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Right-To-Know

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Right-to-Know: What It Can Mean for Citizens

by Susan G. Hadden

In Thomas Jefferson's vision of democracy, an informed citizenry participates actively in the political process. Since Jefferson's time, however, society has become considerably more complex, and it has become increasingly difficult for citizens to keep informed about public policy-related issues, especially those that require an understanding of scientific or technical information.

In the twentieth century, government has gradually assumed much greater responsibility for making information available to citizens, particularly information concerning risks to health and the environment. In fact, information has become an important means of regulating risks in the workplace and from consumer products. For example, many consumer products carry requisite labeling that provides information about safe storage and use, and many food products must display ingredient labels.

In 1986, Congress enacted the Emergency Planning and Community Right-to-Know Act—also known as Title III of the Superfund Amendments and Reauthorization Act (SARA)—which extends a late twentieth-century Jeffersonian approach to the risks posed by hazardous chemicals in our communities. Title III, as the new statute is often called, contains a number of new provisions related to emergency planning, emergency notification, and a Toxic Chemical Release Inventory as well as Community Right-to-Know reporting on chemicals.

The chemical reporting requirements of Title III create a vast new resource of data about the presence of potentially hazardous chemicals in communities, and this new resource opens up a vast opportunity for citizens to assume a

stronger role in environmental affairs. However, the new law also raises important questions about the respective roles of government, citizens, and the private sector in monitoring, disseminating, and interpreting data. For example, who should be responsible for analyzing Title III data? Who should ensure that the analysis is balanced?

Title III is a complex statute that differentiates among three categories of hazardous chemicals, mandates three

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different kinds of reports and several reporting formats, and embodies multiple goals. Since it was passed in part as a response to the accidental release of a highly toxic chemical in Bhopal, India, in 1984, one important purpose of Title III is contingency planning by state and local governments as well as commercial facilities for emergencies involving hazardous chemicals. Facilities subject to Title III requirements include such diverse establishments as warehouses, drycleaning and manufacturing establishments, and hardware stores.

Title III requires facilities to report to new Local Emergency Planning Committees concerning the storage on their premises of "extremely hazardous" chemicals in amounts over a "threshold" quantity. These local committees are charged with developing emergency response plans, using this storage information as well as other information they may request from facilities. Emergency reporting, a second purpose of Title III, is achieved by requiring facilities to report whenever **they accidentally release these hazardous chemicals.**

Facilities must also submit annual hazardous chemical inventories, covering a much greater number of chemicals at higher thresholds, both to assist local planning committees and to enable citizens to learn about the chemicals present in their communities. Finally, manufacturing facilities must annually submit an emissions inventory detailing emissions into air, water, and ground of certain toxic chemicals. EPA is charged with compiling these emissions data in its Toxic Chemical Release Inventory and making this information available to the public in electronic as well as other forms.

Since it has previously been difficult to learn the identities of chemicals stored and emitted by local facilities, Title III has given citizens access to important new data. The first chemical inventories were submitted in March 1988, and the first emissions inventories in July 1988. The sheer complexity of the law's reporting requirements may adversely affect the consistency, quality, or utility of the data, at least in the first few years of the program. Nevertheless, citizens have already begun to use the information in a variety of ways.

It is not unusual for community and environmental groups to band together temporarily to combat a perceived hazard in the community. In many instances, such community action committees have worked with their Local Emergency Planning Committees to conduct assessments of the hazards posed by particular facilities. Focusing first on the facilities storing the most (or the most toxic) chemicals, citizens have asked industry to create scenarios illustrating what would happen if an accident occurred.

Such scenarios typically include, for example, the plotting of plumes showing how chemicals would disperse in air and an analysis of whether and how especially vulnerable persons like children and the elderly would be affected in an emergency. Appropriate emergency plans are also developed. Many citizens have taken tours of local facilities and learned how chemicals are being stored. They have begun working with facilities to achieve reductions in inventories of hazardous chemicals stored in large quantities.

Although the chemical inventories constitute the largest part of the data collected under Title III, the Toxic Chemical Release Inventory emissions data have drawn the greatest attention from the press and the public.

Anticipating public concerns about the quantities of emissions that they would be reporting on July 1, 1988, several major companies previously announced plans to reduce their emissions over several years by amounts ranging from 50 to 90 percent. Conversely, in one neighborhood near Houston, Texas, citizens are working directly with a local plant to develop an emissions-reduction plan, using the emissions report filed in July 1988 as the basis for their negotiations.

Other citizens are more interested in using Toxic Chemical Release Inventory data to develop a picture of conditions area-wide or industry-wide. The Massachusetts Public Interest Research Group, for example, compiled state-wide emissions data based on the following factors: location by city, potential adverse health effects, and disposal sites. The group then helped draft a bill, introduced in the state legislature, designed to accelerate adoption of pollution-prevention strategies by industry.

In another example, a national public interest group, OMB Watch, used the emissions inventory data to obtain an overview of routine emissions of heavy

metals, which can cause a range of adverse health effects in humans.

Citizens for a Better Environment examined the chemicals emitted in Richmond, California, identifying facilities responsible for the greatest amounts of emissions and the most hazardous chemicals both stored and emitted. This group noted that lower income and minority citizens are most at risk, because they live nearest to the facilities.

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Another California group, the Silicon Valley Toxic Coalition, is focusing on the semiconductor industry, examining industry-wide patterns in emissions. All reports of these groups call for citizens to work with industry to obtain reductions in both use and routine emissions of toxic chemicals as well as to develop strong accident-prevention programs.

Citizen groups are also investigating how Title III data can be used in local enforcement efforts. For example, many of them have suggested correlating emissions inventory data with the air and water permits of each facility. In many cases, however, the permits may not mention the particular chemicals that are reported under Title III. An alternative approach, now being explored in Texas, is to compare the emissions data with the chemical inventories, in order to identify any possible inconsistencies. Apparent inconsistencies would then lead citizens to question facilities about substances stored in large quantities but not cited in the emissions data; even more

concern might be aroused by substances reported to the emissions data base but not included on the chemical inventories. Obtaining answers to such questions will require citizens to work closely with industry and government.

These kinds of activities, which are going on throughout the nation, suggest the important opportunities that the new data available under Title III provide citizens to become involved in monitoring and reducing risks from hazardous chemicals in their environments. However, raw data and statistics do not constitute useful information. Such data must be analyzed and placed in context to provide information that can be the basis for citizen participation in decision-making. Title III and other similar laws raise a number of questions about who should have responsibility for turning data into information.

First, citizens who wish to take an active role in reducing risks from hazardous materials in their communities need information beyond that submitted under Title III. The precise nature of this supplementary information is beyond the scope of this article, but it is clear that at the very least, citizens need detailed information about the potential health effects of chemicals and information about appropriate storage, use, and disposal techniques. Should government, industry, or someone else be responsible for providing this supplementary information?

For citizens who are in potential danger, it is unquestionably worthwhile to obtain the necessary information to reduce their risks; on the other hand, it is a waste of resources for many different citizens to duplicate the same searches for information. Another factor to be considered is that citizens do not trust all sources of information equally; they generally prefer information that comes from environmental groups or, in

the case of health effects information, physicians.

In many cases, however, industry is likely to have a monopoly on the necessary information. Should government step in to evaluate the quality of supplementary information and ensure its availability? If the answer is "no," and if citizens are unable to acquire or use the supplementary information, they will not be able to participate fully in the decision-making process.

Second, although Congress ensured that Title III emissions inventory data would be computerized, it did not require that the inventories of stored chemicals also required under the statute be computerized. The same advantages derived from computerized emissions data would also apply if the other data were computerized. These advantages include expanded capability for data analysis, more effective community-wide emergency planning, and better, speedier emergency response. In short, computers can help turn data into information by sorting out data based on the needs of the particular user, analyzing the data selected, and even providing needed context.

At present, computerization at the state and local levels depends on the availability of resources, and there is no way to ensure that local data are compatible with data compiled by neighboring constituencies. In cases where Local Emergency Planning Committees cover small geographic areas, such as those near Boston Harbor or in New Jersey, citizens and

emergency response planners are likely to need information from neighboring jurisdictions because they could so easily be affected by events at plants in adjacent areas. Should an effort be made to link existing emergency response networks to Title III data and to each other to ensure that statewide or even national data are available to everyone? Who would pay for such an effort, and how should such a data base be constructed to be useful and meaningful?

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Third, Title III provides data so that citizens may participate more fully in decisions concerning hazardous materials in their communities. However, our society does not presently have many institutions that encourage interactions between citizens and private industry. Existing institutions for citizen participation are usually intended to foster direct access to government rather than industry. The Community Awareness and Emergency Response program (CAER) sponsored by the Chemical Manufacturers Association—part of which includes an effort to remedy this institutional deficiency—has, in practice, focused more on reducing risk and developing emergency plans than on establishing ongoing relationships between member companies and citizens other than elected officials.

Local Emergency Planning Committees, which by law must include representatives from all three

sectors—citizens, government, and industry—could serve as forums in which decisions are made about risks from hazardous chemicals. At present, most local committees are absorbed with their primary statutory tasks of emergency planning and emergency response, but with some encouragement and assistance, their responsibilities could be expanded to include negotiation about emissions reduction and the substitution of less hazardous for more hazardous chemicals. If appropriate channels are not developed, these decisions are likely to become subject to an adversarial process that will be costly and time-consuming for all parties.

Title III has provided citizens, emergency managers, and regulators with a rich new source of data. So far the reports concerning citizen initiatives around the country indicate that the data are likely to be used to a greater extent once this new resource has been available longer and citizens have had an opportunity to become familiar with its strengths and weaknesses. Even these early activities are evidence, however, that the role citizens play in decisions about the acceptability of risks from hazardous chemicals in the community is changing: a change from ignorance and impotence to knowledge and power. Fully realized, this change will have widespread effects on both our environment and our polity. □

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Right-to-Know: What It Means for EPA

by Charles L. Elkins

Epichlorohydrin is a caustic, flammable chemical used in the production of epoxy resins, solvents, plastics, and other products. Breathing its vapors can irritate your eyes, nose, and lungs. High-level or repeated exposure can damage your liver and kidneys and could cause a fatal buildup of fluid in your lungs.

What's more, breathing epichlorohydrin has been shown to cause nasal cancer in laboratory rats. Based on these and other animal studies, EPA has classified epichlorohydrin as a "probable human carcinogen."

Sound like a good candidate for regulation by EPA? Not necessarily. With effects such as these, the key question is: how extensive is public exposure to the substance? Until recently, data available to EPA did not indicate that significant numbers of people were being exposed to epichlorohydrin.

Now, however, thanks to information in a new EPA data base called the Toxic Chemical Release Inventory (TRI), EPA's Office of Air and Radiation is taking another look at epichlorohydrin. The reason: TRI data show that there are at least three times as many manufacturing plants releasing epichlorohydrin into the air in the United States as the Agency had previously estimated. According to the data base, 70 facilities in 24 states emitted a total of 363,300 pounds of epichlorohydrin into the air

in 1987. Before the TRI data were available, EPA had identified only 20 sources of epichlorohydrin emissions.

Locating previously unknown sources of toxic chemical releases is only one of dozens of potential uses of the TRI that are being identified by EPA's various programs. Other uses include:

- The Air Office has used TRI data to support the development of administration proposals to amend the air toxics provisions of the Clean Air

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Act. In addition, the Air Office and the Office of Solid Waste will use the data to help set their regulatory agendas.

- The Office of Water plans to use the TRI to spot possible violations of water-pollution discharge permits; to target enforcement activities; to help in reviewing permit requests; and to set water quality standards.

- The Office of Toxic Substances is screening TRI data to locate candidates for regulatory investigation under its existing chemicals program and to verify production estimates for asbestos and other regulated chemicals.

- The Pollution Prevention Office expects to use the TRI in developing its strategy for assessing progress in pollution prevention; to determine research needs; and to identify industries or facilities that need technical assistance.

The toxic chemical release data, which must be submitted to EPA and the states every year by thousands of manufacturing facilities across the

country, are providing EPA with an unprecedented national "snapshot" of toxic chemical emissions from some industries to all environmental media—air, water, and land.

The reporting is required by Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (Title III of the Superfund Amendments and Reauthorization Act). The Act also requires industries to participate in contingency planning for chemical emergencies and to notify their states and communities of the presence and accidental release of hazardous chemicals.

As envisioned by Congress, a primary purpose of the Emergency Planning and Community Right-to-Know program is to inform communities and citizens of toxic chemical hazards in their own localities, so they can work together to reduce risk. Used in this way, TRI and other Title III data can be a potent force for environmental change.

A unique aspect of the TRI is that it is made available to the public directly, without analysis or interpretation by EPA or any other intermediary (see box). As discussed in another article (see page 13), citizens already are using the data to lobby for stronger federal and state regulation of toxic chemicals. They also are using this new information to pressure local industries to implement pollution prevention programs in order to cut back on unregulated releases. Several companies, after reviewing their own TRI reports, have announced ambitious

plans to voluntarily reduce their toxic chemical emissions within the next few years.

Because of its multi-media nature, however, the TRI has potential value that extends well beyond the boundaries of individual facilities and local communities. It can also be a valuable source of information for environmental regulators and public health officials at all levels of government.

EPA and the states can, for example, use the information to better understand what toxic chemicals are released and where, in order to get a more complete picture of the total toxic loading in a given geographic area. With this information, regulatory agencies will be able to set priorities, focus their activities, identify gaps in regulatory coverage, and integrate their programs more effectively. EPA has prepared a "risk screening" guidebook to help state and local officials use the TRI data for these purposes. Other documents, including toxicity fact sheets on the TRI chemicals and "roadmaps" to other sources of information, also are being distributed.

The TRI also will make it easier to monitor pollution trends from year to year, as well as shifts of pollutants among air, land, and water (to determine, for example, if restrictions on land disposal cause greater releases to air, or vice versa). Before the TRI, much of this information had never

been collected, and what was collected was scattered in separate, mostly incompatible, EPA program files.

The first industry reports under Section 313 were due to EPA and the states last July 1, covering both accidental and routine releases of more than 300 reportable chemicals during 1987. Manufacturing facilities with 10 or more employees that used more than 10,000 pounds of one of the chemicals, or manufactured or processed more than 75,000 pounds of a reportable chemical, were required to report. The 75,000-pound threshold drops to 50,000 pounds for 1988 releases and to 25,000 pounds for 1989 and thereafter.

EPA received about 75,000 reports from some 18,000 facilities for 1987—one for each chemical reported by each facility. The reports showed that at least 2.7 billion pounds of toxic chemicals were emitted into the air in 1987, 9.7 billion pounds were released to streams and other bodies of water, 2.4 billion pounds were placed in landfills or otherwise disposed of on land, and 3.2 billion pounds were injected underground. In addition, an estimated 1.9 billion pounds of toxic chemicals were sent to municipal wastewater treatment plants for processing and disposal, and 2.6 billion pounds were transported off site to other treatment and disposal facilities.

While these numbers are large and clearly indicate the need for additional efforts by both government and industry to reduce toxic chemical emissions, they do not suggest an immediate public health crisis. In fact, the overall risk to the public health from these releases is probably low. It is likely that only a few facilities are exposing the public to toxic chemicals at a rate that could warrant immediate action; others, however, may be creating risks due to long-term, low-level exposures, and these must be dealt with as well.

From a regulatory standpoint, the value of the TRI data lies primarily in their ability to pinpoint specific facilities, industries, or geographic areas of particular concern for further investigation and follow-up action. For example, the information can call attention to a facility or category of facilities that may be releasing excessive amounts of toxic chemicals.

It is important to note that the data are only annual estimates, not measurements of actual releases. No additional monitoring by reporting companies is required by the law. Nor does the TRI show the relative toxicity of the chemicals or the rate at which they are released, although EPA will consider adding reporting on "peak releases" to the inventory in the future. (Some high-volume chemicals, such as sodium sulfate, are relatively harmless and are scheduled for removal from the TRI list of reportable chemicals.) If an inventory user is concerned, for instance, about acute exposures rather than bioaccumulation, he or she would want to know whether most of the emissions were discharged in a few days or over the course of the entire reporting year.

Despite these limitations—which will diminish over time as companies improve their estimation techniques and as EPA takes steps to improve the accuracy and usefulness of the data base—Title III is nothing less than a revolutionary approach to environmental protection. It

fundamentally challenges the notion that decisions about the control of toxic chemicals should be left to the "experts" in government, industry, and academia.

Since Title III data are made available to the public and EPA at the same time, the program creates a new opportunity for a working partnership between the public and the Agency. By sharing information, the public and EPA can also share in finding solutions—for example, by developing new programs to identify options for reducing the production and use of toxic chemicals. The development of a creative new partnership involving EPA, state and local governments, and the public may, in fact, be the most important benefit of all to flow from the Emergency Planning and Community Right-to-Know program. □

(Elkins is Director of EPA's Office of Toxic Substances.)

How To Obtain Emissions Data

EPA's Toxic Chemical Release Inventory (TRI) data base is being made available directly to the public through computer telecommunications and other means. Here are some of the ways members of the public can obtain information from the TRI:

- If you have a home computer and a telephone modem, you can "dial up" the data base, which is housed at the National Library of Medicine (NLM) in Bethesda, Maryland, and review the data on your monitor or "download" it onto a computer disc or printer. A nominal access fee will be charged. For information on obtaining an account with NLM, call 301-496-6531.
- If you have access to a microcomputer, you can obtain TRI data for each state on diskettes.
- You can review microfiche copies of data on TRI releases in your state either at the Government Printing Office (GPO) federal depository library in your Congressional district or at a designated public library in your county. The complete national data base will be available at EPA libraries and at regional and state depository libraries. Call the toll-free Emergency Planning and Community Right-to-Know Hotline at 800-535-0202 (in Washington, DC, 202-479-2449) for the address of the library with TRI data nearest you.
- The national data base will also be available in compact disc (CD-ROM) format at 400 federal depository libraries, 200 other research and academic libraries, and all EPA libraries. The Hotline can help you locate these libraries as well.
- EPA is publishing a National Report with detailed summaries and analyses of the TRI data. The report will be available at the federal depository libraries or can be purchased from GPO or the National Technical Information Service (NTIS). In addition, all versions of the TRI data base—magnetic tape, CD-ROM, microfiche, and diskettes—can be purchased from GPO (202-275-2091) or NTIS (703-487-4650). Call the Hotline for ordering information.
- You can obtain copies of TRI reports for individual facilities from your State TRI Coordinator. The Title III Hotline can tell you who to contact.
- Finally, the TRI Reporting Center in Washington, DC, will make data from individual facilities available in its reading room, will mail out limited numbers of TRI reports, and will conduct limited searches of the data base and provide printouts on request. The Reporting Center's address is: Title III Reporting Center, P.O. Box 70266, Washington, DC 20024-0266 (Attn: Public Inquiry).