and Office of Management and Budget directives have required federal agencies to perform benefit-cost analyses to support their regulatory actions. These analyses have evolved from relatively simple analyses of costs, such as the "Quality of Life" reviews required by the Nixon administration, to the comprehensive benefit-cost analyses required today. In February 1981, President Reagan issued Executive Order 12291, which required federal agencies to prepare RIAs that identified the benefits and costs for all proposed and final major rules that the agencies issued.⁷ Subsequently, in September 1993, President Clinton issued Executive Order 12866, which continued the requirement for all federal agencies to conduct RIAs for all significant regulatory actions. This order also was intended to make the regulatory process more accessible and open to public scrutiny and reaffirm the primacy of federal agencies in making regulatory decisions. Benefit-cost analysis has received considerable attention in the Congress in recent years. Last year, the Congress passed the Unfunded Mandates Reform Act of 1995,

⁶These costs were incurred in different years and have not been adjusted for inflation.

⁷Under Executive Order 12291, a major rule was defined as any regulation that was likely to result in (1) an annual effect on the national economy of \$100 million or more; (2) a major increase in costs or prices for consumers, industries, or governments; or (3) significant adverse effects on competition, employment, investments, productivity, innovation, or the international competitive position of U.S. firms.

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which requires federal agencies to prepare benefit-cost analyses to support certain regulations.

EPA'S COSTS TO PREPARE RIAs ARE NOT
SYSTEMATICALLY IDENTIFIED AND TRACKED

The Office of Air and Radiation estimated that it spent an average of over 2 million dollars annually to prepare RIAs. The cost is estimated since its four program offices do not systematically identify and track all of the costs of preparing RIAs. Even though the Office of Air Quality Planning and Standards has been tracking the contract costs of preparing RIAs for about 2 years and the Office of Mobile Sources project officers are currently tracking the contract costs associated with preparing individual RIAs, they do not have a way to track the in-house costs associated with preparing RIAs. Therefore, when we requested cost data from program officials, they were unable to provide actual cost data for the 27 RIAs in our review. Further, because of the time and effort that would be required for program officials to identify all of the costs, we agreed to accept the best available data for the contract costs and their best estimates of the in-house costs. Specifically, the contract costs were generally based on the cost estimates in the contract work assignments, and the in-house costs were based on the best estimates of the project officers who managed the preparation of the specific RIAs.

The information on the in-house costs to prepare the 27 RIAs that we received from the Office of Air and Radiation was not based on actual costs, rather on project officers' estimates. For example, the project officers responsible for managing the preparation of these RIAs estimated the amount of time EPA staff had devoted to prepare each one. The in-house cost estimates were based on the average cost of a staff-year and varied among the four program offices. According to program officials, the cost of a staff-year for each program office was

- \$56,000 for the Office of Air Quality Planning and Standards,
- \$60,000 for the Office of Mobile Sources,
- \$60,000 to \$70,000 for the Office of Atmospheric Programs, and
- \$70,000 for the Office of Radiation and Indoor Air.

According to these officials, the cost of a staff-year varied because of the different locations of the program offices and the average grade levels of the people preparing the RIAs varied among the offices. The contract costs were generally based upon the cost estimates when the contract work assignments were issued rather than the actual payments to the contractors. According to

Office of Air and Radiation officials, the contract cost estimates did not differ from the actual costs by more than 5 percent. Enclosure I identifies by program office the contract, in-house, and total costs of preparing the 27 RIAs.

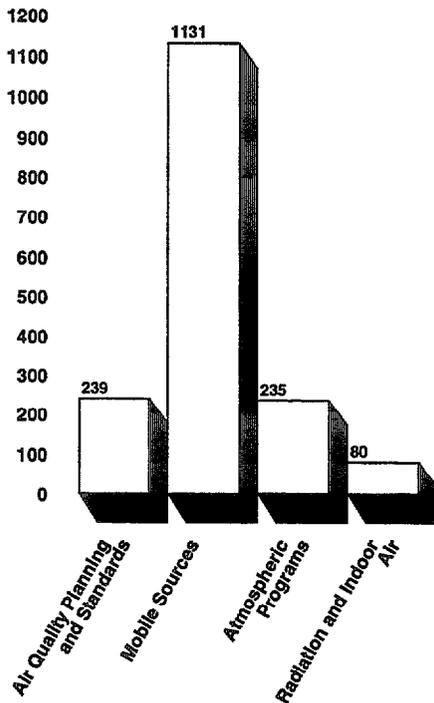
In commenting on a draft of this report, the Office of Air and Radiation stated that implementing a system to identify and track these costs would be costly because it would require the agency to redesign its budget process. The scope of our work did not include a review of EPA's budget process, and we are not suggesting that EPA redesign its budget process. However, systematically identifying and tracking contract and in-house costs of preparing RIAs could help the Office of Air and Radiation to better plan and budget for the resources that the agency will need to prepare future RIAs. Knowing the costs of preparing benefit-cost analyses could also be helpful for EPA in light of recent congressional attention to using benefit-cost analyses and the enactment of the Unfunded Mandate Reform Act of 1995. According to Office of Air and Radiation program officials, these requirements for benefit-cost analyses could cost EPA even more than it is currently spending to prepare RIAs.

**ESTIMATED COSTS TO PREPARE REGULATORY
IMPACT ANALYSES VARIED GREATLY**

The Office of Air and Radiation's four program offices estimated that they spent a total of \$13.4 million to prepare the 27 RIAs, with an average cost of nearly \$500,000 each. The costs to develop specific RIAs varied greatly and ranged from \$46,000 for the RIA supporting the regulation that required labels for products containing ozone-depleting chemicals to \$3.8 million for the RIA supporting the regulation that required using reformulated gasoline in large metropolitan areas to reduce severe ozone pollution levels. Moreover, the average costs to prepare RIAs varied considerably among the four program offices (see fig. 1.1).

Figure 1: Comparison of the Average Estimated Costs to Prepare RIAs Among the Four Program Offices of the Office of Air and Radiation, Fiscal Years 1990-95

Dollars in thousands



Source: Data from EPA.

According to program officials, the costs to prepare these RIAs and supporting studies and analyses varied for three reasons. First, the costs to develop information supporting an RIA were affected by how complex or controversial the proposed regulation was. For example, because only limited economic analysis was required for the RIA supporting a regulation that requires states to issue permits for stationary sources of air pollution, the Office of Air Quality Planning and Standards incurred no contract costs and only limited in-house costs to prepare that RIA. In contrast, to defend more controversial or complex regulations, the Office of Air and Radiation generally develops more economic, health, and modeling data and performs additional analyses of the data because these regulations receive closer scrutiny by EPA managers and the Office of

Management and Budget before being issued. For example, according to a program official in the Office of Mobile Sources, the controversial nature of the reformulated gasoline regulation required the office to incur considerable costs, especially for contract services, to fully evaluate the economic impact of this regulation.

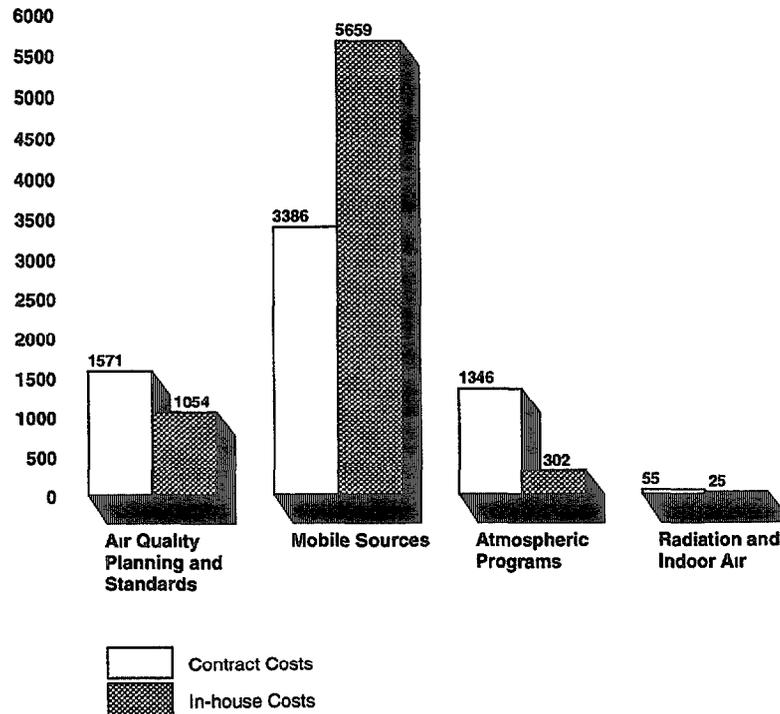
Second, whenever such supporting information as economic analyses, studies on health effects of air pollution emissions, and modeling data was already available, the Office of Air and Radiation used the existing information and avoided the expense of having to develop it. For example, much of the analysis for the RIA supporting the regulation to phase out ozone-depleting chemicals came from a model developed in the 1980's. The cost of developing this model was not included in the cost data provided to us.

A third reason why costs to develop RIAs varied is that the four program offices did not consistently include RIA-related costs in their estimates. For example, the cost estimates provided by the Office of Air Quality Planning and Standards included the costs of economic and regulatory impact analyses and other costs that were incurred specifically to support the RIAs, but the estimates did not include other costs, such as engineering data, studies on health effects, and analyses of data that had been incurred by EPA laboratories or other EPA offices and were not incurred for specific RIAs. On the other hand, the cost estimates provided by Office of Mobile Sources project officers included these types of costs because their RIAs were primarily prepared in-house.

The Office of Air and Radiation's overall cost to prepare RIAs was almost evenly distributed between contract services and in-house staff. However, the percentage of costs that was incurred for contract services varied significantly among the offices. For example, while contract costs accounted for 82 percent of the costs that the Office of Atmospheric Programs incurred to prepare RIAs, only 37 percent of the costs incurred by the Office of Mobile Sources was for contract services. According to Office of Mobile Sources officials, their office relies heavily on in-house staff to prepare RIAs in order to avoid potential conflicts of interest because many contractors that have expertise in mobile source emissions also have ties to the automobile industry. Figure 1.2 compares the contract and in-house costs for the 27 RIAs among the four program offices.

Figure 2: Comparison of Total Estimated Contract and In-House Costs to Prepare RIAs Among the Program Offices in the Office of Air and Radiation, Fiscal Years 1990-95

Dollars in thousands



Source: Data from EPA.

CONCLUSIONS

An important element of current executive and legislative regulatory reform efforts has been the emphasis on benefit-cost analyses to support federal regulations. Additionally, in recent years the Congress has considered imposing additional benefit-cost requirements. Two program offices are currently identifying and tracking the contract costs associated with preparing RIAs. However, by not including the in-house costs, these efforts are only accounting for about half of the costs associated with preparing RIAs. Systematically identifying and tracking in-house costs of preparing RIAs could help EPA better

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plan and budget resources for preparing future RIAs and provide the Congress with more accurate cost information on the resources needed to prepare RIAs.

AGENCY COMMENTS

We provided a draft of this report to EPA for review and comment. In response to the draft, EPA raised several questions regarding our methodology for obtaining the cost data from the four program offices and our proposed recommendation that the Office of Air and Radiation systematically identify and track all of the costs to prepare RIAs. Specifically, EPA questioned whether the inconsistencies in the cost data for preparing the 27 RIAs occurred because we did not request the same type of information from the program offices. Since the cost data was not available centrally, we requested each of the program offices to provide us with this information. We also make it clear in the report that we agreed to accept the project officers' best estimates or the best available data on the costs of preparing the 27 RIAs if actual cost data did not exist. The inconsistencies occurred because program officers did not have actual cost data and provided estimates of their costs.

EPA also took exception with our statement that the Office of Air and Radiation did not have a systematic way to identify and track all of the costs of preparing RIAs. Specifically, EPA stated that the Office of Air and Radiation had written guidance for estimating the costs of developing typical RIAs and a systematic way to identify and track the costs of preparing RIAs. We disagree that the Office of Air and Radiation has a systematic way to capture these costs. We found that the Office of Air and Radiation's efforts to identify and track RIA costs consist of two of the program offices tracking only contract costs, and no office was tracking the in-house costs associated with preparing RIAs. EPA stated that tracking the costs of preparing RIAs would be costly because it would require a redesign of the agency's budget process. While we did not expect EPA to develop a complex tracking system that would require the agency to redesign its budget process, we did envision EPA's systematically identifying the contract and in-house costs of preparing RIAs. Because developing a tracking system would incur additional costs, we are not recommending that EPA implement a formal tracking system. However, we continue to believe that identifying and tracking the costs to prepare RIAs could help improve the agency's oversight of these costs and provide the Congress with more accurate information concerning the resources needed to prepare benefit-cost analyses. EPA also provided other technical comments regarding the factual information in the draft report that have been incorporated as appropriate.

SCOPE AND METHODOLOGY

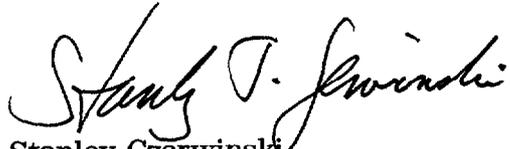
Based on your request that we determine whether EPA has a systematic way to identify and track the costs of preparing RIAs and what those costs have been, we identified the RIAs that had been prepared by EPA's Office of Air and Radiation between November 1990, the effective date of the 1990 amendments, and December 1995. Based on interviews with program officials from EPA's Office of Policy, Planning, and Evaluation and Office of Air and Radiation and examination of EPA's database, we determined that 27 RIAs had been prepared by the Office of Air and Radiation's four program offices for final air quality regulations during this time frame. We interviewed program officials in the four program offices—the offices of Air Quality Planning and Standards, Mobile Sources, Atmospheric Programs, and Radiation and Indoor Air—to determine whether the program offices had a systematic way to identify and track the costs of preparing RIAs and to determine the costs of preparing the 27 RIAs. Because the Office of Air and Radiation did not have a systematic way of tracking costs when most of these RIAs were prepared, EPA's costs to prepare these 27 RIAs were not readily available. Therefore, to minimize the time and effort that program officials would have to devote to developing the cost data, we requested that officials from the four program offices provide us the same types of cost data by identifying the contract costs incurred and estimating the amount of time EPA staff spent on preparing the RIAs. We also discussed with program officials the completeness of the cost data and reasons for the wide variance in the costs of preparing the RIAs. We performed our work from July 1996 through October 1996 in accordance with generally accepted government auditing standards.

As arranged with your office, unless you announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies to the appropriate congressional committees; the Administrator, EPA; and the Director, Office of Management and Budget. We will also make copies available to others on request.

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Please call me at (202) 512-6111 if you or your staff have any questions. Major contributors to this report are listed in enclosure II.

Sincerely yours,

A handwritten signature in cursive script that reads "Stanley D. Czerwinski".

Stanley Czerwinski
Associate Director,
Environmental Protection Issues

Enclosures - 2

COSTS TO PREPARE 27 REGULATORY IMPACT ANALYSES (RIA)
IN FOUR PROGRAM OFFICES IN THE OFFICE OF AIR AND RADIATION

Regulatory impact analysis	Contract costs	In-house costs	Total
Office of Air Quality Planning and Standards			
RIA and Economic Impact Analysis: Proposed Emission Standards and Guidelines for Municipal Waste Combustors	\$ 0	\$ 69,000	\$ 69,000
RIA and Regulatory Flexibility Act Screening: Outer Continental Shelf Air Regulations	90,000	97,000	187,000
RIA and Regulatory Flexibility Act Screening: Operating Permits Regulations	0	56,000	56,000
RIA: National Emissions Standards for Hazardous Air Pollutants for By-Product Coke Oven Charging, Door Leaks, and Topside Leaks	40,000	70,000	110,000
RIA: Section 112(g) Rulemaking	6,000	44,000	50,000
RIA and Regulatory Flexibility Analysis: Enhanced Monitoring Program	100,000	201,000	301,000
RIA, Economic Impact and Regulatory Flexibility Analysis: Proposed Effluent Guidelines and National Emissions Standards for Hazardous Air Pollutants for the Pulp, Paper, and Paperboard Industry	845,000	224,000	1,069,000
RIA: Sacramento Nonattainment Area, South Coast Nonattainment Area, and Ventura County-- Federal Implementation Plans	90,000	47,000	137,000

Regulatory impact analysis	Contract costs	In-house costs	Total
RIA: National Emissions Standards for Hazardous Air Pollutants for Source Categories: Organic Hazardous Air Pollutants From Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to the Negotiated Regulations for Equipment Leaks	150,000	91,000	241,000
Economic Impact Analysis: Proposed Emission Standards and Guidelines for Municipal Waste Combustors	160,000	61,000	221,000
RIA: Petroleum Refinery National Emissions Standards for Hazardous Air Pollutants	90,000	94,000	184,000
Subtotal	\$1,571,000	\$1,054,000	\$ 2,625,000
Office of Mobile Sources			
RIA and Regulatory Flexibility Analysis: Interim Detergent Registration Program and Expected Detergent Certification Program	\$ 2,400	\$ 111,000	\$ 113,400
Final RIA: Reformulated Gasoline	2,307,947	1,536,000	3,843,947
Final RIA: Control of Vehicular Evaporative Emissions	0	152,500	152,500
Final RIA: Refueling Emission Regulations for Light Duty Vehicles and Trucks and Heavy Duty Vehicles	600,000	2,775,000	3,375,000
Final RIA, Economic Impact Analysis, and Summary and Analysis of Comment: Renewable Oxygenate Requirement for Reformulated Gasoline	0	150,000	150,000

Regulatory impact analysis	Contract costs	In-house costs	Total
RIA: Clean Fuel Fleet Program	85,006	450,000	535,006
RIA and Regulatory Support Document: Control of Air Pollution Emission Standards for New Non-Road Spark-Ignition Engines at or Below 19 Kilowatts	369,540	424,800	794,340
Analysis of Costs and Benefits: National Low Emission Vehicles Program	21,334	60,000	81,334
Subtotal	\$3,387,127	\$5,659,300	\$ 9,046,427
Office of Atmospheric Programs			
RIA: Compliance With Section 604 of Clean Air Act Amendments for Phaseout of Ozone Depleting Chemicals	\$ 52,013	\$ 30,000	\$ 82,013
RIA: National Recycling and Emission Reduction Program	132,010	9,000	141,010
RIA: Final Acid Rain Implementation Regulations	397,685	70,720	468,405
RIA: Rule Requiring Labeling of Products Containing or Manufactured With Ozone-Depleting Substances	40,000	6,000	46,000
RIA: National Recycling and Emission Reduction Program--Section 608 of the Clean Air Act Amendments of 1990	94,631	9,000	103,631
RIA: Nitrogen Oxides Regulations--1993	350,000	106,080	456,080
RIA: Nitrogen Oxides Regulations--1995	280,000	70,720	350,720
Subtotal	\$1,346,339	\$ 301,520	\$ 1,647,859
Office of Radiation and Indoor Air			

Regulatory impact analysis	Contract costs	In-house costs	Total
RIA: EPA's High-Level Waste Standards	\$ 55,071	\$ 25,000	\$ 80,071
Subtotal	\$ 55,071	\$ 25,000	\$ 80,071
Total	\$6,358,637	\$7,039,820	\$13,398,457

ENCLOSURE II

ENCLOSURE II

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