United States General Accounting Office

GAO

Report to the Chairman, Subcommittee on Environment, Energy, and Natural Resources, Committee on Government Operations, House of Representatives

April 1988

TOXIC SUBSTANCES

EPA Has Made Limited Progress in Identifying PCB Users

GAO/RCED-88-127

GAO

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

Resources, Community, and
Economic Development Division

B-203051

April 15, 1988

The Honorable Mike Synar
Chairman, Subcommittee on Environment,
Energy, and Natural Resources
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

This report responds to the last of your three-part request of August 29, 1986, for information on the Environmental Protection Agency's (EPA) oversight of companies handling or using polychlorinated biphenyls (PCBs), a toxic chemical used primarily for its insulating properties in electrical equipment. Concerned about the health and environmental effects of PCBs, the Congress passed the Toxic Substances Control Act (TSCA) in 1976, which, among other things, banned the manufacture of PCBs and required EPA to regulate the use and eventual disposal of over 1 billion pounds of PCBs produced from 1929 through 1976.

Parts one and two of your request focused primarily on handlers (companies that collect, store, or prepare PCBs for disposal) and on disposal companies.[1] The third part of your request focused on issues related to all PCB facilities, the vast majority of which are facilities that continue to use equipment containing PCBs (PCB users). In subsequent meetings with your office, we agreed to describe, in this report, EPA's efforts to identify and select potential PCB facilities for inspection--updating the results of our 1981 PCB report.[2]

In summary, more than 10 years after the Congress required EPA to regulate PCBs, EPA has made limited progress in identifying which of the hundreds of thousands of facilities have PCBs, thereby hampering its ability to devise a viable strategy for inspecting them. As a result, EPA is still expending resources conducting inspections at facilities that have no PCBs (non-PCB facilities), thereby lessening the deterrence created by the possibility of an inspection. EPA has, however, recently initiated several actions to improve its PCB identification and inspection program.

[1]Part one resulted in our report, Toxic Substances: Abandonment of PCBs Demonstrates Need for Program Improvements (GAO/RCED-87-127, May 20, 1987), and part two in Toxic Substances: PCB Enforcement in Kansas City Region Substantiates Need for Further Program Improvements (GAO/RCED-88-72, Feb. 26, 1988).

[2]EPA Slow in Controlling PCBs (CED-82-21, Dec. 30, 1981).

As a result of health and environmental concerns, in 1976 the Congress banned PCB production through TSCA and mandated that EPA regulate the remaining PCBs. EPA requires facilities that have PCBs to properly mark, store, keep records on, and dispose of or destroy most items containing PCBs within 1 year after being removed from use and placed in storage. High-concentration PCBs, 500 or more parts per million, require disposal by EPA-approved, high-temperature incinerators or other alternate destruction methods. Lower concentration PCBs can be disposed of by other methods, such as in high-efficiency boilers or in approved chemical waste landfills. Potentially over 1 million PCB capacitors must be removed from service by October 1988, and thousands of PCB transformers by October 1990, resulting in a peak period during which PCBs must be disposed of.

Although EPA headquarters is responsible for the overall PCB program, the 10 EPA regional offices are primarily responsible for enforcing PCB regulations. The enforcement includes inspecting facilities for compliance with PCB regulations and taking enforcement actions, such as assessment of fines, against violators.

Limited Progress Made in Identifying PCB Facilities

Although EPA estimates that 700,000 to 750,000 PCB facilities exist, it has made limited progress in identifying them. EPA believes that, of the estimated universe, 30 facilities are disposal companies, over 100 are handlers, and the remainder are users. Unlike EPA's hazardous waste program, the PCB program does not have a congressional mandate to require facilities to identify themselves to EPA. Instead, EPA identifies the kinds of facilities and activities that use equipment that might contain PCBs, such as utilities, manufacturing companies, and commercial buildings. Unless an EPA inspector determines that such a facility does not have PCBs, EPA considers it a potential PCB facility for inspection.

In 1981 we reported that EPA headquarters had not developed comprehensive lists of potential PCB facilities subject to inspection by its 10 regional offices. Headquarters had provided limited information to the regional offices to assist them in developing their own lists. However, these lists were quite small when compared to the potentially large numbers of PCB facilities. For example, one regional office list identified only 400 potential PCB facilities but estimated a possible 2,000 PCB facilities at that time.

offices contact the fire departments for registrations of PCB transformers in or near commercial buildings, a high-risk area.

EPA Continues to Inspect Non-PCB Facilities

Because EPA regions do not have accurate and complete listings of facilities having PCBs, they continue to conduct inspections at some facilities that do not have PCBs. In 1981 we reported that approximately 50 percent of the PCB inspections conducted in five EPA regions in fiscal year 1980 were of non-PCB facilities. As table 1 shows, several years later, the four regions we reviewed are still conducting PCB inspections at such facilities.

Table 1: Inspection of Non-PCB Facilities

Region	Fiscal year[a]	Total inspections	Non-PCB facility	Percent of total[b]
III	1986	211	34	16
IV	1986	316	97	31
V	1986	555	45	8
VI	1987	237	102	43

[a]Fiscal year 1986 information was not available in region VI

[b]Region IV could not locate 34 inspection reports for our review, and in 39 inspection reports we could not determine whether or not the facility had PCBs In region V, we did not review 185 inspection reports because, among other things, many had been inadvertently destroyed

EPA officials in each region we visited agreed that they are expending some of their limited resources inspecting facilities that have no PCBs. EPA data shows that, in the last 3 fiscal years, EPA conducted an average of about 2,355 PCB inspections per year; and according to regional office estimates, an average inspection may cost as much as $1,300 for salary, travel, test analysis, and other expenses. In these regions, approximately 30 to 100 inspections in 1 year were conducted at non-PCB facilities. The expenditure of a portion of EPA's inspection resources at facilities that have no PCBs reduces EPA's coverage of facilities with PCBs that are subject to the PCB regulations. As a result, the deterrent effect on a PCB facility created by the likelihood of being inspected is lessened.

Changes in EPA's Strategy

In May 1981 EPA provided its first PCB inspection strategy to the regional offices. The strategy identified 11 industries, such as railroads and utility companies, which EPA believed used most of the PCBs, and recommended the percentage of inspections regional offices should allocate to each. In our 1981 report we questioned whether EPA was inspecting the PCB facilities that posed the greatest potential threat to the environment

notification regulation. According to EPA, the administrative burden on EPA and such users did not justify tracking a very few articles of PCB waste and the costs of submitting and processing the data would far outweigh EPA's use of such data.

As in EPA's hazardous waste program, the PCB facilities will be assigned identification numbers, which will be used for tracking purposes. EPA plans to issue the proposed notification rule by April 30, 1988, and a final rule in July 1988 under an accelerated rulemaking process. EPA expects the manifesting portion of the rulemaking to take longer to issue. If EPA receives substantial negative comments on the notification portion of the proposed rule, additional time to address these comments will be necessary. If this occurs, EPA plans to issue the combined notification and manifesting rule by December 31, 1988.

Third, EPA has recently requested and received the 1986 records of the three major PCB incinerators to identify users and handlers who used these facilities. As EPA collects all of the above-mentioned information, it plans to disseminate it to the regional offices to improve their targeting of facilities for PCB inspections.

The last initiative is what EPA terms an exposure-based strategy. EPA has contracted for a study to identify the types of PCB facilities that present the greatest human and environmental risks for better targeting of the types of industries to inspect. EPA's goal is to develop a strategy that concentrates inspection resources in the most important areas. According to the Chief of EPA's Chemical Regulation Branch, the study was initiated because some regions were inspecting facilities that were not likely to result in much exposure, rather than PCB disposal or handling companies, for example, which potentially pose a much greater risk. EPA's completion date for the study is June 1988. However, EPA needs more information and does not expect to meet that date. It has not yet established a revised completion date. EPA expects to modify its risk-based strategy once it receives information on PCB users under its notification requirement.

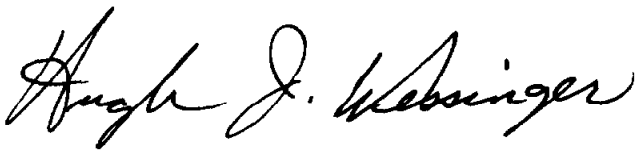
Conclusions

EPA has made limited progress in identifying PCB facilities since the Congress banned PCBs 10 years ago. EPA has been developing lists of potential PCB facilities and has revised its strategy for targeting inspections. However, because the lists are limited and often outdated, EPA still does not know which facilities have PCBs. As a result, EPA has continued to inspect non-PCB facilities, while facilities with PCBs have gone without

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time, we will send copies to the Administrator, EPA, and to other interested parties and make copies available to others upon request.

Major contributors to this report are listed in appendix I.

Sincerely yours,



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inspection. Although EPA will always have to inspect some facilities that may not have PCBs to determine compliance with the notification requirement and other PCB equipment bans, it should be part of a planned strategy. With a recent average of 2,355 inspections each year to cover a potential universe of 700,000 to 750,000 PCB facilities, EPA must accurately target its PCB inspections to provide an effective deterrent to noncompliance with the PCB regulations.

To improve its PCB inspection program, EPA has several initiatives under way. EPA is focusing its inspection efforts on PCB disposers and handlers, the facilities involved with large amounts of PCBs. In addition, EPA has acted to provide additional information on the large PCB users as well as smaller users who have sent PCBs to incineration or used alternate destruction methods. EPA is also working on a risk-based strategy to better target PCB inspections and plans to provide all the above-mentioned information to the regional offices as it is developed.

We are not making any recommendations at this time because we believe that the various EPA initiatives are a step in the right direction. EPA's efforts should provide much-needed additional and current information on PCB users. However, whether they will provide adequate information on PCB users and, therefore, the most effective use of EPA's inspection resources remains to be seen.

Our work was performed between May 1987 and March 1988. We interviewed officials and collected information at EPA headquarters and in regions III (Philadelphia), IV (Atlanta), V (Chicago), and VI (Dallas), which were selected for their geographic distribution.

In order to describe EPA's efforts to identify and select facilities for PCB inspections, we interviewed EPA officials responsible for the PCB program at headquarters and in the four regions and reviewed various headquarters and regional listings of potential PCB facilities. We reviewed PCB inspection files and reports for non-PCB inspections in fiscal years 1986 or 1987, as available. We also reviewed headquarters- and region-developed inspection strategies; general PCB program information, such as resource and inspection data; and documents on EPA program initiatives that related to identification and selection of PCB facilities.

The views of directly responsible officials were sought during the course of our work and are incorporated where appropriate. As requested, we did not obtain official agency comments on a draft of this report.

and recommended that EPA include several other types of industries, such as waste oil dealers and electric equipment repair shops.

In May 1985 EPA revised its strategy and identified the following 10 priority industries for inspection on the basis of 1981 violation rates: metal, electrical utility, chemical, government facility, food and feed, electrical equipment manufacture and repair, scrap and salvage, disposal, general manufacturing, and other. In June 1986 EPA added commercial buildings to the strategy, recommending a 15- to 25-percent allocation of inspections because of the risks of fire-related incidents and the potential human exposure.

Except for commercial buildings, the regions were to determine what percentage of inspections to allocate to the 10 industries. However, the percentages were based on judgment because of incomplete information on the numbers of PCB facilities in each industry in the region. EPA subsequently drafted a proposed revision to its strategy as a result of our PCB work, congressional oversight committee work, and internal EPA reviews regarding increased inspections of PCB handlers and disposers. EPA now plans to allocate inspections to five major categories: 10 percent to PCB disposal facilities, 25 percent to handlers, 5 to 10 percent to reinspection and other, 30 to 45 percent to general (the 10 industries), 15 to 25 percent to commercial buildings, and as needed to PCB complaints and tips.

New PCB Program Initiatives Undertaken by EPA

EPA currently has several initiatives under way to improve its PCB program. First, EPA's primary focus will be on the PCB disposers and handlers, those facilities that will be handling the largest amounts of PCBs, particularly over the next few years when PCB disposal is expected to peak because of deadlines on the use of certain PCB equipment. EPA expects to conduct comprehensive inspections at such facilities, which will decrease the availability of resources to inspect PCB users.

Second, EPA is developing rulemaking to require certain PCB users (those who store their own wastes and therefore are likely to be large-volume users), commercial storers, transporters, and disposers to notify EPA of their existence and to require PCB manifesting, which would track PCBs from the users to final disposal. EPA officials expect to identify about 5,000 primarily large-volume PCB users as well as handlers. Through the manifest system, EPA will also identify an additional unknown number of facilities that incinerate or use alternate destruction methods for their PCB wastes. The majority of users who own only a few pieces of PCB equipment will be exempted from notifying under the draft proposed

Over the years EPA headquarters provided some information to the regions, such as a sales list from the primary PCB manufacturing company and a listing of food and feed establishments, because of the potential consequences of a PCB leak around food or feed. Some regions requested additional assistance from EPA headquarters to identify additional potential PCB users. EPA headquarters hired a contractor to compile listings of potential PCB facilities in regions I (Boston), III (Philadelphia), V (Chicago), and VI (Dallas). According to a contractor official, the listings were compiled in 1982 at a cost of $74,000, primarily from a computerized data base of industrial and nonmanufacturing plants. Even with this effort, however, the listings did not include all industries, according to a region VI official. In addition, the 1982 data soon became outdated as companies went out of business or disposed of their PCBs and new businesses emerged.

Regions we visited resorted to relying on various public directories to select facilities for PCB compliance inspections. Each year three of the four regions searched through telephone and manufacturer directories, as well as various listings of federal, state, municipal, educational, and hospital facilities, for potential PCB facilities for inspection. Although the regions had various lists of potential PCB facilities, region III attempted to make a comprehensive list. It subpoenaed electric utility companies for their customer lists to expand its listing of potential PCB facilities. Using the headquarters information and its own sources, region III officials said they identified approximately 9,000 possible PCB sites.

In part, because of differences in the regional office PCB programs, EPA headquarters conducts national PCB conferences for headquarters, regional, and state officials to share their experiences. According to EPA officials, these conferences include new regulations and directives, as well as activities the regions have initiated. For example, one region reported the success of its utility subpoena in identifying high energy consumption and therefore possible PCB facilities. According to officials in the regions we visited, however, identifying PCB facilities is difficult and a better method of identification is needed, such as requiring PCB facilities to notify EPA of their PCBs.

Another ongoing effort to identify PCB users is the use of PCB transformer registrations at fire departments. As of December 1, 1985, all owners of transformers with high-concentration PCBs must register them with local fire departments because of the potential dangers of human exposure in the event of a fire. EPA has recommended that regional

EPA, partly on the basis of our previous PCB work, is focusing its inspection attention on PCB disposal companies and handlers because of the potential risks associated with the large quantities of PCBs these facilities handle. EPA is also making efforts to better identify PCB facilities, which it believes will also help to reduce the inspection of non-PCB facilities. Among other things, EPA plans to propose a regulation that will require about 5,000 PCB users (mainly large-volume), commercial storers, transporters, and disposers to notify EPA of their activities. The regulation will also require the manifesting (or tracking) of high-concentration PCBs from the user to final disposal, which will identify an additional unknown number of PCB facilities. Additionally, EPA is working on an inspection strategy to target the PCB facilities that present the greatest human and environmental risks.

On the basis of our past work, EPA's efforts to focus on PCB disposal and handling facilities, which handle the largest amounts of PCBs, seem appropriate. In addition, EPA's ongoing and planned actions to identify PCB users should provide additional information to better target inspections. However, it is too early to know the extent to which these actions will identify the PCB user universe and decrease the number of non-PCB inspections EPA currently conducts.

Background

PCBs are toxic chemicals that have been widely used in industry and can cause serious health and environmental problems. Ranging from oily liquids to waxy solids, PCBs have low flammability and high boiling points. They are used primarily in electrical equipment, such as transformers and capacitors which can last 30 years or more. Over 1 billion pounds of PCBs were produced from 1929 through 1976. As of January 1988, EPA estimates about 312 million pounds are still in use in millions of pieces of electrical equipment. EPA believes it will be approximately 20 to 30 years before all PCBs still in use are disposed of or destroyed.

Each year PCBs are released into the environment because of electrical equipment failures and illegal or improper disposal. In 1978 EPA estimated that 150 million pounds of PCBs had already irretrievably entered the environment, where they persist for decades. Plants, animals, and humans ingest or absorb PCBs, which concentrate within their tissues. These concentrations increase with each exposure, particularly through the food chain. In laboratory tests on animals, PCBs have caused reproductive, gastric, and liver disorders; tumors; birth defects; and cancer.