

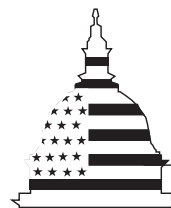
GAO

Report to the Chairman and Ranking  
Minority Member, Subcommittee on VA,  
HUD, and Independent Agencies,  
Committee on Appropriations, U. S.  
Senate

June 1999

# ENVIRONMENTAL INFORMATION

## EPA Could Better Address Concerns About Disseminating Sensitive Business Information



G A O

Accountability \* Integrity \* Reliability

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United States  
General Accounting Office  
Washington, D.C. 20548

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**Resources, Community, and  
Economic Development Division**

B-281230

June 25, 1999

The Honorable Christopher S. Bond  
Chairman  
The Honorable Barbara Mikulski  
Ranking Minority Member  
Subcommittee on VA, HUD,  
and Independent Agencies  
Committee on Appropriations  
United States Senate

This report discusses the usefulness of information reported to environmental regulatory agencies in “competitive intelligence” practices—the collection and analysis of legally obtained information to gain insights into competitors’ operations. The report also assesses the Environmental Protection Agency’s efforts to address industries’ concerns about providing the public access to sensitive business information.

We are sending copies of this report to other Senate and House committees and subcommittees with jurisdiction over environmental, commerce and business, and information management issues. We will make copies available to others upon request.

If you or your staff have any questions, please call me on (202) 512-6111. Major contributors to this report are listed in appendix I.

*David G. Wood*

David G. Wood  
Associate Director, Environmental  
Protection Issues

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# Executive Summary

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## Purpose

Since the mid-1980s, the federal government and several states have implemented various environmental public “right-to-know” initiatives. These initiatives require industries to report on their use and discharge of potentially harmful substances and require government agencies to make this information available to the public. Although the Environmental Protection Agency (EPA) asserts that right-to-know information has resulted in significant benefits to public health and the environment, the industries required to submit this information have questioned the appropriateness of reporting and publicly disclosing increasingly detailed facility-level information. Specifically, representatives of various industries have expressed concerns that their submissions contain “sensitive business information” that, if released, would harm their competitiveness. This concern is heightened because companies around the world have increasingly employed “competitive intelligence” professionals who collect and analyze legally obtained information to glean insights into the operations of their employers’ competitors. In light of this concern, the Senate report accompanying the Veterans’ Administration, Housing and Urban Development, and Independent Agencies’ fiscal year 1998 appropriations bill and subsequent discussions with Appropriations Committee staff directed GAO to (1) provide information on the usefulness of publicly available environmental information to competitive intelligence professionals and (2) assess EPA’s efforts to address industries’ concerns about providing the public with access to sensitive business information.

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## Background

EPA and the states collect information from industrial facilities to monitor compliance with environmental laws and regulations, to measure the progress made towards reducing pollution, and to provide information to the public about hazardous materials in their communities. Over the past decade, the Congress, the executive branch, and several states have made this and other environmental information more available to the public. In 1986, the Congress enacted the Emergency Planning and Community Right-to-Know Act, which requires industries to report to EPA information on toxic chemicals present at and released from their facilities and requires EPA to make this information publicly available. EPA has been considering implementing additional initiatives to collect and disseminate information. Under one of the more controversial of these, EPA is considering requiring industries to report the amounts of toxic chemicals entering a facility, transformed into products and waste, and leaving the facility. A similar reporting requirement has been in place in New Jersey and Massachusetts for several years. Both the state and the proposed EPA programs are commonly referred to as “materials accounting.”

Due, in part, to the large volume of negative comments EPA received in 1996 on its advance notice of proposed rulemaking on materials accounting, the agency has delayed further regulatory efforts and has no immediate plans to implement such a program. Among other things, industries have raised concerns that materials accounting reporting would reveal sensitive information about their business operations that could be used by others to gain an unfair competitive advantage. These concerns were most prevalent in the chemical manufacturing sector.

Under the Freedom of Information Act, federal agencies generally must make their records (including material obtained by an agency) available to the public upon request. This requirement does not apply to, among other things, records constituting trade secrets or confidential business information. EPA has established general procedures for considering claims of confidentiality under the act, as well as procedures for each of its relevant programs to take into account any specific information disclosure or protection provisions in the program's authorizing statute. Certain program regulations also contain provisions governing the disclosure of data.

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## Results in Brief

Competitive intelligence professionals, industry representatives, and environmental officials expressed a range of views on the usefulness of publicly available environmental information provided by businesses. For example, industry representatives told GAO that environmental information reported by businesses—such as air and water permits or materials accounting information—often contains valuable details about their operations. In contrast, most intelligence professionals said that, while such information is useful for some of their purposes, it is rarely sufficient for reliable analyses when used alone. New Jersey and Massachusetts environmental officials also questioned the value of this information for competitive intelligence purposes and noted that businesses made very few claims of confidentiality in their states when submitting even the controversial materials accounting information. Despite the wide range of views on the value of environmental information for competitive intelligence purposes, competitive intelligence professionals generally agreed that multiple types and sources of information are needed to develop comprehensive and reliable analyses of competitors' business operations. Industry officials also acknowledged that they could do a better job of protecting their sensitive business information while still complying with reporting requirements.

EPA has made a number of efforts to address industries' concerns about the collection and the dissemination of sensitive business information. For example, during EPA's recent consideration of materials accounting reporting, the agency made several attempts to better understand and address industries' concerns. However, many of the industry officials that GAO contacted continue to have concerns about EPA's lack of consistent policies and practices for collecting and disseminating sensitive business information. In addition, GAO, industry trade groups, and most recently EPA itself have raised concerns about the absence of consistent, high-level agency attention to information management activities. In response to these concerns, EPA will soon consolidate many of these activities in a new Information Office. However, it remains unclear how the new office will address issues related to collecting and disseminating sensitive business information. GAO is recommending that this new office play a central role in ensuring that these issues are adequately addressed.

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## Principal Findings

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### Usefulness of Environmental Information to Competitive Intelligence Professionals Can Vary

Competitive intelligence professionals and industry representatives expressed a range of views on the usefulness of publicly available environmental information reported by businesses. Although they generally agreed that environmental information provides only one piece of a "puzzle," they disagreed on the significance of that piece. Industry representatives—including some with competitive intelligence responsibilities—told GAO that environmental information reveals valuable details about business operations. These industry representatives told GAO that their specialized knowledge of industrial processes and technology made this information more valuable to them than it might be for intelligence professionals who are consultants and might work in a number of fields and have less specialized knowledge. For example, industry representatives said that they used details found in publicly available environmental documents—such as equipment specifications, operating rates, process descriptions, and volumes of raw materials—to determine competitors' production costs and help make their own firm's pricing strategy more competitive. These intelligence professionals said that information obtained through other sources usually lacked sufficient precision for similar analyses of competitors' costs.

In contrast, other intelligence professionals—often contractors who might sell their services to a number of firms in a variety of sectors—told GAO that while environmental information is useful for some of their intelligence objectives, it is rarely sufficient for reliable analyses of competitors’ business operations. Furthermore, these intelligence professionals told GAO that, in the absence of this information, they could obtain equivalent information from other sources. According to these intelligence professionals, environmental information usually provides a starting point for more comprehensive research, including interviews with knowledgeable industry sources, such as a competitor’s suppliers, distributors, customers, and, if possible, employees. Many competitive intelligence professionals emphasized that information obtained through interviews is more important than that obtained from other sources because people with direct knowledge of a competitor are the most reliable and current sources of information. This view is bolstered by a 1998 survey conducted by security specialists that concluded that the greatest risk of losing proprietary information comes from persons with a trusted relationship with a company, such as employees, consultants, and business partners.<sup>1</sup> Some industry officials that GAO contacted acknowledged that they could do a better job in training their employees to protect sensitive business information.

New Jersey and Massachusetts regulatory officials and environmental advocacy groups also questioned the usefulness of environmental information to intelligence professionals. These officials pointed out that very few firms in their states request confidentiality on information they submit under the states’ materials accounting programs—even though these states rarely challenge these requests. In fact, fewer than 2 percent of the facilities in New Jersey and Massachusetts have made confidentiality claims on the materials accounting information they have reported to their states. Industry representatives offered several explanations for the small number of confidentiality claims they have made. These representatives told GAO that some companies lack adequate procedures for determining whether the information they submit contains sensitive business information. In other cases, the company may review submissions but decide not to make confidentiality claims because the size and the complexity of the facility effectively “mask” potentially sensitive information.

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<sup>1</sup>ASIS Trends in Intellectual Property Loss Survey Report, Richard J. Heffernan and Dan Swartwood, and the American Society for Industrial Security Safeguarding Proprietary Information Standing Committee, 1998.

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## EPA Could Improve Its Efforts to Address Industries' Concerns

Despite its efforts to address industries' concerns about the collection and the dissemination of sensitive business information, EPA could do a better job in addressing these long-standing issues. To its credit, the agency has expanded its outreach efforts to stakeholders in the past several years. For example in 1997, EPA established a Toxic Data Reporting Committee under its National Advisory Council for Environmental Policy and Technology. The Committee was established to solicit stakeholders' input on ways to improve the reporting of data on toxic substances and has representatives from a cross section of industry. Similarly, when EPA published its advance notice of proposed rulemaking on materials accounting in 1996, the agency made a special effort to obtain industries' views on how EPA could address their concerns about collecting and disseminating sensitive business information. Nonetheless, industry representatives have maintained that EPA lacks consistent, high-level attention to their concerns about sensitive business information. For example, a November 1998 study prepared for the Chemical Manufacturers Association concluded that EPA has "a labyrinth of widely different policies for the protection of sensitive business information."<sup>2</sup> Among other things, the report recommended that EPA reconsider its policy decisions and legal interpretations that, it claimed, have unnecessarily restricted the ability of its members to make claims of confidentiality. The report also recommended that the Congress replace various confidentiality provisions with a uniform statute that would increase industries' ability to claim confidentiality.

In response to numerous concerns about its overall information management policies and procedures, in 1998, EPA's Administrator announced plans for the creation of a new program office for information policy and management. In EPA's December 1998 report on options for the structure and functions of the new Information Office, a brief reference is made to the possibility of addressing sensitive business information issues in the future, but the report does not elaborate on how, or if, the office will address them.<sup>3</sup> EPA officials responsible for organizing the new Information Office told GAO that the office would likely address these issues and their relationship to broader information policy and management issues. However, EPA has not yet determined how it should do so.

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<sup>2</sup>Protection of Sensitive Business Information at the Environmental Protection Agency, Ropes & Gray, Nov. 20, 1998.

<sup>3</sup>Final Report: Structural and Functional Options for EPA's New Information Office, Comprehensive Information Management Task Force and the Information Working Group, EPA, Dec. 1, 1998.



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## Recommendation

To help ensure that the long-standing concerns about collecting and disseminating sensitive business information are addressed in a consistent, comprehensive manner, GAO recommends that the Administrator, EPA, direct the Program Manager of the newly established Information Office to develop an action plan that details how the office will address issues surrounding sensitive business information. A central feature of this plan should address how EPA will balance its need for collecting and disseminating potentially sensitive business information with industries' concerns about such activities. To help ensure that EPA fully considers the concerns of all interested parties, this action plan should be developed with extensive and representative involvement by stakeholders.

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## Agency Comments

GAO provided a draft of this report to EPA for comment and held discussions with officials from the Office of Information Transition and Organizational Planning. The agency generally agreed with the information presented in the report, concurred with GAO's recommendation, and stated that GAO had taken a fair approach to discussing this challenging issue. EPA offered several technical comments and clarifications, which GAO incorporated throughout the report as appropriate.

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## Abbreviations

ASIS	American Society for Industrial Security
EPA	Environmental Protection Agency
FBI	Federal Bureau of Intelligence

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# Introduction

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Since the mid-1980s, the Environmental Protection Agency (EPA) has initiated a number of actions to make information on the sources and the levels of pollution widely available to the public. Although EPA allows submitters of information to request claims of confidentiality if the public release of the information would adversely affect their businesses, many in industry believe that EPA collects and disseminates too much sensitive business information. In recent years, these concerns have heightened with the growing use of “competitive intelligence” practices—the gathering and analyzing of legally obtained information on one’s competitors to gain insights into their business operations— by companies around the globe.

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## EPA’s Programs to Collect and Disseminate Information

Through the Freedom of Information Act and the information disclosure provisions of environmental statutes, the public has access to much of the information EPA generates and collects. EPA has promulgated both agencywide and program-specific regulations governing the submission and the disclosure of information. A business may request that EPA treat certain submitted data as confidential and withhold it from public disclosure, which the agency will do if it determines, among other things, that disclosing the information is likely to substantially harm the competitive position of that business. Provisions in environmental statutes impose program-specific restrictions on the types of data that may receive confidential treatment or must be publicly disclosed.

EPA and the states collect information from industrial facilities to monitor compliance with environmental laws and regulations, to measure the progress made towards reducing pollution, and to provide information to the public on hazardous materials in their communities. For example, under the Clean Water Act, EPA must make certain discharge data publicly available. One of the most significant sources of publicly available environmental information is the Toxic Release Inventory, established under the Emergency Planning and Community Right-to-Know Act of 1986. Businesses must submit to EPA information on toxic chemicals present at, and released from, their facilities. The act requires EPA to make this information publicly available through computer telecommunications as well as other means and authorizes businesses to claim only specific chemical identities as confidential. EPA has expanded the inventory several times to include additional types of businesses and chemicals. According to EPA, since the reporting of releases of toxic chemicals under the Toxic Release Inventory began in 1988, the total releases of chemicals listed on the inventory has been reduced nearly 43 percent. The agency has

considered also requiring businesses to report the amounts of specific toxic chemicals that enter the facility, are used within it, and leave either as products, by-products, or waste. This is referred to as “materials accounting,” and EPA asserts that reporting and disseminating such data would provide a more detailed and comprehensive picture to the public about environmental conditions and toxic chemicals at facilities located near their communities. Due, in part, to the large volume of negative comments EPA received in 1996 when it announced its consideration of a nationwide materials accounting program in an advance notice of proposed rulemaking, the agency has delayed further regulatory efforts and has no immediate plans to implement such a program. However, Massachusetts and New Jersey currently require the reporting of materials accounting data.

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## Industries’ Concerns About the Disclosure of Sensitive Business Information

Although representatives within industry acknowledge that there are benefits to publicly disseminating some of the information they submit to EPA, some have raised concerns that the disclosure of some of this information will adversely affect their businesses’ competitiveness. These concerns have heightened in recent years as EPA has increased the type and the amount of information it collects and disseminates and domestic and foreign competitors have increased their use of “competitive intelligence” methods. Some industry representatives maintain that domestic firms are at a competitive disadvantage because U.S. firms are often required to disclose more detailed information than their foreign counterparts.<sup>4</sup>

Competitive intelligence is the process of gathering and analyzing information on one’s competitors to gain insights into their business operations. Unlike economic espionage, competitive intelligence relies on legal methods to collect data. Companies use competitive intelligence to answer questions about such things as their competitors’ production costs, timelines for new product introductions, market share, manufacturing processes and capacity, and expansion plans. Competitive intelligence professionals answer these questions by piecing together information using multiple data collection methods and information sources ranging from literature searches to interviews with the competitors’ employees. Although no specific information is available on the economic losses incurred by U.S. firms due to legal competitive intelligence activities, the Federal Bureau of Intelligence’s (FBI) National Counterintelligence Center

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<sup>4</sup>Because of the vast array of environmental reporting requirements around the world, we did not evaluate the accuracy of this claim.

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reported that U.S. firms may have lost over \$250 billion in 1996 through those activities and illegal espionage practices.<sup>5</sup>

The Chemical Manufacturers Association has been especially critical of EPA's information collection and dissemination programs and has sponsored several studies that examined the link between the disclosure of sensitive business information and the environmental reporting requirements.<sup>6</sup> The Association maintains that EPA's policy decisions and legal interpretations unnecessarily limit industries' ability to claim information as confidential. Many industry officials have expressed strong objections to EPA's materials accounting proposal, in part because much of the information (e.g., raw material stocks and usage rates) that might be reported under such a program would make it very easy for competitors to gain important knowledge about their business operations. These concerns are particularly strong within the chemical-manufacturing sector.

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## **Related GAO Products**

In recent years, GAO has issued several reports on EPA's information collection, dissemination, and management activities. In a 1998 report on EPA's information collection and dissemination activities, we concluded that although EPA had projects underway to help address information gaps related to facilities' toxic chemical releases, the agency had not developed policies, procedures, and standards to govern various aspects of its public dissemination efforts.<sup>7</sup> To help ensure that EPA provides the public with information that is accurate, complete, and relevant, we recommended that it expand its guidance on information resources management by developing agencywide policies and procedures for program offices involved in designing, developing, and implementing information dissemination projects. Such guidance and standards should address obtaining stakeholders' input in the projects' design and development, testing to correct data errors, and communicating contextual information on the data's uses and limitations. EPA agreed with our recommendation.

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<sup>5</sup>The Center relied on statistics derived from a survey conducted by the American Society of Industrial Security, a trade association that represents professionals in the field of corporate security.

<sup>6</sup>The Association represents the chemical industry on legislative, regulatory, and legal matters at the international, national, and state levels.

<sup>7</sup>Environmental Information: Agencywide Policies and Procedures Are Needed for EPA's Information Dissemination (GAO/RCED-98-245, Sept. 24, 1998).

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In 1997, we reported on the status of federal and state efforts to require industries' reporting of detailed materials accounting information.<sup>8</sup> The report summarized various studies on materials accounting programs in New Jersey and Massachusetts and on stakeholders' views on the implications of a potential federal program. Several studies focused on the benefits associated with materials accounting programs while others emphasized their drawbacks—including the potential that disclosure of reported information could reveal industrial trade secrets.

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## Objectives, Scope, and Methodology

This report responds to the Senate report accompanying the VA, HUD, and independent agencies' fiscal year 1998 appropriations bill and subsequent discussions with Appropriations Committee staff. We were asked by Committee staff to (1) provide information on the usefulness of publicly available environmental information to competitive intelligence professionals and (2) assess EPA's efforts to address industries' concerns about providing the public access to sensitive business information.

To determine how competitive intelligence professionals use information provided by EPA and the states, we interviewed individuals at 13 firms. Some of these individuals were consultants who performed competitive intelligence on a full-time basis while others were industry employees who did this work as part of their job. We selected individuals and firms based on their experience in preparing analyses on the chemical-manufacturing sector. The individuals and firms were judgmentally selected to reflect a range of views. The selected sample is not necessarily representative nor can the views we obtained be projected to the universe of competitive intelligence professionals. To ensure that our sample contained a wide range of views and appropriate experience, we asked the Society of Competitive Intelligence Professionals and industry trade groups, such as the Chemical Manufacturers Association, to recommend competitive intelligence professionals and firms that met our criteria.<sup>9</sup> In addition to interviewing competitive intelligence professionals, we reviewed journal articles and studies on competitive intelligence and attended competitive intelligence training workshops. Because industries have particular concerns about EPA's consideration of a materials accounting program, we interviewed state environmental and industry officials in Massachusetts and New Jersey to obtain their perspectives on sensitive business

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<sup>8</sup>Toxic Substances: Few States Have Considered Reporting Requirements for Chemical Use Data (GAO/RCED-97-154, June 6, 1997).

<sup>9</sup>The Society is an organization of individual competitive intelligence professionals from around the world.

information matters related to their states' materials accounting programs. The firms contacted in these states were judgmentally selected, and the views we obtained are not necessarily representative. We selected the firms from a larger universe of those that have historically made claims of confidentiality and from recommendations from industry and environmental groups at the national and state levels. Our work focused solely on the information collection and analysis methods of legal competitive intelligence rather than on economic espionage or illegal uses of such information, such as by terrorist groups. We also interviewed officials in the FBI's National Security Division and the American Society for Industrial Security to obtain their perspectives on the potential losses of U.S. businesses due to competitive intelligence activities and the steps that companies can take to better protect their sensitive business information.

To assess EPA's efforts to address industries' concerns about the implications of providing public access to sensitive business information, we interviewed EPA officials involved in information collection and dissemination policies, company and trade association representatives from industries that submit information to EPA, and representatives of national environmental and public interest groups. We also reviewed relevant statutes and EPA's policies and procedures on collecting, protecting, and disseminating industry information and for obtaining stakeholders' input.

EPA commented on a draft of this report, and, where appropriate, we incorporated its comments in the final report. Our review was conducted from June 1998 through April 1999 in accordance with generally accepted government auditing standards.



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# The Usefulness of Environmental Information to Competitive Intelligence Professionals Can Vary

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The competitive intelligence professionals and industry representatives that we contacted expressed a range of views on the usefulness of publicly available information businesses report to environmental agencies. Most of the competitive intelligence professionals and industry representatives agreed on the basic framework for how competitive intelligence is conducted. In particular, they described competitive intelligence as a jigsaw puzzle or mosaic because their analyses are pieced together from numerous types of information gathered and selected from a wide array of sources. Although they generally agreed that information obtained from environmental agencies provides only one piece of the “puzzle,” they disagreed on the significance of that piece. Industry representatives—including some with competitive intelligence responsibilities—stated that the information reported by businesses often contains valuable details about their competitors while other competitive intelligence professionals said that such information is neither sufficient or even necessary for their analyses. Because examples were provided to us that supported a range of views, it is apparent that the value of this information for competitive intelligence purposes varies from case to case. Regardless of their views on the usefulness of this information, industry officials acknowledged that they could do a better job in protecting their sensitive business information while still complying with EPA’s and states’ reporting requirements.

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## Some Competitive Intelligence Professionals Use Environmental Information Extensively

Industry representatives—including some with competitive intelligence responsibilities—told us that they use information reported to environmental agencies to uncover valuable details about their competitors. Although they acknowledged that this information may not be useful for gaining insights into operations at some facilities, these industry representatives said that the information reported to environmental agencies is among the most valuable type of information available to them and that their work is becoming easier as more of this information is publicly disseminated. Accordingly, they carefully review their competitors’ environmental records, such as air and water permits and, in Massachusetts and New Jersey, materials accounting data. They said that these records disclose such useful pieces of information as equipment specifications, operating rates, process descriptions, amounts of raw materials, and other details.

The industry representatives who emphasized the importance of environmental information often cited materials accounting data as among the most valuable type of such information. They said that the details

found in materials accounting data are not available from other environmental documents. They told us that data on the quantity of chemicals used and processed at a facility can reveal precise information about a competitor's production levels, operational efficiencies, and production costs. They frequently mentioned that the identity and the efficiency of catalysts—ingredients used to control reactions in chemical manufacturing processes—is information found only in materials accounting data. Representatives of the chemical manufacturing industry also told us that the precision of materials accounting data enables them to make reliable estimates of competitors' production costs, the primary basis of competition in their markets, and that these estimates are used to develop more effective pricing and marketing strategies. These intelligence professionals said that information obtained through other sources usually lacked sufficient precision for similar analyses of competitors' costs.

Industry representatives who perform competitive profiling for their firms described themselves as experts with specialized knowledge of chemical processes and technology. They said that this expertise makes environmental information more valuable to them than it would be to intelligence professionals who work in a number of fields and have less in-depth knowledge in any one field. One intelligence professional told us that his specialized knowledge of chemical manufacturing technology enables him to pick out process-specific insights from a facility's environmental documents even when that information is combined with information about other unrelated processes.

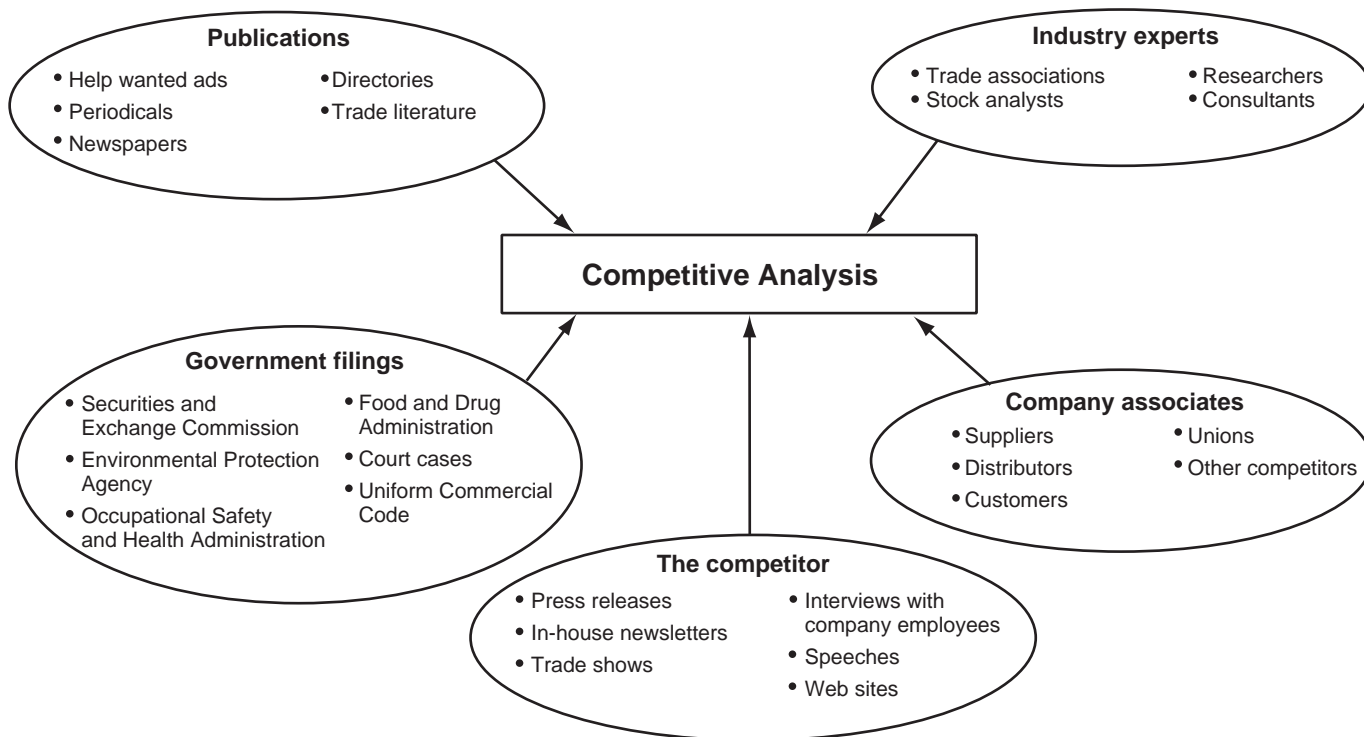
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## **Some Competitive Intelligence Professionals See Little Value in Environmental Information**

In contrast, other competitive intelligence professionals we spoke to said that they use environmental information for some of their analyses but generally rely on a much broader range of information sources. In addition, these intelligence professionals said that when they do use environmental information, they regard it as a starting point for more comprehensive research. For example, a representative of an intelligence consulting firm told us that only once in his experience did he obtain an answer to a research question simply by conducting a search of environmental information. More commonly, these firms collect as much environmental and other information on targeted businesses as possible and then sift through the records for useful pieces of information that might suggest further areas of more in-depth research. For example, an environmental permit could contain the name and telephone number of a plant manager who could then be contacted for additional information.

Figure 2.1 shows how different types and sources of information are combined to glean insights on competitors' business operations.

**Figure 2.1: The Types and the Sources of Information Used by Intelligence Professionals**



Some of the intelligence professionals we spoke to said that materials accounting data may contain useful information but that the information contained in environmental documents can generally be obtained through other sources. For this reason, one intelligence professional told us that profiling is no easier in the two states that require materials accounting than it is in states without such programs. A report prepared for the Chemical Manufacturers Association—often cited by industry as evidence that materials accounting programs threaten their competitiveness—acknowledges that an initial analysis using materials

accounting information in combination with other publicly available environmental information “does not constitute a high-confidence, decision-grade profile.” Instead, the report concludes that such an analysis provides “a highly useful core of understanding around which an interested outside party can build a more comprehensive investigation.” When we spoke with the authors of the report, they confirmed that materials accounting data does not substantially affect the ease of their work.

Many competitive intelligence professionals said that their most important information comes from personal contacts rather than from publicly available environmental information. They use interviews to confirm and expand on information obtained from publicly available environmental records and other sources. They said that people with direct knowledge of a competitor—such as the competitor’s suppliers, distributors, customers, and employees—are the most reliable and current sources of information. Professionals with competitive intelligence consulting firms told us that they frequently call these sources to gather information and commented that company employees and business partners often are eager to talk about their work to someone who shows interest.

The competitive intelligence professionals who said that environmental information is not a critical source for competitive profiling tended to work as consultants for, rather than employees within, companies. Environmental officials in New Jersey and Massachusetts and environmental advocacy groups who agreed with this view pointed to the small number of claims of confidentiality that had been made in these states on materials accounting data—even though the states rarely challenge these claims—as evidence that environmental information is not as sensitive as claimed by some in industry. In fact, fewer than two percent of the facilities in New Jersey and Massachusetts made confidentiality claims in 1996.<sup>10</sup> According to state environmental officials, these numbers have varied very little from year to year.

Industry representatives from New Jersey and Massachusetts offered several explanations for the small number of confidentiality claims made on materials accounting data and said that this does not necessarily indicate that the information is not useful for competitive profiling. For example, some companies decide not to make confidentiality claims

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<sup>10</sup>In their comments on a draft of this report, EPA officials speculated that state restrictions on claiming confidentiality on information that can readily be obtained from other sources—such as reverse engineering or chemical analyses of waste streams—may have been a contributing factor to the small number of claims of confidentiality.

because the size and the complexity of their facilities make it difficult for competitors to glean important insights from reported information. In addition, some representatives said that facilities in New Jersey and Massachusetts are not representative of facilities nationwide in terms of the sensitivity of their materials accounting information.

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## **Industry Could Better Protect Its Sensitive Business Information**

Nonetheless, some industry representatives also acknowledged that companies often fail to make confidentiality claims and/or take other information security measures because many of the firms' employees responsible for submitting information lack awareness of how environmental information can be used for competitive profiling. As a result, some sensitive business information could be submitted without attendant claims of confidentiality. In addition, some employees report more detailed information than required by environmental regulatory agencies. For example, instead of submitting simple box diagrams of their firm's processes, employees, who are unaware of the sensitivity of the information, might submit detailed schematics of the facility. This lack of awareness is not limited to submitting environmental information to regulatory agencies. For example, industry representatives acknowledged that they do not always train their employees to safeguard sensitive information when dealing with competitors at trade shows or responding to "cold" inquiries over the telephone. In fact, a 1998 survey of U.S. companies conducted by the American Society for Industrial Security (ASIS) concluded that the greatest risk to proprietary information comes from employees and other persons with a trusted relationship with a company, such as consultants and business partners.<sup>11</sup> Representatives of the Society told us that employees often unknowingly reveal sensitive information over the telephone to competitive intelligence professionals.

Some industry representatives said that their companies have taken steps to educate their employees on ways to better safeguard sensitive business information. For example, some firms train employees to report only the minimum amount and type of information required by environmental regulatory agencies. Because competitors are not always as careful about protecting sensitive business information, one representative acknowledged that environmental reporting requirements could work to his company's advantage. If safeguards are in place, they can minimize risks to a company's competitiveness while providing insights into the business operations of a less careful competitor.

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<sup>11</sup>ASIS Trends in Intellectual Property Loss Survey Report.

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# EPA Could Improve Its Efforts to Address Industry Concerns

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Although EPA has made several efforts to address industry's concerns about the collection and the dissemination of potentially sensitive business data, many of the industry representatives we spoke with believe that these efforts have been inadequate. They believe that EPA's interpretation of certain statutes has been inconsistent and tends to overemphasize the collection and the dissemination of information while underemphasizing the provisions to protect sensitive business data. In response to the number and variety of information management problems that have been raised by GAO and others, EPA recently announced plans for establishing a new Information Office. While EPA acknowledges that this office would be well-suited to address, among other things, the long-standing concerns about the collection and the dissemination of sensitive business information, the agency has not yet determined how to do so.

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## EPA's Efforts to Address Industries' Concerns

EPA has a number of initiatives underway to help solicit and address industries' and other stakeholders' concerns about the collection and the dissemination of information. Some of these initiatives are program-specific while others cut across program lines. The initiatives range from formal federal advisory councils to more informal "open-door" meetings. Although the issue of sensitive business information is relevant to, and has been raised in, several of these outreach efforts, EPA has not yet established a forum specifically to address this issue.

Examples of formal advisory forums that EPA uses to solicit industry views include several committees within the National Advisory Council for Environmental Policy and Technology. The Council was founded in 1988 to provide a forum for public counsel and advice to EPA's Administrator by taking advantage of the respective knowledge and insights of business and industry, government, academia, labor, environmental advocacy organizations, community groups, and others involved in environmental management. The Council has had a number of committees that have addressed program-specific or agencywide information management issues. For example, in 1997, the Council established the Toxics Data Reporting Committee to address information-reporting issues related to EPA's Toxic Release Inventory. These issues have ranged from fairly narrow topics, such as revising reporting forms, to broader ones, such as ways for EPA to improve its presentation of inventory data to the public. In 1996, the Council established the Information Impacts Committee to provide advice and recommendations on EPA's current and proposed

processes for managing its information resources. In 1998, this Committee was reorganized and renamed the Environmental Information and Public Access Committee, and it will continue to provide advice on EPA's information management initiatives.

EPA has several other formal and informal mechanisms to solicit industries' input on its information collection and dissemination initiatives. For example, when the agency first announced that it was considering establishing a nationwide materials accounting program, it presented its plans in an advance notice of proposed rulemaking wherein, among other things, EPA invited comment on six questions that specifically addressed concerns about confidential business information. For example, EPA asked which of the proposed data elements were of greatest concern and how the proposed initiative could be modified to address these concerns while still preserving public access to relevant data on chemical use. EPA also asked whether there were any cases in New Jersey or Massachusetts where public access to materials accounting data had adversely affected businesses. In addition to the advance notice's request for public input, EPA held numerous public meetings and published a series of issue papers that sought industries' participation in crafting a materials accounting program that would address their concerns. Finally, EPA and several industry officials told us that they meet periodically to discuss their continuing concerns about the collection and the dissemination of sensitive business information.

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## **EPA's Efforts Have Not Addressed Industries' Concerns to Their Satisfaction**

Despite its outreach efforts, EPA has not fully addressed many of industries' long-standing concerns about collecting and disseminating sensitive business information. A common theme among those critical of the agency's efforts is that EPA conducts its increasingly important, complex, and controversial information management activities in an inconsistent manner that lacks adequate attention from senior-level managers.

For example, a 1998 report prepared for the Chemical Manufacturers Association concluded that EPA has "a labyrinth of widely different policies for the protection of sensitive business information" that "frustrate confidentiality claims for information that can be of high value for competitive intelligence."<sup>12</sup> Because the Association acknowledges that at least some of this inconsistency results from different statutory

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<sup>12</sup>Protection of Sensitive Business Information at the Environmental Protection Agency, Ropes & Gray, Nov. 20, 1998.

requirements concerning the collection, the protection, and the dissemination of business information, it favors a uniform statute that would make it easier for its members to assert confidentiality claims based on the “mosaic” argument.

However, the Association maintains that much of this inconsistency results from EPA’s policy decisions and legal interpretations that unnecessarily limit industry’s ability to claim data as confidential. For example, the Association maintains that such terms as emissions data and effluent data “have been stretched by EPA’s interpretation to include a wide range of industrial process information that exceeds the normal meaning of these terms.” Furthermore, an overlybroad interpretation by one EPA office adversely affects industry’s ability to make claims of confidentiality, even in other offices with a narrower interpretation, because, once information has been disseminated, it can no longer be claimed as confidential. Accordingly, the Association recommends that EPA engage in a broad-based, heightened level of scrutiny of its policies on public disclosure and confidentiality.

Representatives from other industries also expressed dissatisfaction with EPA’s responsiveness to their concerns about the collection and the dissemination of sensitive business information. For example, officials from the Chemical Specialties Manufacturers Association told us that EPA’s Office of Prevention, Pesticides, and Toxic Substances is increasingly pushing a “right-to-know” agenda and is making it increasingly difficult to justify claims of confidentiality.<sup>13</sup> These officials said that when they raised a number of substantive concerns about a proposal they believed would result in increased disclosure of sensitive business information, EPA only responded to minor technical issues raised by the Association and ignored their more substantive concerns. An official from the American Petroleum Institute told us that EPA is generally not very responsive to their concerns and declined to include them as participants in the advisory Toxic Data Reporting Committee even though the petroleum industry has unique concerns that would not be raised by other industries’ representatives.

When we asked the representatives of various industries if their concerns about the collection and the dissemination of sensitive business information could be addressed through administrative and/or legislative remedies, some respondents indicated they were generally satisfied with

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<sup>13</sup>The Association represents companies engaged in the manufacture, the formulation, the distribution, and the sale of chemical specialty products for household, institutional, and industrial use.



the existing provisions of EPA and the states concerning confidential business information provisions. Others recommended a few minor revisions, such as reporting information in ranges rather than in precise numbers. However, a few officials acknowledged that even though they believed such remedies could address their concerns, they did not want to inform EPA about them for fear that this information would only make it more likely that the agency would pursue a materials accounting program. Regardless of their views on the adequacy of these provisions, nearly all industry officials we spoke to questioned the benefits of, and remained opposed to, a materials accounting program. Accordingly, many believed that if such a program were to even slightly increase the possibility of releasing sensitive business information to their competitors, this risk would be unacceptable.

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## **EPA's New Information Office Is Positioned to Address Long-Standing Problems**

Similar, and broader, concerns about EPA's inconsistent management of information have also been raised by us and others in the past. In September 1998, we reported that industry believed that individual EPA offices were given too much authority in making decisions about information dissemination projects and had not adequately collaborated with them to identify and resolve concerns prior to disseminating the information. We also found that, while EPA had a general policy statement on public access to its information, the agency lacked specific procedures and standards to help ensure that its dissemination activities were carried out in accordance with that statement. Accordingly, we recommended that EPA develop agencywide procedures and standards that would, among other things, address stakeholders' involvement in the design and the development of projects in the various program offices.

EPA's National Advisory Council for Environmental Policy and Technology raised similar concerns and made several recommendations to the Administrator on ways to address some of the agency's long-standing information management problems. In a January 1998 report, the Council concluded that EPA did not provide sufficient senior-level management attention to information management issues and did not have an ongoing, formal forum to involve stakeholders. Accordingly, the Council recommended that EPA establish (1) a new organization with the appropriate authority and sole responsibility for managing agency information and (2) an on-going, broad-based information "Users' Group" to provide regular constructive advice, feedback from stakeholders' constituencies, and reactions to proposed actions and initiatives.

In response to the number of concerns raised within and outside EPA about its information management, on August 11, 1998, the Administrator announced an initiative to “redesign our internal management structure to better meet the information integration needs of the 21st century.”<sup>14</sup> To begin this process, EPA established a senior-level task force to develop options on how to “fundamentally realign information management and policy at EPA.” The task force was instructed that these options must include a single, senior official in charge of information management and policy. The task force was also instructed to develop a plan for involving both internal and external stakeholders.

As envisioned in the December 1998 final report by the task force, the new Information Office’s program manager will be vested with strong authority to help ensure the office’s goals are attainable.<sup>15</sup> These authorities would include policy setting, supported by a small policy staff. The new office will also have an external liaison staff to serve as a first point of contact “for persons and organizations that have a problem, issue, or need with EPA’s data and information services and programs.”

The final report also noted that, while not a preeminent concern, industry representatives continued to have concerns about protecting sensitive business information. However, the report only listed this issue as “one to be considered for future phasing in.” After considering the task force’s recommendations, on December 9, 1998, the Administrator announced her decision regarding the structural framework for the new office. As recommended by the task force, the office will be lead by a senior-level manager and will, among other things, have responsibility for policy and for liaison with stakeholders. No mention was made of the issue of the collection and the dissemination of sensitive business information. In our discussions with EPA officials responsible for organizing the new office, we were told that while sensitive business information issues would likely be addressed in the context of broader information policy and management issues, EPA has not decided precisely how the office should do so.

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## Conclusions

Recently, EPA has made a number of efforts to solicit stakeholders’ involvement in identifying information management concerns and has undertaken a number of initiatives to address some long-standing

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<sup>14</sup>Memorandum on “Comprehensive Information Management,” EPA’s Administrator and Deputy Administrator, Aug. 11, 1998.

<sup>15</sup>Final Report: Structural and Functional Options for EPA’s New Information Office, Comprehensive Information Management Task Force and the Information Working Group, EPA, Dec. 1, 1998.

problems. Among these efforts, most significant is the recent creation of an Information Office that will be headed up by a senior-level manager who has been charged with addressing information policy issues, improving agencywide consistency of information policy and management, and obtaining stakeholders' involvement in the decision-making process. Although EPA acknowledges the importance of addressing industry's concerns about the collection and the dissemination of sensitive business information, no defined plans have been developed by EPA that detail how the new Information Office should proceed in doing so. Given the long-standing controversy over this issue, we believe EPA needs to ensure that the Information Office works with industries and other stakeholders to address these matters.

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## **Recommendation**

To help ensure that the long-standing concerns about the collection and the dissemination of sensitive business information are addressed in a consistent, comprehensive manner, we recommend that the Administrator, EPA, direct the Program Manager of the new Information Office to develop an action plan that details how the office will address the issues surrounding sensitive business information. A central feature of this plan should address how EPA will balance its need to collect and disseminate potentially sensitive business information with industries' concerns about such activities. To ensure that EPA fully considers the concerns of all interested parties, this action plan should be developed with extensive and representative involvement by stakeholders.

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## **Agency Comments**

We provided a draft of this report to EPA for comment and held discussions with officials from the Office of Information Transition and Organizational Planning. The agency concurred with our recommendation and offered several technical comments and clarifications, which we incorporated as appropriate.

# GAO Contacts and Staff Acknowledgments

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## Acknowledgments

In addition to those named above, Alice L. London, Joseph Cook, and Richard P. Johnson made key contributions to this report.

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