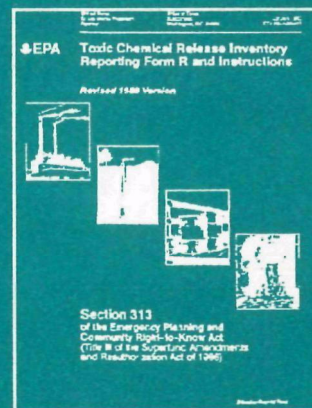
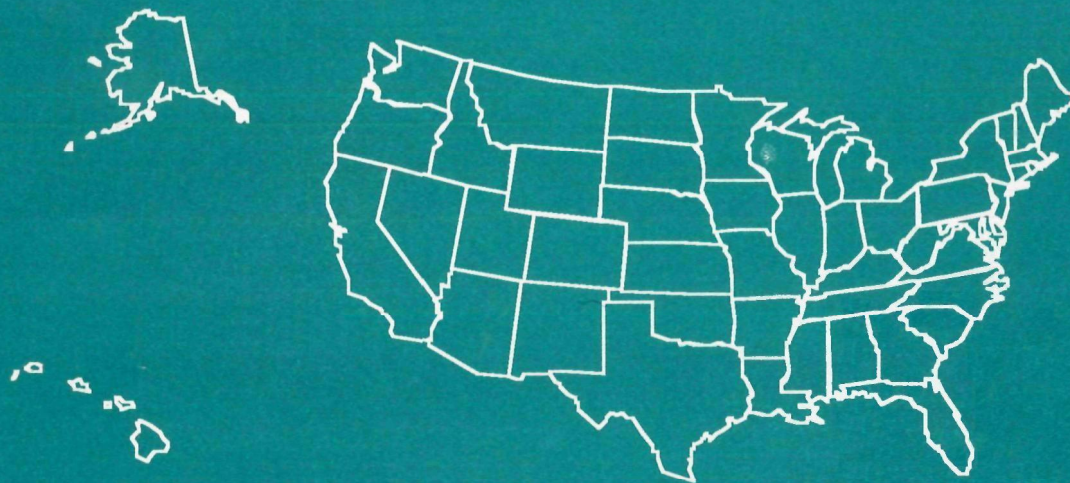




Program Recommendations for State Section 313 Program Coordinators





Program Recommendations for State Section 313 Program Coordinators

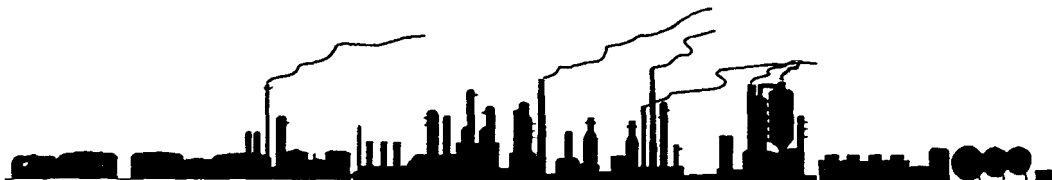
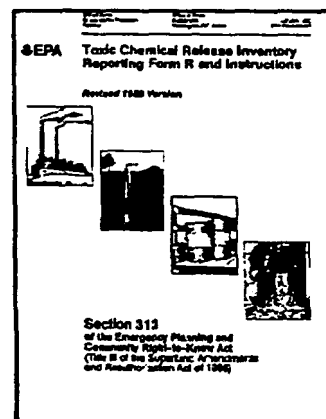
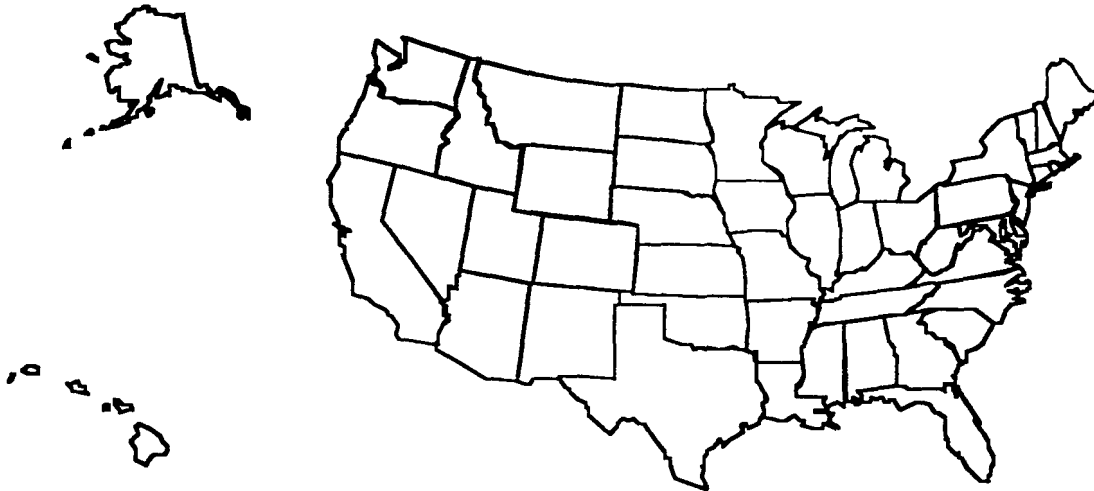


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I. INTRODUCTION

Acting out of concern for the public's exposure to potentially harmful chemicals that are manufactured, processed, stored, or released in their communities, as well as to increase communities' preparedness in the event of chemical accidents, the U.S. Congress passed the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA, also referred to as Title III of the Superfund Amendments and Reauthorization Act). EPCRA established a variety of new reporting and planning requirements that (1) collect a vast amount of information on the use, storage, and release of toxic chemicals to be used by federal, state, and local programs and officials; and (2) increase public participation in emergency planning and environmental protection by making the most of the information publicly available.

Section 313 of EPCRA requires U.S. manufacturers to report annually (on the standardized "Form R") estimates of toxic releases and transfers from their facilities. The U.S. EPA database containing this release information is referred to as the Toxic Release Inventory (TRI). In the first filing year, 1987, more than 19,000 manufacturing facilities submitted Form Rs. More than 22 billion pounds of TRI chemicals (including 12 billion pounds of sodium sulfate, which has since been deleted from Section 313 reporting because of its limited toxicity) were released to the environment or were transferred off-site for treatment or disposal during calendar year 1987. Excluding sodium sulfate, approximately one quarter of the emissions were released to the air (25 percent), one quarter were placed in land disposal sites (23 percent), and one quarter were transferred off-site (24 percent). The remaining 2.9 billion pounds of releases were discharged to public sewer systems (8 percent), discharged directly to surface waters (5 percent), or injected into underground wells (14 percent). While these figures provide an indication of the national picture, the concerns of most of the public are with environmental or health risk issues at their own regional, state, or local level.

State-level Section 313 programs are in the best position to play an essential role in providing release information to, and interpreting the information for, the public. Some state environmental protection and public health programs have used information gathered under Section 313 quite actively for their own local environmental needs. By providing information and references, this manual is intended to help state Section 313 Program Coordinators enhance the basic elements of their existing programs and to help states set up programs where none currently exist.

As Administrator Reilly has pointed out, the information reported by industries under Section 313 offers states a multimedia, facility-oriented database with which to pursue a number of goals. A short, and by no means exhaustive, list of the uses and advantages of Section 313 information follows:

- Section 313 data can be used to augment existing environmental protection programs in air, water, and municipal and hazardous waste. For example, such programs can utilize Section 313 for permit verification, for determining new permit tolerances, and for comparisons with their own databases. Another use of Section 313 information is to identify publicly-owned treatment works (POTWs) receiving substantial toxic loadings from manufacturers which should be added to the pretreatment program. Section 313 information need not supplant databases maintained by state or federal programs for regulatory purposes, but can be used to supplement them.
- Section 313 data can be used to develop new programs such as those designed to inventory and control sources of air toxics.
- Section 313 data is a useful planning and priority-setting tool for environmental and public health programs.
- Section 313 information, in conjunction with other chemical use and storage information required under EPCRA, enables individuals and groups to draw a profile of chemicals in their community and to use this as a tool to address local concerns about potential risks.
- Facility-oriented reporting (e.g., Section 313 release information) focuses pollution control efforts on emissions to all media and supports development of pollution prevention initiatives. Too often, pollutant controls that are limited to one medium shift emissions to another medium rather than reducing or eliminating total emissions of toxics. A number of states have used Section 313 information as a starting point for developing pollution prevention programs and are using 1987 and 1988 submissions as a baseline measure of emissions for comparison with future reductions.
- Section 313 increases public scrutiny of industry. In addition, anecdotal evidence suggests that collecting the information needed to complete Form R has increased industry's attention to process changes and housekeeping improvements that reduce emissions.
- As data quality improves and computer modeling and mapping software become more available, Section 313-type reporting can be incorporated into geographic information systems (GIS) and other analytic systems to assess proximity of pollution sources to sensitive resources (such as drinking water supplies) and exposed populations, and to model exposures and to perform risk screening.

A. Background

When Congress passed the Superfund Amendments and Reauthorization Act (SARA) in 1986, they altered the relationships between U.S. EPA, the states, industry, and the public. Title III of SARA, also known as the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), required those companies which manufacture, process, or use certain toxic chemicals and compounds to report information on the uses, storage, and releases of those substances. Each state was required to establish a State Emergency Response Commission (SERC) and emergency planning districts. Indian Tribes could set up a comparable commission or enter into cooperative agreements with states. The SERCs' major roles are to supervise and coordinate development and revisions of emergency plans drawn up for each planning district and to establish procedures for making plans and filing information publicly available. Local Emergency Planning Committees (LEPCs) are responsible for developing the emergency response plan for their district. In essence, the LEPC members serve as contacts for the public, and the Committees carry out most EPCRA programs and activities at the local level. The LEPCs must include a diverse membership, ranging from elected officials to local hospital and transportation personnel to owner/operators subject to EPCRA reporting requirements. Facility owner/operators must also notify the LEPC in the event of an emergency -- an accidental or unintentional release at the facility. Under Sections 311 (Material Safety Data Sheets) and 312 (Emergency and Hazardous Chemical Inventory Forms), companies must submit specific information about the types and amounts of chemicals stored on-site at a facility to the SERC, LEPC, and local fire department. Through these sources, the public may have access to this facility specific information. Section 313 of EPCRA responds to Congressional concerns that the public has the right to know what chemicals are being manufactured, processed, and released (routinely and accidentally) by facilities in their community. Section 313 requires that manufacturers with ten or more employees report estimates of annual releases and transfers of over 320 toxic chemicals meeting certain thresholds and requires that the U.S. EPA create the Toxics Release Inventory (TRI). This information is to be made publicly available by numerous access systems. In addition to enhancing local emergency response capabilities, Congress expected that the release information would be used as a planning tool to prioritize environmental protection efforts. The various Sections of EPCRA are listed in Exhibit I.

Generally, EPCRA requires manufacturers to submit chemical use, storage, and release information. This information is used by federal and state governments, LEPCs, individual citizens, environmental groups, and industry to improve, and increase public participation in, emergency planning and environmental management. However, Section 313 differs markedly from the rest of EPCRA programs in that it collects information about ongoing routine and accidental releases of toxics to the environment.

Exhibit 1.

Sections of the Emergency Planning and Community Right-to-Know Act of 1986

Title III of Public Law 99-499

Section 300 Short title; table of contents

Subtitle A Emergency Planning and Notification

Section 301 Establishment of State commissions, planning districts, and local committees

Section 302 Substances and facilities covered and notification

Section 303 Comprehensive emergency response plans

Section 304 Emergency notification

Section 305 Emergency training and review of emergency systems

Subtitle B - Reporting Requirements

Section 311 Material safety data sheets

Section 312 Emergency and hazardous chemical inventory forms

Section 313 Toxic chemical release forms

Subtitle C General Provisions

Section 321 Relationship to other law

Section 322 Trade secrets

Section 323 Provision of information to health professionals, doctors, and nurses

Section 324 Public availability of plans, data sheets, forms, and followup notices

Section 325 Enforcement

Section 326 Civil Actions

Section 327 Exemption

Section 328 Regulations

Section 329 Definitions

Section 330 Authorization of appropriations

B. Methodology

In order to gather the essential information needed for this manual, U.S. EPA held meetings with sixteen state Section 313 Coordinators. In four days of discussions, the Coordinators covered practically all aspects of their programs. The discussion topics included:

- Structure and Development of Section 313 Programs
- Use of Section 313 Information
- Community Outreach and Industry Outreach Activities
- Support for Interpretation of Section 313 Data
- Compliance and Enforcement of Section 313 Requirements

The state Coordinators attending the colloquia provided information about program goals, structure and location, funding issues, activities currently undertaken, program elements that have worked well, problems that have been encountered, and solutions to those problems. They also discussed the constraints and opportunities that result from the lack of explicit roles for Section 313 programs. In addition, U.S. EPA personnel, both at headquarters and in all ten regional offices were interviewed. This manual distills the most relevant information, approaches, and experiences of the participating state Section 313 Coordinators and EPA personnel.

C. How to Use This Guide

The format of this guide parallels the logic that Coordinators follow when developing a state-level Section 313 program; it is not a cookbook approach to program development. Since state Section 313 programs will benefit if program elements are developed with thought as to how the individual elements support the overall goals of the program, it is suggested that Section 313 Coordinators and staff read through the manual once to get an idea of what has been tried by other states and what can be done with a Section 313 program. Section II (**Overview**) provides some important considerations and limitations for planning and goal-setting. Sections III (**The Basics**), IV (**Beyond the Basics**), and V (**Advanced Capabilities**) present the "how-to" of various program elements. A Coordinator's ability to expand and increase the sophistication of a state Section 313 program is, to a large extent, constrained by the level of available resources. While not under the direct control of the Section 313 Coordinator, funding and general program support are influenced by factors that he/she has some control over. These factors include: selecting Section 313 staff with expertise and knowledge of the Section 313 data and program, documenting the need for the program (e.g., the number of Form Rs received and public interest), and developing the organizational structure of the state Section 313 program. The "how-to" sections focus on those factors that Coordinators have direct control over.

The division of these three "how-to" sections is based primarily on the level of resources available.

The Basics offers ideas for Section 313 program development related to data management, responding to inquiries, and program development.

Beyond the Basics considers how the same activities, such as data management, can serve more programs, thereby increasing the use of Section 313 information. In addition, this chapter presents activities that can enhance and otherwise support the basic functions of the Section 313 program.

Advanced Capabilities presents more sophisticated and varied uses of Section 313 data. Quite naturally, these capabilities and applications serve not only Section 313 program goals but also support the work and goals of other environmental protection and public health offices.

Finally, a variety of resources are presented in the Appendices. These include a list of state Section 313 Coordinators (Appendix A), a list of U.S. EPA Regional Section 313 Coordinators (Appendix B), references (Appendix C) on topics ranging from personal computer (PC) software to risk communication, and an example of a memorandum of understanding between state and U.S. EPA Regional Section 313 programs (Appendix D). Because state Section 313 programs are changing so rapidly, personal contact with others working with Section 313 programs may offer the best opportunity to bring your program staff up-to-date.

II. OVERVIEW

At a minimum, state Section 313 Coordinators are legally responsible for accepting Form Rs and making them available to the public. Beyond that, Coordinators are in a unique position to extend the influence of their state Section 313 program by focusing public and state agency (environmental protection and public health) attention on the importance and usefulness of multimedia facility-oriented emissions reporting.

Prior to developing program goals, Coordinators must consider how the organizational setting of the Section 313 office affects their responsibilities and the operations of the Section 313 program. In some states the Section 313 office is located within the environmental protection agency. In others, all EPCRA programs are located in one agency (e.g., emergency planning, fire marshal, civil defense, environmental protection, or community development) or under the state emergency response commission (SERC). There are advantages and disadvantages to each of these locations. State agencies other than the host agency might be interested in using Section 313 information, but first must be made aware of its availability. Regular briefings of contact individuals at other state agencies accomplish two things:

- keeping other offices aware of new developments in the state's Section 313 program; and
- enhancing the referral network of expertise within the state that Section 313 staff can use.

In addition to coordinating Section 313 program activities with other state agencies, Coordinators are responsible for ensuring that the Section 313 program has the necessary legal authority to carry out program activities and that this authority does not conflict with existing state right-to-know laws.

It is important that a Coordinator develop program goals early in the process. Setting goals first will also help guide any program expansion in the most efficient way. One goal that Section 313 programs can be used to support is the improved coordination of environmental reporting across media. For example, some states (e.g., CA, IL, KS, NY, and RI) entered only a portion of the Form R information (the release data) but also entered facilities' mailing addresses so that the database could be used to generate a mailing list for Title III as well as other regulatory programs, such as air, water, and hazardous waste. The additional task of entering the mailing addresses increased the front-end level of effort, but made the state database more useful. While all future uses cannot be anticipated, good program planning means looking at the larger picture. Time should be taken to discuss program goals with superiors and others whose support would be essential.

Once a program's goals have been developed, a Coordinator serves as advocate and spokesperson for the state Section 313 program. In these roles, the Coordinator promotes the value of Section 313 information and the importance of the state Section 313 program. As with any new program, it is important to provide others whose support is needed with a vision of what the Section 313 program can accomplish and to educate them about the staff and available data. Much of program promotion is an educational process. For example, Kansas' Section 313 Coordinator provides all state legislators with emissions data for their districts along with a description of the state's Section 313 program and its goals. In response, several legislators have participated in local forums assembled to discuss release information for the community and the Section 313 program. Informing office directors within the state's environmental protection and public health agencies is usually a less formal process, but equally important.

This manual also describes a number of innovative uses of Section 313 information. A major advantage of Section 313 is that it is the first national reporting requirement to cover multimedia facility-based release information. Such facility-based reporting is expected to be used more frequently in the future because of the advantages for pollution prevention initiatives and for management of all releases from a facility. The facility identification section of Form R enables environmental managers to use geographic information systems (using locational information in Question 3.6) and to integrate Section 313 information with other environmental databases (e.g., using identification numbers from Form R).

As with most new databases, there are disadvantages associated with Section 313 information. Confusion about how to complete Form R led to some inaccurate submissions. In addition, because the procedures and information used to estimate toxic releases vary from facility to facility, the estimates themselves contain a degree of uncertainty (Recent audits found that release estimates are 90 percent accurate.). In fact, properly submitted data may legitimately vary widely depending upon the estimation methods used. The U.S. EPA's computer version (the Toxics Release Inventory System, TRIS), which includes all Section 313 information for the U.S., contains less than two percent data entry errors. Also, U.S. EPA's data normalization efforts are designed to maximize the usability of the national TRI data (e.g., making sure all facilities are linked year-to-year, insuring that county names are spelled consistently, etc.). To minimize the number of submitter and data entry errors, U.S. EPA has undertaken a wide variety of quality assurance projects in the past year and plans continued emphasis in this area.

Another factor relating to the national database is timing. Because U. S. EPA is required by statute to enter the data for the entire U.S., and because of the extensive variety of data quality and data normalization activities which U.S.

EPA undertakes, availability of the entire database takes longer than is the situation for an individual state entering only a portion of the data for that state alone. There may be situations where it is useful for states to create their own databases, while at the same time utilizing the national database. States do, however, have access from the time data is uploaded to EPA's mainframe to the Toxic Release Inventory data, and so should carefully consider whether the use of resources to create a state database is the most effective use of state resources.

There are also limitations associated with using Section 313 information. U.S. EPA's Toxic Chemical Release Inventory Risk Screening Guide outlines how Section 313 information can be used to compare the significance of releases from various sources (e.g., facilities, chemicals, geographic areas) to one another to set priorities for further investigation. Release information alone, without knowledge of chemical toxic effects, and the potential for exposure, is not adequate to predict risks. Even when this type of information is available, there still are usually not enough data to predict *quantitative* risks. A quantitative risk assessment requires additional information, such as environmental fate and transport of releases, pollutant release patterns and characteristics (duration, frequency, stack or outfall parameters, etc.), characteristics of potentially exposed populations (size and distribution), and monitoring data. In most cases, these data can only be collected through significant additional effort. A quick review of the TRI data is not adequate to develop sound risk information needed to effectively communicate with the public. Consequently, all users of the data should be informed about these issues.

III. THE BASICS

A. Data Management

Under EPCRA, states must, at a minimum:

- (1) receive Form Rs from manufacturing facilities in their state; and
- (2) maintain the information and provide public access to the information.

These are the only mandated functions for a state Section 313 program. In response, most states have organized a filing system for the Form Rs they receive. Since most state programs have little or no resources available, they probably will not be able to support a sophisticated data management system. Instead, these programs focus on forms management. Most individuals requesting information from Form Rs are interested in just one community or facility. For that reason, Form Rs should be filed in the most accessible manner for individual requests. Alphabetical filing by county, municipality, and submitter's name organizes the files according to location, which is the most prevalent type of request.

It is important that the forms be reviewed prior to filing to ensure that they are complete. Frequently, the first two pages of Form R are submitted only once and not with the forms for every chemical as they should be. Unless access is restricted to staff familiar with the form, the first two pages should be duplicated for each chemical. However, forms that are duplicated and do not have original signatures are not legally valid submissions. Currently, U.S. EPA's notices of noncompliance (NON) require that any resubmission be sent to the state Section 313 office as well as to the federal Section 313 program. To help state programs detect whether facilities in their states have filed Form Rs with both the state and federal Section 313 programs, U.S. EPA can generate printouts of facilities that, to date, have submitted Form Rs to the federal Section 313 program. States can then compare this printout with their own list of submitters. Verification procedures are discussed further in **Beyond the Basics**.

Access Protocols

Even though the U.S. EPA keeps the original Form Rs, consideration should be given to maintaining the integrity of the state files to avoid possible misfiling, loss, or theft. The simplest solution is to establish access protocols

similar to those used for public access files elsewhere in the agency. If such protocols exist, it is probably better to copy that system rather than introduce a new set of rules. Systems that are used include:

- Requestors have access to files under supervision of Section 313 staff. A deposit or driver's license is required in order to receive files.
- Only Section 313 staff have access to files and will copy the pages of interest. Files are not to leave the area.
- A duplicate of each Form R is made. Only Section 313 staff have access to the master file. The other file is available for internal and external requests with little oversight.

Alternative access procedures may be needed for groups and individuals (e.g., press, public interest groups, academia, consultants) interested in a large portion of the file or the entire file. In these cases, the manpower and resources are usually provided by the requestor, but protocols need to be established to ensure that the file is returned in the same condition and that others have access to the files while they are being used.

Recouping Costs

Recouping the costs of duplication and staff time spent on fielding public requests serves two functions. If collected funds are kept by the Section 313 program, it defrays Section 313 program operating costs. In addition, it deters excessive requests for duplication and staff time. Some state programs charge from 10 to 25 cents per page for duplication.

B. Responding to Inquiries

Inquiries from the Public

EPCRA is intended to foster public interest in the emissions from industries in a community. The Section 313 Coordinator, by virtue of being the keeper of the Form Rs, will be asked to answer questions about the information contained in Form R and will be asked to interpret that information. The ability of the Section 313 program to respond to public inquiries depends on a number of factors. Coordinators often feel that their response capabilities are limited by the level of resources available to the program. However, response capabilities also depend upon the technical knowledge of the Coordinator and Section 313 staff, their knowledge of Section 313 and the TRI, the network of support from

other environmental and health professionals that has been established, and the views of other environmental protection officials in media and planning offices. Among the questions commonly asked are:

"What kind of chemical emissions are there in my town?"

Most individuals want to know what your office can tell them about environmental exposures in their community. Unless monitoring has been completed, it will not be possible to assess ambient exposures in a community. Often, however, supplying the Form R release information is a satisfactory first response. For that reason, callers should be prompted as to whether they would like a copy of the release information contained in Form R (for a particular community or facility). Callers may also be provided with copies of the relevant Hazardous Substances Fact Sheets. For those simple requests that require no interpretation of the Form R, mailings can be done by clerical staff. Many states include copies of brochures describing Section 313 and TRI (available from U.S. EPA through the regional offices) in all such mailings.

"Is this release harming me or my family?"

By now, most Coordinators are accustomed to being asked for interpretation of the release information. The public first must be told that Section 313 information does not contain everything needed to complete a risk assessment but Section 313 staff can provide information about the toxicological hazards of 313 releases and may be able to assess the likelihood (but not the magnitude) of exposure. One way to build up the necessary expertise to answer technical, and risk- and exposure-related inquiries is to organize a network of technical and public health professionals in state offices and federal agencies who are willing to serve as contacts for the Section 313 program. Expertise in the following areas is needed to respond to inquiries:

Data Analysis:

- Computerization and manipulation of Form R information
- Computer access (to national computer systems and databases) methods

Technical:

- Permit information (air, water, hazardous waste)
- Pollution control
- Pollution prevention audits

Exposure Analysis:

- Air modeling and monitoring
- Ground and surface water dispersion modeling and monitoring
- Hazardous waste transport and handling

Risk Analysis:

Hazard assessment of chemicals
Risk assessment
Geographic "hotspots"
Wildlife and ecosystem effects assessment

The Coordinator's role may be to field as many inquiries as possible using the expertise of Section 313 staff and to direct all other inquiries to the appropriate person in the Section 313 network of professionals. Several states log inquiries and track referrals in order to demonstrate the program's efforts, to monitor the burden on staff involved in the network, and to identify areas of expertise that may need to be added or strengthened. In addition, because the public may find it difficult to locate the Section 313 office, other state agencies, other offices within the host agency, Local Emergency Planning Committees (LEPCs), and private environmental and public service groups should be educated about Section 313 reporting requirements, the state Section 313 program, its functions, and how to contact the office. These organizations should also be informed that public inquiries regarding Section 313 can be referred to the Coordinator and provided the Coordinator's name, and the office's address and telephone number. Examples of published materials describing Section 313 requirements and programs that are suitable for distribution to the public and the state Section 313 network include:

- Chemical Risk Communication: Preparing for Community Interest in Chemical Release Data (American Chemical Society, 1988)
- The Emergency Planning and Community Right-to-Know Act: Section 313 Release Reporting Requirements (U.S. EPA, 1989)
- Title III of SARA: A Guide for Massachusetts Municipalities and their Local Emergency Planning Committees (Massachusetts Department of Environmental Protection, June 1988)
- Toxic and Hazardous Chemicals, Title III and Communities: An Outreach Manual for Community Groups (U.S. EPA, September 1989)
- Risk Communication About Chemicals in Your Community: A Manual for Local Officials (U.S. EPA, September 1989)
- When All Else Fails! Enforcement of the Emergency Planning and Community Right-to-Know Act (U.S. EPA, September 1989)
- Explaining Environmental Risk (U.S. EPA, November 1986)
- Toxic Chemical Release Inventory Risk Screening Guide (U.S. EPA, July 1989)

The annotated bibliography (Appendix C) provides further details on these materials.

Most requests for information occur soon after the annual filing deadline of July 1st or in the wake of an event such as a chemical spill which focuses attention on toxic releases. In addition to summary reports and data access available through U.S. EPA, public interest groups and newspaper reporters have computerized the Form R release information in certain states and provided the state Section 313 office with a personal computer diskette copy of the information. Such databases are low-cost, but the information they contain is essentially unverified. If such an external database is used by the state Section 313 program for any reason, all users should be aware of the risks of its use, the data should be at least partially verified prior to distribution, and a disclaimer should indicate that the information was not prepared by the state Section 313 program. In some cases, states may not wait for the U.S. EPA update of TRI and may wish to enter the data themselves. Recommendations on data entry of Form R information are addressed in the next section, **Beyond the Basics**.

Inquiries from State Offices

Requests for information from within state government (typically, environmental protection or public health agencies) can be fielded by Section 313 staff or other program staff. There are both advantages and disadvantages to having Section 313 staff respond to internal information requests. The advantages are (1) it enables the Coordinator to learn how other offices are using Section 313 information, (2) the Coordinator can tailor the information provided and also provide interpretive assistance, and (3) it increases other offices' understanding and knowledge of the state's Section 313 program. On the other hand, using other offices' staff to retrieve forms and generate their own summary information frees up Section 313 staff time.

There are times when hand manipulation of forms is not efficient and a computerized database is necessary. As noted above, all states have access to U.S. EPA's TRIS database, and may choose to acquire access to TRI through the National Library of Medicine's (NLM) TOXNET system. In addition, U.S. EPA provides magnetic tapes and PC diskettes of data to all states wishing to utilize them. State summary statistics are published each year in The Toxics Release Inventory. These tools, together with any computerized database developed by the state, are available to the Section 313 program to respond to requests from environmental protection offices for database verification, permit compliance, or planning purposes. Public health agencies may want to use Section 313 information to compare release information with, or to identify, geographic hotspots of disease incidence. U.S. EPA Regional offices may be able to provide some summary information for specific states as the information is entered into U.S. EPA's IBM mainframe computer system. States may also develop summary statistics and reports using either the TRIS database on U.S. EPA's mainframe

computer, or, the Toxics Release Inventory available through the NLM's TOXNET system. Further information regarding these computer resources is presented in Beyond the Basics.

Inquiries from Industry

In addition to the capabilities mentioned above, potentially subject facilities have an entirely different set of concerns, some of which may be addressed to state Section 313 offices. Questions about filing instructions (e.g., where to send the state Form R, the deadline for filing, article exemptions, employment and chemical use thresholds) are the predominant type. Requests for forms and instructions should be referred to U.S. EPA's Emergency Planning and Community Right-to-Know Document Distribution Center listed in Appendix B. The more complex filing questions can be referred to Regional U.S. EPA Offices (listed in Appendix B) or the Emergency Planning and Community Right-To-Know Information Hotline (800-535-0202; or in DC and AK 202-479-2449). Both places have staff and resources devoted to providing this type of assistance, especially as the July 1st filing deadline approaches. In response to questions about filing late, the U.S. EPA advises facilities to file as soon as possible, even if late, in order to avoid non-filer enforcement actions. Details on U.S. EPA's compliance and enforcement policy are presented in Section IV.E. The state Section 313 office should expect some inquiries from industry following publication of release information in a state report, national report, or news article, especially if company names are provided. Inquirers may be invited to examine the state Section 313 files, but if specific data are in question, they should be directed to the report's authors.

C. Section 313 Program Development

Beyond maintaining the data and responding to inquiries, a Coordinator also serves as program director. As advocates and spokespersons for the program, Coordinators have three additional responsibilities:

- To develop goals for the state Section 313 program;
- To educate others about the value and importance of the Section 313 program; and
- To develop adequate funding sources.

Setting Goals

Setting program goals is an exercise that invariably causes Coordinators to assess the strengths and weaknesses of Section 313 information. Program goals that are based on state needs and resources, staff interests and expertise, and the ability to garner support from superiors and other individuals and groups, have

the greatest chance of success. The very process of formally developing short- and long-term goals helps Coordinators to articulate how Section 313 program activities, and use of Section 313 information, support those goals. As a result, media offices, other state agencies, the state legislature, and the public can more readily understand the value and importance of the state's Section 313 program.

One approach is to set short-term goals that increase interest in, and the stability of, the Section 313 program. Then long-term goals may be designed to improve public health planning and environmental protection efforts. One long-term goal common to several state Section 313 programs is to support development of a pollution prevention program in their state. This goal exploits one of the unique characteristics of Form R -- reporting emissions for all media. Several of these states also are evaluating innovative revisions to environmental reporting requirements, patterned after Form R, that might reduce industry's paperwork and reporting burden. For example, Massachusetts is beginning to reorient its reporting requirements towards facility reporting by first comparing the information needs of all environmental regulatory programs to what is currently collected by each regulatory office. This information is being analyzed along with data on the level of effort industry spends collecting and filing the information. The results may be used to collapse several cross-media reporting requirements into fewer facility-oriented filings to be used by several programs.

With no implied hierarchy or claim to completeness, goals of state Section 313 programs could include:

Short-term goals:

- Increase public use and understanding of TRI
- Improve data quality
- Increase industry compliance rates
- Establish stability for Section 313 program
 - increase funding and staff capabilities
 - increase interest within the environmental offices
 - promote TRI use for permit compliance
 - promote TRI use for database verification

Long-term goals:

- Increase public participation in environmental protection activities
- Prioritize pollution control efforts according to exposed populations and threatened natural resources
- Establish and support pollution prevention programs
- Promote risk-based budget allocation
- Increase (cross-media) facility-oriented reporting of environmental data

- Promote coordination between all media offices in environmental protection agency
- Identify toxic releases impairing environmental quality that may need additional controls
- Link environmental databases across media
- Protect sensitive populations/areas when making facility siting decisions
- Improve integration of all state-level EPCRA programs and reporting

Funding and Promotion of the Section 313 Program

Because of fiscal constraints at the state level, many state Section 313 programs currently operate with little or no official budget. In those situations, Coordinators usually "borrow" labor, supplies, and resources from other programs within the same agency. For example, in New York, water pollution control office personnel helped to develop a computer database containing Form R release information and mailing addresses. In that case, the release information benefitted the water office (they could compare it with NPDES permit conditions) as well as the Section 313 program. In every case, one key to getting informal support for the program has been convincing other office directors of the possible uses of Section 313 information for their own programs. Many Coordinators point out that promoting their Section 313 program (both internally, within the host agency, and externally, to the public and press) results in greater interest in Section 313 information and greater support for the Section 313 program.

There are, however, significant drawbacks to informal budget support. Support may be withdrawn when formal budgets are reduced, or when Section 313 programs remain small over time. For example, if a Section 313 program is continually constrained to use borrowed clerical or duplication resources, others' perceptions of the utility of the program may gradually erode. It is difficult to ask to borrow clerical time or duplicating equipment and at the same time argue convincingly that multimedia facility-based reporting is important.

In fiscal year (FY) 1990, U.S. EPA's Office of Toxic Substances (OTS) will provide \$1 million in financial assistance for the TRI Data Quality Assurance Program. Grants and cooperative agreements are available to qualifying states, the District of Columbia, and territories (under Section 28 of the Toxic Substances Control Act, or TSCA) and Indian Tribes (under Section 10 of TSCA). The funds will be awarded to help recipients develop and implement programs of TRI data quality assurance to improve the utility of the TRI data for the prevention or elimination of unreasonable risks from toxic chemicals within the states.

In addition to direct grants to state Section 313 programs, academic institutions are eligible for competitive cooperative agreements issued by various offices at U.S. EPA. State Section 313 programs may benefit directly or

indirectly from academic research especially if the project is related to the state Section 313 program's interests. The Regional U.S. EPA serves as a clearinghouse for information and cooperative agreement requests for proposals.

On the state level, the more the public and other state offices and agencies know about the Section 313 program, the better position the Section 313 program is in when funding decisions are made. This may mean promoting the value of the Section 313 program within the host agency or attaching the Section 313 program to a well-supported program. In some cases, interest in pollution prevention initiatives has led to indirect support for the Section 313 program. In other cases, the Section 313 program's community outreach activities include providing each state Senator, state Representative, and LEPC with emissions information for their district or community so that the public learns about the availability of the information and the importance of the state's Section 313 program. Several states (e.g., CA, KS, and NY) keep a log, or tally, of phone calls and visits that permits them to track what type of inquiries are received and to document the level of interest in the Section 313 program. Strategies for advancing Section 313 funding needs within the budget process are discussed more fully in **Beyond the Basics**.

D. Keeping Up-to-Date

The Emergency Planning and Community Right-to-Know Act was passed into law on October 17, 1986. Coordinators have benefitted from keeping up-to-date in three areas: (1) knowing what resources are available (and from whom); (2) keeping apprised of federal Section 313 activities; and (3) keeping apprised of activities undertaken by other states. Where the state's Section 313 program is well integrated with the state's other EPCRA programs, the list above may be extended to all of EPCRA. There are several sources of information that state Coordinators can use:

- U.S. EPA Regional Section 313 Coordinator and staff
- U.S. EPA sponsored training and conferences
- Newsletters from state-level EPCRA programs (e.g., KS and LA)
- U.S. EPA's electronic bulletin boards and the Title III Network for States (TINS) system

These sources vary in their ease of use and access to other EPCRA/Section 313 information. Regional Section 313 staff are a phone call away; they know about most state activities in the Region, and usually know about federal programs and activities under Section 313. U.S. EPA-sponsored conferences offer in-depth exposure to selected topics and a chance to exchange ideas with others in the field but may require states to contribute travel costs and staff time. The Kansas Right-to-Know Program's newsletter presents updates on documents, software, conferences, training, and regulatory affairs related to EPCRA. Finally, U.S.

EPA's electronic bulletin boards probably have the most current and comprehensive information about new materials, forthcoming reports and meetings, and summaries of U.S. EPA Headquarters, Regional and state activities. The Title III Network for the States (TINS) system contains chemical hazard profiles, the Title III bulletin board, and allows communication to other system users (i.e., U.S. EPA Regions and states). The Regional Coordinator can arrange for state Section 313 programs to have access to e-mail; access will require a personal computer with communications software and a modem.

IV. BEYOND THE BASICS

A. Data Management

The expansion of a state Section 313 program depends, in part, upon the existence of a Section 313 database that others have confidence in and will use. As noted above, U.S. EPA is engaging in a wide variety of data quality and data normalization efforts to this end. There are also several data maintenance activities that states may choose to engage in that may improve the quality of and increase the use of Section 313 data. Applying quality assurance measures to both the Form Rs and any computerized version of the Section 313 data will improve the quality of data once the information is in house. Industry outreach can improve the quality of the information contained on Form R as well as the compliance rate. Other data maintenance activities, such as accessing TRI on NLM's TOXNET or engaging in various analyses or TRI data, may increase use of Section 313 data. Finally, establishing credibility for the Section 313 data depends on Section 313 staff recognizing, and acknowledging to users, the data limitations.

There are a number of activities that can improve the quality of information maintained by the Section 313 program office. If the state Section 313 program develops a list of reporters, this can be checked with a current printout of facilities that have submitted Form Rs to the U.S. EPA to identify any misfilings. Since many facilities subject to Section 313 are also subject to other Sections of EPCRA, Section 302, 311 and 312 submissions can also be used to identify potential nonreporters. New filing instructions included on the 1989 version of Form R itself should reduce the number of forms sent only to the federal program.

Several states review each Form R for internal consistency upon receipt. Obvious errors, such as omitting fugitive emissions of volatile compounds where large quantities are used for degreasing, can be caught this way. To avoid the possibility of compounding an error during Form R verification, Section 313 staff can conduct telephone callbacks (when there are few -- less than 200 -- filers) or can send a standard mailing noting the discrepancy. In the event that a state identified such errors by submitters, the submitters should be told to send revisions of the forms needing correction to EPA's Title III Reporting Center marked "REVISION" in red. Changes to Form Rs, other than for obvious errors (e.g., typographic), should not be made without formal documented contact with filers. Any discrepancies or errors in Form R should be referred both to the Information Management Division (IMD) at U.S. EPA headquarters and to the Regional compliance and enforcement staff. IMD will enter the information into the national database. Regional compliance staff will notify U.S. EPA Headquarters which is responsible for issuing notices of noncompliance for

incomplete and inadequate form submissions. (See Section IV.E. for a discussion of state and U.S. EPA interaction in attaining compliance.) State Section 313 Coordinators may, however, be more familiar than U.S. EPA with particular facilities in their state and therefore may be better able to spot reporting errors. If, on the other hand, a state chooses to review all of the Form Rs submitted, the level of effort dedicated to verifying Form R submissions can be reduced by examining responses to a small number of questions (possibly suggested by media-specific or other offices).

As mentioned previously, the data management activities a Section 313 program undertakes are guided by the ultimate uses of the Section 313 information. For example, if it is important to have the Section 313 emission information analyzed and available for the public to access immediately following the filing deadline when the press or public may start their inquiries, then the state may want to develop its own computerized database rather than wait for U.S. EPA's on-line version. Note, however, that without extensive data quality activities, conclusions drawn from such databases must be made with caution. There are both advantages and disadvantages to the development of an in-house computerized database. The advantages include:

- if only a subset of the TRI data is entered, the information it contains will be available more rapidly than U.S. EPA's national database;
- it can be tailored to fit state needs and uses;
- it can be used to identify inconsistent Form R entries to be verified;
- it can usually be kept on a personal computer;
- Section 313 data can be linked with other state databases to identify nonresponders or for other uses;
- computer files containing specific information can be created for use by others;
- simple printouts containing release information can be generated to respond to public inquiries; and
- Section 313 data analysis and report preparation capabilities are enhanced.

The last benefits listed above would also be realized if the user obtains the EPA state diskettes in dBase or Lotus format. Some of the disadvantages of such an in-house Section 313 information system are:

- it is resource intensive to develop and maintain such a database;
- it will not undergo the same edits and review as the national TRI;
- inconsistencies between state and national databases may undermine user confidence; and
- such a database will duplicate many functions available from the TRIS and TRI/NLM databases, and the state diskettes distributed by U.S. EPA.

If a state decides to create its own database, precisely what information should be included in a state Section 313 database will be determined by its ultimate uses. If the database is used only to answer public inquiries regarding releases, then company name, facility location, and release information is sufficient. Most states with their own Section 313 databases (e.g., CA, CT, IL, KS, KY, NY, UT) include this information. If industry outreach or compliance and enforcement activities are contemplated, then matching the Form R information with facility mailing addresses (Form R requests facility street address, not mailing address) available from state industry directories might prove useful. If other media offices are interested in using the database, then other disposal information may be needed: such as, type of air emission (stack vs. fugitive), name of receiving water body (for water releases), and disposal practice (for on-site disposal of hazardous waste) or manifest destination (for off-site disposal of hazardous waste).

EPA Computer Resources

If the level of resources necessary for data entry is prohibitive, access to a computerized version of the Section 313 data can be achieved in several other ways. Funds have been allocated so that states can access the TRI on U.S. EPA's IBM mainframe computer through their Regional Office. This database is designed for use by EPA and state personnel prior to installation of TRI on NLM's TOXNET system and is continually updated as Form R's are received and processed. The associated software can be used easily to extract facility-specific information or to generate summary information, such as, total fugitive emissions of chemical X in a particular state. Additional software is being developed to allow users to define their own reports without programming skills.

Alternatively, each year's TRI database will be installed on NLM's TOXNET in the spring following that year's filing deadline. This system is designed for public access and currently is more user-friendly than the U.S. EPA's mainframe system. For example, the NLM system has menu-driven software that will enable users to generate customized reports, and supports more sophisticated command line searching for more complex searches. In addition, "Toxic Dump," a PC-based menu-driven software program is now available (contact your Regional Coordinator). This software can be used to: (1) download screen-captured files from TOXNET into dBase III+ format, and (2) manipulate dBase III+ data and generate summary reports. At the same time that TRI is loaded onto NLM's TOXNET system, U.S. EPA will also make the database available to states on other magnetic media, such as dBase III+ diskettes, as well as microfiche. A CD-ROM version is being evaluated.

One aspect of Section 313 information management that determines how readily media-specific offices will use Section 313 information is the degree to which the state's environmental databases are integrated in a computer network. Such a network may be costly to develop, but it allows several program offices to easily access each others' data. An alternative to this resource intensive solution to information flow is to provide other program offices with a diskette version of the information that is needed. U.S. EPA is actively working to link all the major U.S. EPA databases on its mainframe computer.

Linkage of environmental databases is greatly facilitated by common facility identification numbers that are unique to an emissions source or facility. U.S. EPA developed a 15 character TRI identifier (composed of facility zip code, first five non-vowel letters of facility name, and first five characters of address). All 1987 and 1988 submitters were sent their TRI-ID numbers, and the ID's are being "frozen" even if certain changes occur that would otherwise lead to a new ID, in order to facilitate multi-year linkage and analysis. In addition, EPA is ultimately proposing to develop a unique facility identification number to be used for all regulatory programs. Presently, Georgia assigns every regulated (by any environmental program) facility a unique identification number. Georgia uses the facility's Dun & Bradstreet (D&B) number from Form R or else the state assigns the facility a dummy number from a set of inactive D&B numbers available from U.S. EPA. The state then uses this identification number for all databases within the state's environmental programs. Utah has adopted the same management system for their environmental programs. Massachusetts is generating a facility master file (containing facility name, location, a unique identifier, and the identifiers used for that facility in all of the state's other environmental databases) and is also consolidating state environmental databases onto a single computer system so that users can easily search various databases for facility information. Alternatively, several states (e.g., CA and NY) are developing master files but have not integrated their data management system to permit access to all environmental databases. This arrangement is more cumbersome than an integrated system but it does accomplish the same goal of linking state environmental databases.

Industry Outreach

A wide range of industry outreach activities serve to improve the quality of information collected and maintained by Section 313 programs. Specifically, educating industry about Form R can improve their understanding of the questions and the quality of responses. In addition, industry outreach activities that increase awareness of the state Section 313 program, Section 313 filing requirements, and other EPCRA requirements may lead to greater industry compliance. States have conducted industry outreach in a variety of ways:

- Comparing Section 313 submissions with Section 311/312 submissions.
- Educating trade and industry associations and chambers of commerce to conduct their own outreach activities. States may provide brochures or other materials. Section 313 staff time is limited to involvement with the staff of the sponsoring organization(s).
- Conducting mass mailings to potential filers (i.e., all business entities categorized as eligible manufacturers by tax, unemployment, or other business databases). This is a relatively high cost method that often does not target likely filers. Coordinating these activities with the U.S. EPA Regional office is a potentially cost-effective way to carry out such mailings.
- Mailing Section 313 reporting requirements/program description along with other notices such as NPDES permit renewals. This reduces mailing costs and targets mailing to specific emitters.
- Making presentations at in-state trade group meetings.
- Making presentations at in-state pollution control conferences.
- Co-presenting with U.S. EPA Regional staff to inform audiences of state program.

Industry outreach often requires considerable staff resources. If the state's outreach activities are coordinated with the activities of the U.S. EPA Regional office, then a greater number of events can be covered and duplication of effort is minimized. Presentations given by state Section 313 offices should provide audiences with an understanding of the roles and activities of the state, the U.S. EPA Regions, and U.S. EPA Headquarters. The investment in staff preparation and materials for distribution can be minimized if a standard presentation and set of materials is prepared. Once staff are familiar with the presentation, preparation time will be minimal. In addition, co-presenting or piggybacking atop other state presentations can reduce costs and staff time.

B. Responding to Inquiries

Inquiries from the Public

A major purpose of the Section 313 program is to aid the public in understanding the chemical releases to which they may be exposed. Public access to the data is mandated under Section 324 of EPCRA. Section 313 staff typically receive two types of inquiries from the public. Many individuals want to know what quantities of what chemicals are emitted in their county or city. The follow-up question from the public usually is whether these releases are harmful to themselves or their family.

As a basic response capability, Coordinators make the Form Rs available to the public. In addition, many states either developed or have access to a summary of the Form Rs for the state. These reports frequently contain state-level emission summaries and list "Top 10s", e.g., top 10 chemicals emitted, top 10 industries emitting Section 313 chemicals, top 10 counties with Section 313 chemical emissions. Additional breakdowns of the data in a summary report may allow the report to respond more directly to public inquiries. For example, concerns may center around local emissions rather than state emissions. A summary report describing emissions by county- or city-level instead of at the state level may better address the public's concerns about local conditions.

Hazard and toxicity classifications in the summary reports will further address the public's questions regarding the risks from emissions. Including characteristics of the chemicals can help guide the public in assessing whether they find the emission levels acceptable. Summary reports can group chemicals as acute or chronic hazards. Toxicity categories, such as carcinogenic, teratogenic, or mutagenic, can be identified from the toxicity matrix available in ROADMAPS. (See description of ROADMAPS later in this section and Appendix C for sources of information on chemical toxicity categories.) Ideally, the degree of hazard presented by each chemical would be identified but such an assessment does not exist for many chemicals. However, some carcinogens do have potency measures, such as the slope factor of the dose-response function, which may be used to draw rough comparisons of the relative potencies of carcinogens.¹ Further discussion on qualitative risk assessments is provided below and in **Advanced Capabilities/Applications** (Section V.A).

¹ A description of the slope factor, or q_1^* measure, is described in Chapter 7 of the U.S. EPA's Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Interim Final, 1989).

Another method of giving the public some perspective on the numbers in a summary report is to make specific comparisons between emissions. It is often difficult to take a stream of numbers and make them meaningful. Comparisons can provide a basis for the public to decide what level of emissions from what industries they find acceptable. If emissions from a familiar, local source are reported under Section 313, these might be compared to the emissions of another manufacturing facility in the state, and to a proposed manufacturing facility. Though these comparisons may ease public concerns regarding local sources of emissions, the Section 313 Coordinator must also be aware of the value judgements involved and the potential political repercussions in choosing the examples for comparison.

Requests for risk assessments go beyond the resources of most Section 313 programs. Such assessments require expert personnel either in the Section 313 office or available to the Section 313 program. When asked who the next employee hired would be if additional funding were available, most states that had satisfied their data management needs said an environmental health professional (e.g., a toxicologist) would be their next hire. Even though Form Rs do not contain all of the information necessary to make quantitative exposure and risk estimates, many Section 313 Coordinators feel that their offices need expertise in air, ground water, and surface water modeling, as well as in assessing the human uptake and potency of the Section 313 chemicals in order to respond to public inquiries.

A comprehensive exposure and risk assessment requires an extensive level of effort for even one chemical; it is unlikely that a staff toxicologist could go through this effort except in the most important cases. However, a health risk professional's training and experience will enable her or him to explain to the public the factors that will affect risk, such as chemical characteristics (e.g., volatility, solubility, half-life, potency); meteorological conditions; nature, medium and patterns of TRI releases; and human behavior. The inquiring individual can use this information to determine whether the potential exposures merit additional action.

If it is not possible to hire a toxicologist, the Section 313 Coordinator can develop a chemical characteristic library. Section 313 staff can use the data sources to evaluate chemical hazards or to send additional information to the inquirer. Reference materials in the library could include:

- The Hazardous Substances Fact Sheets; also known as the New Jersey Fact Sheets (available from New Jersey and on NLM's TOXNET)
- Material Safety Data Sheets for all chemicals subject to EPCRA reporting

- Integrated Risk Information System (IRIS) contains information on over 250 carcinogens (available through TINS and to be available on NLM's TOXNET)
- SARA Title III Ecological Fact Sheets (distributed by OTS and to be available on NLM's TOXNET)
- Publications from the American Society of Governmental Industrial Hygienists (ASGIH)
- National Institute of Occupational Safety and Health (NIOSH) information sheets
- Hazard assessments collected from industrial hygiene journals
- Hazardous Substances Data Bank (available through NLM)
- Hazard assessments collected from emergency services journals
- Hazard assessments collected from trade journals
- USA Today's (July 31 - August 3, 1989) definitions and uses of reportable toxic chemicals and compounds
- Society of Risk Analysis' Risk Assessment Journal

An annotated bibliography and additional references are listed in Appendix C. While some of this information may be most appropriate for a technical audience, other information is more general and better-suited to public distribution (e.g., USA Today articles). It may also be possible to get information from groups serving as resources for Section 313 staff, such as the Scientists' Institute for Public Information in New York City and academic centers funded by the U.S. EPA Grant Office.

There are also directories of information -- U.S. EPA's Information Resource Directory (U.S. EPA, Spring 1989) and the ROADMAPS database distributed by U.S. EPA to state officials and other users. The Information Resource Directory (IRD) contains listings and descriptions of environmental information resources including EPA and non-EPA information systems (computers, software, and databases), contact individuals by subject area, documents, newsletters and periodicals, and interest groups. The ROADMAPS database is a PC-based index to information sources within EPA containing summary information on chemical toxicity and major regulations.

The Toxic Chemical Release Inventory Risk Screening Guide (U.S. EPA, Office of Toxic Substances, 1989) is another useful tool for responding to risk inquiries. The Risk Screening Guide assists users in developing qualitative risk estimates. It outlines a methodology for translating emissions into risk by describing exposure and includes, for each chemical, a "high-medium-low" potential for a range of toxicity end points. The Guide can be used to construct relative risk rankings of emission sources and to identify and set priorities for further assessment. In that respect, the Risk Screening Guide can move both environmental agencies and the public closer to an understanding of the potential impact of Section 313 chemical emissions.

Besides improving the state's ability to answer questions regarding Section 313 data, the Section 313 Coordinator (or a public outreach specialist if sufficient funds are available) may choose to educate the public regarding the TRI and to encourage public inquiries. This decision depends on each state's goals for the program and on the ability of the state to handle a potentially increased number of public inquiries. There are many routes through which public education can occur including:

- Local Emergency Planning Committees
- Libraries
- Environmental organizations such as the Sierra Club and the National Audubon Society
- City planners/city managers
- Civic groups such as the League of Women Voters
- Community colleges
- Science teacher associations
- Public service announcements
- Cable television talk shows
- Industry sponsored public forums

Distribution of available Section 313 information through some of the above routes may be an effective way to increase public awareness and promote public education related to TRI. Also, EPA developed a videotape (What It Means To You: The Emergency Planning and Community Right-to Know Act) to inform the public about all Sections of EPCRA, and the content and potential uses of the TRI. This videotape can be used in conjunction with oral presentations and pamphlets to present a complete picture of EPCRA and how the TRI fits into U.S. EPA's effort to involve the public in environmental protection. Public outreach measures, such as these, are discussed more fully in Section 313 Program Development sections of **The Basics (III.C.)** and **Beyond the Basics (Section IV.C.)**.

Some states have found that there is little need to promote the TRI to the public since they are already receiving many inquiries and demands from citizens for additional information or action. These inquiries are often motivated by media reports of chemical releases or of Section 313 emission data. To ensure that the public receives balanced information, Section 313 Coordinators may benefit from educating the press as well as educating the public directly. Outreach to the press is discussed further in Section 313 Program Maintenance (Section IV.C).

Inquiries from Other State Program Offices

Inquiries from other offices can be encouraged through distribution of targeted educational materials designed to emphasize the potential usefulness of the TRI to each office. Simple analyses using Section 313 data combined with other offices' data can also serve to promote the Section 313 database. **Augmenting Existing Programs** (Section IV.D) further discusses these issues.

Inquiries from Industry

If a state Section 313 Coordinator elects to develop their state program's ability to respond to questions from industry rather than referring these questions to Regional EPA Offices or the Emergency Planning and Community Right-to-Know Information Hotline (800-535-0202; or in DC and AK 202-479-2449), the Section 313 staff needs thorough knowledge of the technical aspects of completing Form R. This knowledge can be obtained through staff attending EPA seminars on Form R completion (contact regional offices) or, if funds are available, through hiring an engineer who can respond to Section 313 questions (see **Increasing Technical Expertise within Program Maintenance**).

C. Section 313 Program Maintenance

Even after a state's Section 313 program is well established, Coordinators are responsible for ensuring the continued stability, success, and growth of the program, i.e., program maintenance. Maintaining a Section 313 program means that Coordinators must design and carry out activities that build on the responsibilities outlined in the Program Development section of **The Basics**. These additional responsibilities include:

- Pursuing long-term goals for the state Section 313 program;
- Continuing outreach activities -- educating others about the value and importance of the Section 313 program;
- Increasing technical and health risk expertise of Section 313 program; and
- Establishing stable funding sources.

Pursuing Long-Term Goals

As mentioned previously, long-term goals developed by each Coordinator, in concert with other environmental protection and public health staff (a consensus approach), are most likely to meet their state's needs and to be supported by the various offices potentially using the Section 313 data. A few examples of long-term goals are presented in the Program Development section of **The Basics**. In addition to the long-term goals outlined in that section, the Section 313 program and staff can take an active role in advancing the use of

Section 313 data by other offices (e.g., by developing software or databases that can be used to link Section 313 data with databases of other media-specific regulatory offices), coordinating cross-media pollution control initiatives, and providing emissions information for risk screening and other planning purposes. All of these activities serve to draw the attention of different offices and agencies to the value of the Section 313 program and may enable the program to play a larger role in several areas of environmental management.

Continuing Public Outreach

Continuing to educate and inform a wide variety of audiences about the relative merits of the state Section 313 program helps to keep the Section 313 program in the public spotlight. More advanced outreach activities capitalize on external interest in the Section 313 program by developing education and promotional activities designed for specific audiences and/or specific situations. For example, most of the states attending the colloquia find that the number of inquiries from groups and individuals increases following the annual filing deadline. Similar bursts of interest are reported following spill incidents and accidental releases. These events often spawn greater public interest in finding out about all environmental exposures. Inquiring individuals and/or groups may be asked whether they would like additional information on the state's Section 313 program or if they are interested in participating in public forums on the availability of Section 313 information and the Section 313 program.

Community outreach can be expanded to include:

- Education of groups that frequently serve as initial contacts for environmental and public health questions. This is important for several reasons. First, members of public service and public interest groups, such as the League of Women Voters, Audubon Society, Sierra Club, and Greenpeace, frequently contact their group's professional staff before searching for the state Section 313 office. The more the groups' professionals know about the state Section 313 program, the more information they can pass along to their members. Such intermediaries are particularly important because they can explain the release information at the community level and facilitate interactions with concerned constituents and the public. Coordinators can ask such groups to assist in promoting use of Section 313 information by:
 - co-hosting meetings for their members or the public where release information and the Section 313 program may be discussed;
 - including articles prepared by the Section 313 office in their newsletters; and

- using presentations or videotapes prepared or distributed by the Section 313 office.

Similarly, public health officers and members of Local Emergency Planning Committees can also serve as local contacts for the state Section 313 office.

- **Education of the general public.** Several activities are used by state Coordinators to increase public awareness and understanding of state Section 313 programs. Section 313 newsletters offer interested individuals up-to-date information on Section 313 data availability, data analysis, contact individuals, and state pollution control and pollution prevention initiatives. Some states are reaching the public by distributing analytic reports and release information from Form Rs (usually hard copy, but possibly on diskette) to public libraries. Secondary-level science teacher associations in some states (e.g., UT) have expressed interest in using Section 313 data in their environmental curricula. Some Coordinators have arranged appearances on cable television and local network affiliates.
- **Increasing press contacts to educate the media.** Print, radio and television media frequently focus on environmental issues and can be used to disseminate summary Section 313 information. One strategy employed to avoid having to respond to reporters' deadlines is for the Coordinator to initiate contact. If the Section 313 program can prepare preliminary analyses of emissions data (possibly as part of press releases) soon after July 1st, as well as provide reporters with access to the files, then the public may read and hear of the Section 313 program's interpretation of the data. In addition, an ongoing dialogue between reporters and Section 313 staff may enable the Section 313 office to prevent blindsiding of other environmental program offices and emergency service agencies by being aware of what and when Section 313 information is released.

Resources and materials available to help the media understand and interpret Section 313 information include:

- **Journalist's Guide to Title III.** Contact Regional U.S. EPA Coordinator.
- **EPCRA conferences for journalists.** Regional Section 313 staff will be notified of upcoming events.
- **Scientists Institute for Public Information (NY City).** A scientific referral service for journalists.

Increasing Technical and Health Risk Expertise

As mentioned in **The Basics**, often programs have addressed the pressing need for data entry and data management personnel by borrowing data entry personnel from other environmental protection or emergency management offices and developing software and data management systems on a one-time basis. Beyond data maintenance capabilities, Coordinators feel that two types of expertise would greatly enhance their program. Technical expertise, such as industrial process engineering or chemical engineering, could enhance quality assurance activities, industry outreach, technical assistance (to industry), and pollution prevention programs. Environmental health expertise will permit a program to respond to risk-related inquiries more thoroughly and to expand the program's overall hazard and risk assessment capabilities. Evaluating the relative risks of environmental exposures is a key capability for a state Section 313 program interested in using Section 313 information for planning and priority-setting.

Establishing Stable Funding Sources

Because so many of a Section 313 program's activities, such as outreach, are long-term (several years or more) endeavors, it is important to establish dependable funding sources. One-year or one-time funding is useful for getting a program off the ground or developing a specific element of the state's program (e.g., a chemical hazard library or pilot project), but should not be depended upon to support the regular activities of the Section 313 program. Consequently, Coordinators that work to include the Section 313 program explicitly in the state's or host agency's fiscal plans are more likely to develop funding stability. The National Governors Association's (NGA) EPCRA: Status of State Actions -1989 devotes a chapter to state costs and funding approaches for community right-to-know and emergency planning programs.

Maintaining the interest of fiscal planners is, in part, dependent upon the need for, and interest in, the Section 313 program. For these reasons, it is important to educate other state officials about the Section 313 program and to be able to demonstrate the level of interest and activity of the program to budgetary decision-makers. For example, if budget setting is a host agency decision, then media-specific offices' opinion of the Section 313 data and program may play a large role. If the state legislature has line item authority over Section 313 program funding, however, then the opinion of legislators and the public will be of greater influence on the decision process. Each time fiscal planning begins, Coordinators should be able to demonstrate to decision-makers that the Section 313 program is of value to them and to their constituencies.

By 1990, at least four states (KS, MA, OH, and TX) will collect filing fees to offset operating costs of their Section 313 program. A fee system is most advantageous if the funds can be dedicated to the Section 313 program and are not returned to general funds. In one case, however, the filing fees go to the state's general fund and the Section 313 program receives the amount collected in fees that year. It is important to note that, increasingly, states are adopting user charges and fees to support a wide variety of state programs during fiscal hard times.

Most state fee schedules have a two-part system: a fee per filer (designated as a facility) and a fee per Form R. Most states have a sliding scale for filer fees based on company size (either in terms of annual sales or number of employees) and a cap on the Form R fees. Since the number of filers and Form Rs received is fairly well known, the state can establish the fee per filer and form to generate the needed revenue. States with fee systems felt that it is advantageous to have the authority to adjust the fees to maintain revenues without legislative approval.

D. Augmenting Existing Programs

Several states currently are using Section 313 information to augment existing environmental protection programs. Coordinators may see use of Section 313 information by other environmental protection and public health offices as a short-term goal for their Section 313 program. Other offices' familiarity and positive experiences with the Section 313 data will probably result in quicker acceptance and support of the information base. Over the long-run, augmenting the activities of media-specific offices can lead to a coordinating role reorienting environmental protection programs around multimedia facility-based reporting, such as required by Section 313. For example, if existing program offices are familiar with Section 313 reporting and information, they may approach Coordinators with requests for data support. In other cases, Coordinators may suggest specific uses of the emission data to media-specific offices.

As a starting point, Coordinators can compare the Section 313 emission data to media offices' databases. For example, a facility's hazardous waste shipments reported on Form R should match manifested shipments tracked by Resource Conservation and Recovery Act (RCRA). The comparison will probably be useful to highlight missing or incorrect data contained in both databases. Coordinators can use data comparisons to increase the accuracy of the Section 313 reported emissions while also making other offices aware of data gaps or errors in their databases.

Section 313 information is also a tool to verify permit compliance. This includes:

- Verification of the legality of disposal methods. For example, the Commonwealth of Virginia's water board used Section 313 data to identify an illegal underground injection operation.
- Identification of facilities exceeding permit limits. A facility's emissions reported on Form R should not exceed discharges permitted by regulatory offices. This is not always a straightforward determination; Section 313 releases are reported on an annual basis whereas permits are often based on a concentration limit or daily release limit.

E. Compliance and Enforcement

Section 325 of EPCRA authorizes the Administrator of the U.S. EPA to enforce compliance with EPCRA, including the Section 313 requirements. EPCRA establishes federal authority for civil, administrative, and criminal actions against owners and operators of facilities that do not comply with EPCRA requirements. EPCRA does not, however, provide direct authorization for states to take civil, administrative, or criminal actions against violators of the reporting requirements of Section 313. Specifically, Section 326 of EPCRA authorizes states to bring civil suits against noncompliant owners/operators failing to comply with Sections 302(c), 311(a), 311(c), and 312(a), but not Section 313. Section 326(a)(1) authorizes any person to commence a civil action on his own behalf against an owner/operator of a facility for failure to comply with any of several specified requirements of Sections 302, 311, 312, and 313 of EPCRA. For Section 313, any person may commence a civil action against an operator/owner of a facility for failure to complete and submit a toxic chemical release form. Section 329 provides a definition of person which includes States, municipalities, commissions, political subdivisions of States, and interstate bodies. Thus, as "persons," States may file civil suits under Section 326(a)(1) for noncompliance with Section 313. A manual is available from the U.S. EPA Office of Solid Waste and Emergency Response which explains the role of LEPCs in obtaining compliance of EPCRA (for example, identifying noncompliant facilities under Section 313) and the different enforcement authorities under EPCRA. The summary of EPCRA requirements and federal, state, and local and citizen enforcement authorities presented in Exhibit 2 is taken from that document.

Exhibit 2.

Emergency Planning and Community Right-to-Know Act Enforcement Authorities

Requirement	Federal	State and Local	Citizen
§302(c) o/o with EHS>TPQ notify SERC by 5/17/87 (or 60 days after EHS>TPQ becomes present) that facility is subject to Act.	§325(a) EPA may order o/o to comply. USDC has authority to enforce and assess a penalty up to \$25k/day.	§326(a)(2)(A)(i) State & Local Governments can file civil action in USDC for failure of o/o to notify SERC.	No authority under §326(a)(1).
§303(d) o/o must appoint facility representative to participate in planning by 9/17/87 & provide info. for planning when requested.	§325(a) EPA may order o/o to comply. USDC has authority to enforce and assess a penalty up to \$25k/day.	§326(a)(2)(B) SERC or LEPC can file civil action in USDC against o/o for failure to provide information.	No authority under §326(a)(1).
§304(b) o/o must notify SERC & LEPC immed. after a release of EHS or CERCLA release. §304(c) o/o must follow-up report as soon as practicable.	§325(b)(1)&(b)(2) Class I and Class II penalties of up to \$25k/day (up to \$75k/day thereafter) by Administrative Order or in USDC. Criminal penalty: up to \$25k/day and/or 2 years.	No Authority under §326(a)(2). See §326(a)(1).	§326(a)(1)(A)(i) any person can file a civil action in USDC against o/o for failure to submit follow-up report.
§311 o/o who must prepare MSDS under OSHA must submit MSDS/list to SERC, LEPC & fire department by 10/17/87 or 3 months after newly subject to OSHA.	§325(C)(2),(4) EPA can assess penalty of up to \$10k per violation per day by Administrative Order or in USDC.	§326(a)(2)(A)(ii) & (iii) State & Local Governments can file civil action in USDC against o/o for failure to submit MSDS or list or make available info. requested under §311(c).	§326(a)(1)(A)(ii) any person can file a civil action in USDC against o/o for failure to submit MSDS or list.
§312(a) o/o who must prepare MSDS under OSHA must also submit Tier I form on 3/1/88., then annually. For newly covered facilities, first forms due 3/1/90.	§325(C)(1),(4) EPA can assess penalty of up to \$25k per violation per day by Administrative Order or in USDC.	§326(a)(2)(A)(iv) State & Local Governments can file civil action in USDC against o/o for failure to submit Tier I form. §326(a)(2)(B) SERC & LEPC can file civil action for failure to submit Tier II form under §312(e)(1).	§326(a)(1)(A)(iii) any person can file a civil action in USDC against o/o for failure to submit Tier I information.
§313 o/o of facility that manufactured, processed or used a toxic chemical in previous year must submit TRI form annually starting 7/1/88.	§325(C)(1),(4) EPA can assess penalty of up to \$25k per violation per day by Administrative Order or in USDC.	No Authority under §326(a)(2). See §326(a)(1).	§326(a)(1)(A)(iv) any person can file a civil action in USDC against o/o for failure to submit a TRI form under §313.
§322(a)(2) o/o must submit information to support a trade secret claim.	§325(c)(2) EPA can assess penalty of up to \$10k per violation per day by Administrative Order or in USDC.	No authority.	No Authority.
§325(d) claim must not be frivolous.	§325(d)(1) EPA can assess penalty of up to \$25k per claim for claim that is unsubstantiated or not a trade secret and frivolous by Administrative Order or in USDC.	No authority.	No Authority.
§323(b) o/o must submit a MSDS, inventory form, and a TRI form to physician who requests information in an emergency situation.	§325(c)(2) EPA can assess penalty of up to \$10k per violation by Administrative Order or in USDC.	No Authority	§325(e) Health professional can file action in USDC to compel o/o to comply. USDC may issue order and enforce.

Key:

CERCLA = Comprehensive Environmental Response, Compensation and Liability Act of 1980

EHS = extremely hazardous substances

LEPC = Local Emergency Planning Committee

MSDS = material safety data sheets

o/o = manufacturing facility owner/operator

OSHA = Occupational Safety and Health Administration

SERC = State Emergency Response Commission

TRI = toxic chemical release inventory

TPQ = threshold planning quantity

USDC = U.S. District Court

Several state legislatures (e.g., CT, IL, KS, and MA) have enacted enabling legislation, similar to EPCRA, granting their state environmental programs administrative and criminal enforcement authority under Sections 311, 312, and 313. Unlike the federal compliance and enforcement program, these states usually focus on compliance with Sections 311 and 312, which are of primary concern to state and local emergency response officials. However, facilities subject to Section 313 are usually subject to other sections of EPCRA. States interested in ensuring that a facility is in total compliance with EPCRA, not just the sections the state has authority to enforce, are encouraged to refer all suspected noncompliant facilities to U.S. EPA Regional Offices for action under federal statutes. Further, states which have enforcement authority under Section 313 are also encouraged to refer all suspected noncompliant facilities to U.S. EPA Regional Offices as state enforcement action does not preclude additional action under federal authority. Likewise, EPA Regional Offices are encouraged to coordinate with states and to keep them informed about enforcement matters.

States interested in developing enforcement capabilities might benefit from discussing the mechanics involved in administering an enforcement program with their Regional U.S. EPA Section 313 Coordinator. U.S. EPA has spent two years implementing their compliance monitoring and enforcement strategy for Section 313. At a minimum, there is much to be learned from the federal experience. Discussions with U.S. EPA Regional EPCRA staff may also improve understanding of the federal enforcement program and help establish mutual notification protocols, referral mechanisms, and complementary roles for each enforcement program. States with enforcement authority for their Section 313 program are advised to draw up a memorandum of understanding (MOU) that describes the respective enforcement roles of the state agencies responsible for EPCRA programs and the Regional U.S. EPA Office (a draft MOU is presented in Appendix D).

States without explicit enforcement authority for Section 313 may still take an active role in identifying noncompliant facilities for U.S. EPA to issue civil administrative complaints (penalties) or notices of noncompliance. Regional U.S. EPA compliance and enforcement staff encourage state Section 313 programs to provide the Regions with a list of facilities suspected of noncompliance.

Currently, the federal compliance monitoring and enforcement program focuses on two types of violations: nonreporters and reporters who submit incomplete or incorrect reports with readily apparent errors. In response, the current federal compliance and enforcement program consists of the following elements:

- Identifying suspected nonreporters; investigating whether they are subject to reporting requirements; and taking enforcement action. The

identification process includes comparing a list of filers to facilities in regulatory program databases that would be expected to be subject to Section 313 or to databases containing manufacturing facilities, such as unemployment insurance contributors. Oregon is using a list of 311 and 312 filers to identify potential filers under Section 313.

- Identifying and taking action against reporters who have submitted forms with readily identifiable errors. At this time, this includes discrepancies identified by review of Form R submissions which preclude entering the data into the database (discussed in Data Management--Sections II.A and IV.A).

The U.S. EPA's enforcement response policy for Section 313 summarizes how to determine the appropriate enforcement action for each potential violation. Possible actions include: no action; issuing a notice of noncompliance (which has no associated penalties but does remain in a facility's compliance record); issuing an administrative civil complaint which includes penalties; and criminal action under 18 U.S. Code 1001 (which makes it a criminal offense to intentionally provide false information to the U.S. government).

States seeking enforcement authority must: (1) have adopted the required enabling legislation (2) develop an enforcement response policy (or adapt EPA's) that reflects their legal authority; (3) ensure that the policy creates appropriate incentives for compliance with Section 313; and (4) ensure that state compliance and enforcement does not conflict with federal authority. State programs may elect to focus on certain types of noncomplying facilities that are particularly problematic in their state or are easily identified. To avoid duplication and be more efficient, state enforcement programs should be designed to complement the federal compliance and enforcement program by targeting facilities whose noncompliance is a priority for the state Section 313 program. Such coordination of the state's compliance and enforcement strategy with the U.S. EPA Regional Office may, in turn, result in a greater total number of enforcement actions taken against noncompliant owners/operators within the state.

V. ADVANCED CAPABILITIES/APPLICATIONS

A. Internal Planning and Priority Setting

As a risk-based planning tool for both traditional and innovative pollution control and prevention programs, Section 313 information is unique. Since most environmental programs are premised on protecting human health and natural resources, the most important large-scale planning information is identification of locations where unacceptable exposures are likely to occur. Section 313 information includes fairly complete multimedia emissions data (albeit self-reported estimates) for an entire set of (larger) manufacturing facilities. Linking this geographic source data (from Section 313) with receptor population data greatly improves planners' abilities to estimate exposure. TRI stands out as one of the only sources of multimedia facility emissions data.

Now that TRI is available, it is possible to identify geographic areas of concern, compare total emissions across industrial categories, and to otherwise set priorities for state environmental efforts based on exposures and risk. Care must be taken when using release information to extrapolate to health and ecosystem risks. Although Section 313 information is incomplete for purposes of assessing risk, the information enables planners to summarize, or rank, emissions according to chemical hazard and likelihood of significant exposure. U.S. EPA's Toxic Chemical Release Inventory Risk Screening Guide (1989) lays out the procedures and guidelines for ranking emission sources according to risk.

Some applications of risk-based priority-setting include:

- Risk-based budgeting at the state agency level
- Identifying areas of industrial discharge for cross-media controls
- Ranking industries according to health risks of total releases
- Comparing risks from industrial releases with other known sources of environmental risks

Risk screening also can be used to set priorities and to guide development of programs described in the following sections.

B. Use of Section 313 Data for Pollution Prevention Programs

While Section 313 information is a useful risk-based planning tool, states can also use Section 313 data to decrease chemical emissions and therefore exposure and risk to humans, wildlife, and the environment. States can work towards reducing hazardous chemical use and emissions through implementing pollution prevention programs.

Section 313 information can support pollution prevention programs in at least four ways:

- (1) Section 313 information can provide data with which to evaluate the need for a pollution prevention program;
- (2) Section 313 information can supply a baseline measure of emissions against which to evaluate the effectiveness of a pollution prevention program;
- (3) Section 313 information can provide data on best pollution prevention practices within an industry, which can serve as goals for other facilities in that industry; and
- (4) Section 313 information can provide the impetus for restructuring state environmental programs around pollution prevention, cross-media pollution controls, and facility-oriented reporting.

Several states are using the Section 313 data to evaluate the need for a pollution prevention program. One way to evaluate this need is by conducting epidemiological studies to determine whether increased incidence of diseases may be coincident with chemical emissions sources. States can also evaluate the need for a pollution prevention program through risk assessments for the Section 313 chemicals. Besides technical evaluations, public officials can compare their state's emissions to other states' emissions, assess public response to the Section 313 data, and compare population centers to emission locations to evaluate the demand and need for a pollution prevention program. Even when states do not know specific risks, it is certain that decreasing emissions will reduce risk, regardless of the initial risk level.

At least two states, Oregon and Massachusetts, have developed pollution prevention programs that rely on Section 313 data. They present substantially different models for developing a pollution prevention program. The State of Oregon passed House Bill 3515 through which it developed a program designed to determine a set of best industry emission practices throughout the country. The State can apply pressure, in the form of publicity, on Oregon facilities to meet these standards. The law requires Oregon facilities to show that it is not feasible for them to match the lower emissions of similar facilities within the same industry to avoid publication of their elevated emissions rate(s). Oregon is using the Section 313 reporting requirements as the initial requirements for their program, but the Oregon Department of Environmental Quality can add to or subtract from the list of reporters. There is no enforcement for reduction except through public pressure; the system relies on the dual incentives of avoiding adverse publicity and gaining credit for emission reductions. To reduce the

burden on industry Oregon has established a research program for toxic use reduction through Oregon State University. The State will also make loans available to industry for source reduction.

The Commonwealth of Massachusetts has set a goal of reducing toxic waste by 50 percent by 1997. Massachusetts has relied more explicitly on Section 313 reporting in setting up its pollution prevention program than has Oregon. The main emphasis of Massachusetts's "Toxic Use Reduction Act" is on reporting requirements similar to those required by Section 313. For example, Form R information will be collected from facilities in other standard industrial category (SIC) codes and from facilities falling below the number of employees and toxics use thresholds established for Section 313 reporting. Massachusetts' program also differs from Oregon's in that Massachusetts can impose performance standards on industry after 1995 if the Commonwealth determines that the industry is a "priority user segment."

Massachusetts is currently testing its program through the Blackstone River Pilot Project in which the pollution prevention program is implemented for industries in SIC codes 34-39 (a subset of the manufacturing industries subject to EPCRA). The State is evaluating the use of cross-media inspectors and is providing technical assistance towards source reduction to these industries. Massachusetts will be measuring results of the project in emission decreases and will evaluate the usefulness of Section 313 to measure emissions.

C. Augmenting Existing Programs

Some additional applications of Section 313 information to augment existing programs include:

- Support for cross-media inspections. Cross-media inspections can consolidate the inspection process of several regulatory programs and may enable inspectors to audit a larger number of facilities. The emission reporting under Section 313 can facilitate the institution of cross-media inspections by providing a multimedia emissions reporting instrument (Form R). The State of Massachusetts is experimenting with cross-media inspection as part of the Blackstone River Pilot Project.
- Prioritize placement of air and water pollution monitoring systems. Media-specific offices can use the Section 313 information as another tool to determine the regions suspected of having high ambient air and water pollutant concentrations. This data can aid the media offices in determining air and water monitoring locations that will yield the most important pollutant concentration measurements.

- Guide new facility siting. State and local governments, along with the public, can use Section 313 information in reviewing local new manufacturing sites. Citizens and government can use Section 313 information in two ways. First, the data can be used to determine the likely emissions from the proposed facility. This is possible by examining the emissions from a similar facility reporting Section 313 emissions. The public and the state can also use the Section 313 data to compare the chemicals and quantities that the proposed facility is likely to emit to those already emitted near their location. This comparison can help provide a context for the public and the state in which to decide when and where new facilities are acceptable.

D. Natural Resource and Public Health Protection

One of the major advantages of information reported under Section 313 is that it contains locational information as well as multimedia emissions information. This enables Section 313 release information to be linked to the location of sensitive receptors (human populations or natural resources such as drinking water supplies). If all information is complete and accurate, such geographic information systems (GIS) permit public health professionals to make preliminary exposure assessments (for human populations) and environmental protection professionals to identify threats to natural resources. Developing GIS capabilities requires in-house expertise in data management, the relevant modeling disciplines, and evaluation of the effects of exposure. Currently, the most significant limitation in using Section 313 data for GIS analysis is the poor quality of locational information. For the 1987 data, locational information should be verified prior to use. During that year, the location data were submitted voluntarily; submission was mandatory subsequent years. Some states are supplanting the locational information in Form R with other sources of locational information (e.g., zip code latitude/longitude centroids available from marketing service companies or from PC-GEMS). The use of ZIP code centroids is a quick and dirty type of patch, since these data are definitely not of the quality needed for use in GIS. Edit checks done by EPA on the 1987 data identified virtually all the facilities whose locational coordinates were so poor as to make zip code centroids an improvement. The only utility for states to do this on their own is when they are doing their own data entry.

Several states are using geographic information systems to determine if geographic hotspots (e.g., elevated disease incidence) are associated with releases reported under the Section 313 program. In these applications, it is important to limit the investigation to chemicals for which there is an established link with development of adverse health outcomes and to consider exposure pathways accurately. Such a search for the underlying causes of disease hotspots is most

suitable for air emissions of known carcinogens associated with rare types of cancer. This application is limited by two facts: Section 313 releases account for only a fraction of environmental exposures for some chemicals; and it ignores lifestyle and occupational exposures. Finally, public reaction to linking emissions sources with disease incidence may be strong; it should be stressed that the findings of such an analysis are preliminary in nature, and are used to direct more sophisticated investigations.

A similar analysis can be done linking sensitive natural resources with possible sources of contamination. Evaluating the impact of releases is useful for a range of resource protection activities such as wellhead protection, water body planning, and airshed management. For example, if a state knows the geographic location of all sources of drinking water in the state (both surface water bodies and groundwater aquifers), then possible threats to these resources can be identified by overlaying release information (from Form R) on the spatial matrix of water supply resources. The additional step of modeling the fate and transport of air, water, and underground injection releases (e.g., using PC-GEMS or CAMEO) will provide a better indication of possible threats. Compiling toxic loading inventories for important resources, such as the Chesapeake Bay, the Great Lakes, or Puget Sound, is one example of how this type of analysis can be applied to pollutants entering sensitive ecosystems.

E. Summary

This guide has attempted to summarize the most up-to-date information and resources related to developing and enhancing state Section 313 programs. Additional resource materials and training for Section 313 programs, such as documents, computer software, and risk assessment training, are being, and will continue to be, developed by U.S. EPA. Furthermore, it is inevitable that the role of Section 313 programs will change as environmental protection efforts begin to incorporate multimedia controls, such as pollution prevention initiatives, in addition to traditional command and control solutions. These changes testify to the dynamic nature of Section 313 programs and make it important for all EPCRA staff, not just Section 313 Coordinators, to stay in touch with other state and federal EPCRA programs in the coming years.

Appendix A
State Section 313 Program Office Addresses and
Contact Individuals

ALABAMA

Alabama Emergency Response Commission
Alabama Department of Environmental Management
1751 Congressman W. L. Dickinson Drive
Montgomery, AL 36109
Contact: L.G. Linn
E. John Williford

(205) 271-7700
(205) 271-7931

ALASKA

Alaska State Emergency Response Commission
3220 Hospital Drive
Juneau, AK 99801
Contact: Linda VanHouten

(907) 465-2600

AMERICAN SAMOA

American Samoa EPA
Office of the Governor
Pago Pago, American Samoa 96799
Contact: Pati Faiai

(684) 633-2304

ARIZONA

Arizona Emergency Response Commission
Division of Emergency Services
5636 East McDowell Road
Phoenix, AZ 85008
Contact: Carl Funk

(602) 244-0504

ARKANSAS

Arkansas Department of Pollution Control and Ecology
P.O. Box 9583
8001 National Drive
Little Rock, AR 72219
Contact: John Ward

(501) 562-7444

CALIFORNIA

Office of Environmental Affairs
P.O. Box 2815
Sacramento, CA 95812
Contact: Chuck Shulock

(916) 324-8124

COLORADO

Colorado Department of Health
Division of Hazardous Materials and Waste Management
4210 E. 11th Avenue
Denver, CO 80220
Contact: Pam Harley
Judy Waddill

(303) 331-4858
(303) 331-4858

CONNECTICUT

State Emergency Response Commission
Department of Environmental Protection
State Office Building, Room 161
165 Capitol Avenue
Hartford, CT 06106
Contact: Sue Vaughn

(203) 566-4856

DELAWARE

Air Resource Section
Department of Natural Resources and Environmental Control
P.O. Box 1401
Dover, DE 19903
Contact: Robert French

(302) 736-4791

DISTRICT OF COLUMBIA

State Emergency Response Commission for Title III in the District of Columbia
Office of Emergency Preparedness
2000 14th Street, NW
Frank Reeves Center for Municipal Affairs
Washington, DC 20009
Contact: Pamela Thurber

(202) 727-6161

FLORIDA

Florida Emergency Response Commission
Secretary, Florida Department of Community Affairs
2740 Centerview Drive
Tallahassee, FL 32399-2149
Contact: Eve Rainey

(904) 488-1472

GEORGIA

Georgia Emergency Response Commission
205 Butler Street, SE
Floyd Tower East
11th Floor, Suite 1166
Atlanta, GA 30334
Contact: Jimmy Kirkland

(404) 656-6905

GUAM

Guam EPA
P.O. Box 2999
Aguana, Guam 96910
Contact: Roland Solidio

(671) 646-8863

HAWAII

Hawaii State Emergency Response Commission
Hawaii State Department of Health
P.O. Box 3378
Honolulu, HI 96801-9904
Contact: Mark Ingoglia

(808) 543-8249

IDAHO

Idaho Emergency Response Commission
1410 North Hilton
Boise, ID 83706
Contact: Jenny Records

(208) 334-5888

ILLINOIS

Emergency Planning Unit
Illinois EPA
P.O. Box 19276
2200 Churchill Road
Springfield, IL 62794-9276
Contact: Joe Goodner

(217) 782-3637

INDIANA

Indiana Emergency Response Commission
5500 West Bradbury Avenue
Indianapolis, IN 46241
Contact: Skip Powers

(317) 243-5176

IOWA

Department of Natural Resources
900 East Grand Avenue
Des Moines, IA 50319
Contact: Pete Hamlin

(515) 281-8852

KANSAS

Right-to-Know Program
Kansas Department of Health and Environment
Mills Building, Suite 501
109 SW 9th Street
Topeka, KS 66612
Contact: Karl Birns

(913) 296-1690

KENTUCKY
Kentucky Department of Environmental Protection
18 Reilly Road
Frankfort, KY 40601
Contact: Valerie Hudson (502) 564-2150

LOUISIANA
Department of Environmental Quality
333 Laurel Street
P.O. Box 44066
Baton Rouge, LA 70804-4066
Contact: R. Bruce Hammatt (504) 342-8617

MAINE
State Emergency Response Commission
Station Number 72
Augusta, ME 04333
Contact: Tammy Gould (207) 289-4080
David D. Brown (Chair)

MARYLAND
State Emergency Response Commission
Maryland Department of the Environment
Toxics Information Center
2500 Broening Highway
Baltimore, MD 21224
Contact: Marcia Ways (301) 631-3800

MASSACHUSETTS
Title III Emergency Response Commission
Department of Environmental Protection
One Winter Street, Tenth Floor
Boston, MA 02108
Contact: Arnold Sapenter (617) 292-5993

MICHIGAN
Michigan Department of Natural Resources
Environmental Response Division
Title III Notification
P.O. Box 30028
Lansing, MI 48909
Contact: Title III Coordinator (517) 373-8481

MINNESOTA
Minnesota Emergency Response Commission
290 Bigelow Building
450 Syndicate Street
St. Paul, MN 55104
Contact: Lee Tischler (612) 643-3000

MISSISSIPPI
Mississippi Emergency Response Commission
Mississippi Emergency Management Agency
P.O. Box 4501
Fondren Station
Jackson, MS 39296-4501
Contact: Bill Austin (601) 960-9973
J. E. Maher (Chair)

MISSOURI
Missouri Emergency Response Commission
Missouri Department of Natural Resources
2010 Missouri Boulevard
Jefferson City, MO 65109
Contact: Dean Martin (314) 751-7929

MONTANA
Montana Emergency Response Commission
Environmental Sciences Division
Department of Health & Environmental Sciences
Cogswell Building A-107
Helena, MT 59620
Contact: Guy Youngblood (406) 444-6911

NEBRASKA

Nebraska Emergency Response Commission
Nebraska Department of Environmental Control
P.O. Box 98922
State House Station
Lincoln, NE 68509-8922
Contact: Clark Smith

(402) 471-2186

NEVADA

Division of Emergency Management
2525 South Carson Street
Carson City, NV 89710
Contact: Bob King

(702) 885-4240

NEW HAMPSHIRE

State Emergency Management Agency
Title III Program
State Office Park South
107 Pleasant Street
Concord, NH 03301
Contact: Leland Kimball
Richard Strome (Director)

(603) 271-2231

NEW JERSEY

Department of Environmental Protection
CN-405
401 East State Street
Trenton, NJ 08625
Contact: Ruth Williams

(609) 984-3719

NEW MEXICO

New Mexico Emergency Response Commission
New Mexico Department of Public Safety
P.O. Box 1628
Santa Fe, NM 87504-1628
Contact: Max Johnson

(505) 827-9222

NEW YORK

New York State Department of Environmental Conservation
50 Wolf Road, Room 326
Albany, NY 12233-3510
Contact: Bill Miner

(518) 457-4107

NORTH CAROLINA

North Carolina Emergency Response Commission
North Carolina Division of Emergency Management
116 West Jones Street
Raleigh, NC 27603-1335
Contact: Vance Kee
Emily Kilpatrick

(919) 733-3844

(919) 733-3865

NORTH DAKOTA

North Dakota State Department of Health and Consolidated Laboratories
1200 Missouri Avenue
P.O. Box 5520
Bismarck, ND 58502-5520
Contact: Charles Rydell

(701) 224-2374

COMMONWEALTH OF NORTHERN MARIANA ISLANDS

Division of Environmental Quality
P.O. Box 1304
Saipan, CNMI 96950
Contact: Russell Meecham, III

(670) 234-6984

OHIO

Ohio EPA
Division of Air Pollution Control
1800 Watermark Drive
Columbus, OH 43215
Contact: Cindy Dewulf

(614) 644-2266

OKLAHOMA
Emergency Response Commission
State Department of Health
P.O. Box 53551
Oklahoma City, OK 73152
Contact: Larry Gales (405) 271-8056

OREGON
Oregon Emergency Response Commission
c/o State Fire Marshall
3000 Market Street Plaza
Suite 534
Salem, OR 97310
Contact: Ralph M. Rodia (503) 378-2885

PENNSYLVANIA
Bureau of Right-To-Know
Room 1503
Labor and Industry Building
7th & Forster Streets
Harrisburg, PA 17120
Contact: James Tinney (717) 783-2071

PUERTO RICO
Title III - SARA Section 313
Puerto Rico Environmental Quality Board
P.O. Box 11488
Santurce, PR 00910
Contact: SERC Commissioner (809) 722-0077

RHODE ISLAND
Department of Environmental Management
Division of Air and Hazardous Materials
291 Promenade Street
Providence, RI 02908
Contact: Martha Delaney Mulcahey (401) 277-2808

SOUTH CAROLINA
Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201
Contact: Ron Kinney (803) 734-5200

SOUTH DAKOTA
South Dakota Department of Water and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181
Contact: Lee Ann Smith (605) 773-3153

TENNESSEE
Tennessee Emergency Response Commission
Tennessee Emergency Management Agency
3041 Sidco Drive
Nashville, TN 37204
Contact: Lacy Suiter/Tom Durham (615) 252-3300
(800) 258-3300

TEXAS
Emergency Response Unit
Texas Water Commission
P.O. Box 13087 - Capitol Station
Austin, TX 78711-3087
Contact: David Barker (512) 463-8527

UTAH

Utah Hazardous Chemical Emergency Response Commission
Utah Division of Environmental Health
288 North 1460 West
P.O. Box 16690
Salt Lake City, UT 84116-0690
Contact: Neil Taylor

(801) 538-6121

VERMONT

Department of Health
60 Main Street
P.O. Box 70
Burlington, VT 05402
Contact: Dr. Jan Carney (Commissioner)

(802) 863-7281

VIRGIN ISLANDS

Department of Planning and Natural Resources
U.S. Virgin Islands Emergency Response Commission
Title III
Suite 231
Nisky Center
Charlotte Amalie
St Thomas, VI 00802
Contact: Gregory Rhymer

(809) 774-3320 ext. 169/170

VIRGINIA

Virginia Department of Waste Management
Monroe Building, 18th Floor
101 North 14th Street
Richmond, VA 23219
Contact: Wayne Halbleib

(804) 225-2513

WASHINGTON

Department of Ecology
Mail Stop PV-11
Olympia, WA 98504
Contact: John Ridgway

(206) 438-7252

WEST VIRGINIA

West Virginia Emergency Response Commission
West Virginia Office of Emergency Services
State Office Building, EB-80
Charleston, WV 25305
Contact: Bill Jopling

(304) 348-5380

WISCONSIN

Department of Natural Resources
P.O. Box 7921
Madison, WI 53707
Contact: Russ Dumst

(608) 266-9255

WYOMING

Wyoming Emergency Response Commission
Wyoming Emergency Management Agency
5500 Bishop Boulevard
Cheyenne, WY 82009
Contact: Brooke Hefner
Ed Usui (Executive Director)

(307) 777-7566

Appendix B
U.S. EPA Regional Section 313 Program Office Addresses and
Contact Individuals

Region I (CT,MA,ME,NH,RI,VT)

Dwight Peavey
Pesticides & Toxics Branch
U.S. EPA Region I (APT2311)
JFK Building
Boston, MA 02203
(617) 565-3230

Region II (NJ,NY,PR)

Nora Lopez (or Ellen Banner)
Pesticides & Toxics Branch
U.S. EPA Region II (MS240)
Woodbridge Avenue, Building 209
Edison, NJ 08837
(201) 906-6890

Region III (DC,DE,MD,PA,VA,WV)

Kurt Elsner
TSCA Enforcement Section
U.S. EPA Region III (3AM31)
841 Chestnut Street
Philadelphia, PA 19107
(215) 597-1260

Region IV (AL,FL,GA,KY,MS,NC,SC,TN)

Jill Perry
Pesticides and Toxic Substances Branch
U.S. EPA Region IV
345 Courtland St.
Atlanta, GA 30365
(404) 347-5014

Region V (IL,IN,MI,MN,OH,WI)

Dennis Wesolowski
Pesticides & Toxic Substances Branch
U.S. EPA Region V (5SPT-7)
230 South Dearborn Street
Chicago, IL 60604
(312) 353-5907

Region VI (AR,LA,NM,OK,TX)

Michael Nicar
Pesticides & Toxic Substances Branch
U.S. EPA Region VI (6TPT)
1445 Ross Avenue
Dallas, TX 75202-2733
(214) 655-7244

Region VII (IA,MO,NE,KS)

Ed Vest
Congressional & Intergovernmental Liaison
U.S. EPA Region VII (CIGL)
726 Minnesota Avenue
Kansas City, KS 66101
(913) 236-2806

Region VIII (CO,MT,ND,SD,UT,WY)

Dianne Groh
Toxic Substances Branch
U.S. EPA Region VIII (8AT-TS)
999 18th Street
Denver, CO 80202-2405
(303) 293-1735

Region IX (AZ,CA,HI,NV,AS,GU)

Kathleen Goforth
Pesticides and Toxics Branch
U.S. EPA Region IX (A-4-3)
1235 Mission Street
San Francisco, CA 94103
(415) 556-5387

Region X (AK,ID,OR,WA)

Philip Wong
Pesticides & Toxic Substances Branch
U.S. EPA Region X (AT083)
1200 Sixth Avenue
Seattle, WA 98101
(206) 442-4016

Emergency Planning and Community Right-to-Know Document Distribution Center
U.S. Environmental Protection Agency
P.O. Box 12505
Cincinnati, OH 45212

Appendix C

Bibliography of Materials on the Emergency Planning and Community Right-to-Know Act Risk Communication and Waste Minimization

**Adapted from bibliography prepared by
the Emergency Planning & Community Right-to-Know Information Hotline
for the
U.S. Environmental Protection Agency**

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Emergency Planning and Community Right-to-Know Act Resources

Unless otherwise noted, all of the following materials are available by written request to:

The Emergency Planning and Community Right-to-Know
Information Hotline
U.S. Environmental Protection Agency
OS-120
401 M Street, SW
Washington, D.C. 20460

• EPCRA General Information

"Superfund Amendments and Reauthorization Act of 1986" (P.L. 99-499)

The Congressionally signed law from which EPA was given the authority to develop the Title III regulations.

"Emergency Planning and Community Right-to-Know (Title III) Factsheet" August 1988 (OSWER-88-003)

A 9-page summary of the Emergency Planning and Community Right-to-Know Act of 1986. This document includes the requirements of each section, the facilities covered by each section and a chart of key dates for EPCRA.

"Chemicals in Your Community, A Citizen's Guide to the Emergency Planning and Community Right-to-Know Act" September 1988 (OSWER-88-002)

This booklet is intended to provide a general overview of the Title III requirements and benefits for all audiences. Part I of the booklet describes the provisions of Title III and Part II describes more fully the authorities and responsibilities of the groups of people affected by the law.

"It's Not Over in October; A Guide for Local Emergency Planning Committees; Implementing the Emergency Planning and Community Right-to-Know Act of 1986" September 1988 (OSWER-88-004)

The purpose of this pamphlet is to offer suggestions to Local Emergency Planning Committees (LEPCs) to help them implement Title III. The pamphlet describes the function of LEPCs and provides ideas and examples based on past LEPC, EPA and Federal Emergency Management Agency experiences.

"Comprehensive List of Chemicals Subject to Reporting under the Act (Title III List of Lists)" December 1988 (EPA 560/4-88-003)

A consolidated list of chemicals subject to reporting under Title III of SARA. This document lists by CAS number the extremely hazardous substances with their threshold planning quantities, the CERCLA hazardous substances with their reportable quantities, the Section 313 toxic chemicals and the RCRA Hazardous Wastes from the P and U lists.

"Title III: What It Means To You" 1987

This brochure briefly explains the main provisions of Title III and tells how citizens can participate in and obtain information from their LEPCs.

Source:

U.S. Environmental Protection Agency
Attention: Title III Coordinator
841 Chestnut Building
Philadelphia, PA 19107

"What It Means to You: A Videotape on the Emergency Planning and Community Right-to-Know Act," October 1989

"What It Means to You" is a 15-minute videotape that explains to businesses and community members actions they can take to learn about chemicals in the community and steps they can take to plan for the possibility of chemical accidents. Viewers also learn how to obtain information about any routine releases of toxic chemicals that may take place.

This videotape is available by written request to:

Color Film Corporation
Video Division
770 Connecticut Avenue
Norwalk CT 06854
(800) 882-1120
3/4" \$28.95; Beta I and Beta II \$20.65; VHS - \$21.50

"The Emergency Planning and Community Right-to-Know Act: A Framework for Action"

Developed jointly by the EPA, U.S.D.A.'s Extension Service, and Oklahoma State University's Cooperative Extension Service, this video aids rural public agencies in learning about and implementing risk management practices. The video stresses that small communities can better manage risk if they become involved with their Local Emergency Planning Committees and use the information available under the Act.

Other materials have been prepared as part of the Extension Services' on-going training on risk management.

This video and other training materials are available by contacting:

Department of Agricultural Communications
Public Information Building
Oklahoma State University
Stillwater, OK 74078-0222
(405) 744-6853

Video Number: VT 249

"Successful Practices in Title III Implementation"

1. (OSWER-88-006.1), January 1989
2. (OSWER-88-006.2), August 1989
3. (OSWER-88-006.3), December 1989

This is a series of EPA bulletins providing examples of Title III programs and practices that are innovative or have proven to be effective. the purpose of these bulletins is to share information on successful practices with Local Emergency Planning Committees, State Emergency Response Commissions, fire departments, and Title III implementing agencies throughout the country with the hope that such information will prove to be useful to other State Emergency Response Commissions and Local Emergency Planning Committees as their programs develop and evolve.

The Information Resource Directory contains listings and descriptions of environmental information resources ranging from EPA and non-EPA information systems (computers, software, and databases), contact individuals by subject area, documents, newsletters and periodicals, and interest groups.

This document is available by written request or by contacting:

National Technical Information Service

5285 Port Royal Road

Springfield, VA 22161

(703) 487-4650

Order Number: PB90-132192 ACS

Cost: \$29.50

• Emergency Planning and Notification (Section 301 304) Resources

"Extremely Hazardous Substances List and Threshold Planning Quantities; Emergency Planning and Release Notification Requirements;" Final Rule FR April 22, 1987 (OSWER-042287)

This Federal Register contains the final rule on Sections 302 and 304 of Title III, the emergency planning and emergency notification sections. This document does not contain the extremely hazardous substances list; that list is an appendix to this Federal Register and is distributed separately.

"Designation of Extremely Hazardous Substances as CERCLA Hazardous Substances" Proposed Rule January 23, 1989 (OSWER-012389)

This Federal Register proposed to designate 232 extremely hazardous substances listed pursuant to Title III of SARA as hazardous substances under CERCLA. Currently, 134 extremely hazardous substances are already CERCLA hazardous substances. This proposed rule is intended to reduce potential confusion concerning different SARA Title III and CERCLA requirements by ensuring consistent procedures for reporting releases of all extremely hazardous substances.

"Extremely Hazardous Substance List" March 1, 1988 (OSWER-EHS-1)

The complete list of extremely hazardous substances as defined under Section 302 of Title III. This document lists the chemicals alphabetically and by CAS number. The reportable quantity and threshold planning quantity of each chemical is also listed.

"List of State Emergency Response Commissions/Title III Contacts" May 1990

The EPA's revised list of State Emergency Response Commissions contacts. The name, title, address and phone number of the contacts for each state as well as some U.S. territories are listed.

"Guide to Exercises in Chemical Emergency Preparedness Programs" May 1988 (OSWER-88-006)

The purpose of this guide is to provide local and state officials with a self-contained manual for use in conducting a wide range of chemical emergency exercises. It includes three technical assistance bulletins (numbers one, two, and three) published by the EPA:

1. Introduction to Exercises in Chemical Emergency Preparedness Programs
2. A Guide to Planning and Conducting Table-Top Exercises
3. A Guide to Planning and Conducting Field Simulation Exercises

"Hazardous Materials Emergency Planning Guide" March 1987 (NRT-1)

The purpose of this guide is to assist communities in planning for hazardous materials incidents. This guide outlines the development of planning teams and hazardous materials emergency plans. It also addresses approaches to plan appraisal and continuing planning.

"Criteria for Review of Hazardous Materials Emergency Plans" May 1988 (OSWER-NRT-1A)

This document contains a set of criteria which may be used by the Regional Response Teams (RRT) under the provisions of Section 303(g) of the Emergency Planning and Community Right-to-Know Act of 1986.

"Technical Guidance for Hazards Analysis" December 1987 (OSWER-88-001)

This document provides technical assistance to local emergency planning committees in assessing the lethal hazards related to airborne releases of extremely hazardous substances. This guide should be used with NRT-1.

"Handbook of Chemical Hazard Analysis Procedures," FEMA/EPA/DOT.

This handbook expands "NRT-1" and "Technical Guidance for Hazardous Analysis" by including information on explosive, flammable, reactive and otherwise dangerous chemicals. By introducing these additional methodologies on how to plan for these and other dangerous chemicals, this handbook serves as a stepping stone from "NRT-1" and "Technical Guidance for Hazardous Analysis" to a more comprehensive approach to emergency planning.

This document is available by written request to:
Federal Emergency Management Agency
Publications Department
500 C Street, S.W.
Washington, D.C. 20472

"Computer Systems for Chemical Emergency Planning," (Technical Assistance Bulletin 5), U.S. EPA, September 1989, (OSWER-89-005)

This bulletin was developed to assist local planners in identifying computer systems applicable to SARA Title III. The bulletin provides a checklist to help SERCs and LEPCs identify computer systems applicable for local planning.

"Directory of Federal Information Resources for Emergency Planning and Response," National Response Team, August 1989.

This document represents the first step at creating a comprehensive inventory guide to the Federal Government's information sources for emergency planning and response. The Directory covers a broad array of types of information ranging from computer systems and databases to audio-visual material and training documents.

"Tort Liability in Emergency Planning" (Technical Assistance Bulletin 7), January 1989 (OSWER-89-007)

This document is technical assistance bulletin developed to assist interested persons in various emergency planning, preparedness or prevention activities. This bulletin, developed by Dr. John Pine of Louisiana State University, addresses concerns raised by many members of local emergency planning committees about the liability that may arise from their planning and administrative duties. Liability and protection from liability is discussed from the Federal and State employee perspective.

"1987 Emergency Response Guidebook" September 1987

This guidebook lists over 1,000 hazardous materials by name and DOT number. General hazards and isolation distances for these materials are also discussed.

This document is available by written request to:
Office of Hazardous Materials Transportation
Attn: DMH-50
Research and Special Projects Administration/DOT
400 7th Street, SW
Washington, DC 20590

• Reporting Requirements for Material Safety Data Sheets, Emergency and Hazardous Chemical Inventory Forms

"Emergency and Hazardous Chemical Inventory Forms and Community Right-to-Know Reporting Requirements"; Final Rule; FR October 15, 1987 (OSWER-101587)

This is the final rule on Sections 311 and 312 of Title III, the community right-to-know section. This Federal Register contains the MSDS and inventory reporting requirements, the Tier I and Tier II forms and instructions for these forms.

"Emergency and Hazardous Chemical Inventory Forms and Community Right-to-Know Reporting Requirements; Implementation of Reporting Requirements for Indian Lands; Proposed Rule"; FR March 29, 1989 (OSWER-032989)

This is the proposed rule on Section 311 and 312 of Title III, the community right-to-know section. The Federal Register proposes reporting thresholds that would apply on or before October 17, 1989, for manufacturing facilities, September 24, 1990, for non-manufacturing facilities, and April 30, 1989 for the construction industry.

"Emergency and Hazardous Chemical Inventory Forms and Community Right-to-Know Reporting Requirements;" Interim Final Rule and Supplemental Notice to Proposed Rule"; FR October 12, 1989 (OSWER-081289)

This is an interim final rule on Section 311 and 312 of Title III, the community right-to-know section. The Federal Register establishes reporting thresholds that would apply on or before October 17, 1989, for manufacturing facilities, September 24, 1990, for non-manufacturing facilities, and April 30, 1991 for the construction industry.

"Community Right-to-Know and Small Business" September 1988 (OSWER-88-005)

This illustrated brochure is directed toward businesses that may have requirements under Sections 311 and 312 of Title III as a result of the OSHA expansion of the Hazard Communication Standard to include non-manufacturing businesses. The brochure provides background information on Title III and the community right-to-know reporting requirements (Sections 311 and 312). It describes the requirements for small businesses and helps them determine if they need to comply.

• **Toxic Chemical Release Inventory (Section 313) Resources**

"Toxic Chemical Release Reporting; Community Right-to-Know"; Final Rule; FR February 16, 1988 (OTS FR 021688)

The final rule on Section 313 of Title III, toxic chemical release reporting. This Federal Register contains the toxic chemical release inventory reporting form, form R. It also contains a list of the Section 313 toxic chemicals.

"The Emergency Planning and Community Right-to-Know Act: Section 313 Release Reporting Requirements" December 1989 (EPA 560/4-90-002)

This 24 page brochure alerts businesses to their reporting obligations under Section 313 and helps them determine whether their facility is required to report. The brochure contains the Section 313 EPA Regional contacts, the Section 313 toxic chemical list and a description of the Standard Industrial Classification (SIC) codes subject to Section 313. This brochure was originally distributed to every manufacturing facility in the U.S.

"Supplier Notification Requirements" (EPA 560/4-90-006)

This pamphlet assists chemical suppliers who may be subject to the supplier notification requirements under Section 313 of Title III. The pamphlet explains the supplier notification requirements, gives examples of situations which require notification, describes the trade secret provision, lists the Regional Section 313 contacts and contains a sample notification.

"Toxic Chemical Release Inventory Reporting Package for 1989" January 1990 (EPA 560/4-90-001)

Includes the revised 1989 form R and Instructions document, Questions and Answers document, Magnetic Media Submission Instructions, and the Section 313 Final Rule all in one document.

"Toxic Chemical Release Inventory Reporting Form R and Instructions" January 1990 (EPA 560/4-90-007)

Step by step expanded instructions for completing the revised 1989 toxic chemical release inventory reporting form R. This document includes a completed sample form R and a list of the state 313 contacts as well as a copy of form R.

"Toxic Chemical Release Inventory Questions and Answers" January 1990 (EPA 560/4-90-003)

This document has been developed to expedite facility reporting and to provide additional explanation of the reporting requirements under Section 313 of Title III. It supplements the instructions for completing Form R.

"Toxic Chemical Release Inventory Magnetic Media Submission Instructions" January 1990 (EPA 560/7-90-008)

This document provides specifications for the use of magnetic media to submit EPA Form R. The structural record specifications for each section of Form R are presented. These specifications must be followed exactly for the EPA to accept the magnetic media submission.

"Estimating Releases and Waste Treatment Efficiencies for the Toxic Chemical Release Inventory Form" December 1987 (EPA 560/4-90-009)

This manual provides an overview of the general methods that may be used to estimate releases subject to the reporting requirements. Examples of the application of most of the methods discussed are included. Sources of additional information release estimation are also provided.

This document is available by written request to:

Superintendent of Documents
Government Printing Office
Washington, DC 20402-9325 202-783-3238
GPO stock number: 055-000-00270-3
\$11.00

or is available free of charge by written request to:

Section 313 Document Distribution Center
P.O. Box 12505
Cincinnati, OH 45212
Order Number: EPA 560/4-88-002

"Industry Specific Technical Guidance Documents for Estimating Releases" January July 1988

These documents were developed to assist specific industries with completion of Part III (Chemical Specific Information) of the toxic chemical release inventory reporting Form R. The documents include general information on the toxic chemicals used and process wastes generated, along with examples of release estimate calculations.

Electroplating Operations
January 1988 (EPA 560/4-88-004g)

Rubber Paperboard Production
February 1988 (EPA 560/4-88-004k)

Presswood & Laminated Wood Products Manufacturing
March 1988 (EPA 560/4-88-004i)

Leather Tanning and Finishing Processes
February 1988 (EPA 560/4-88-004l)

Wood Preserving
February 1988 (EPA 560/4-88-004p)

Semiconductor Manufacture
January 1988 (EPA 560/4-88-004e)

Roller, Knife and Gravure Coating Operations
February 1988 (EPA 560/4-88-004j)

Printing Operations
January 1988 (EPA 560/4-88-001b)

Spray Application of Organic Coatings
January 1988 (EPA 560/4-88-004d)

Monofilament Fiber Manufacture
January 1988 (EPA 560/4-88-004a)

Electrodesposition of Organic Coatings
January 1988 (EPA 560/4-88-004c)

Textile Dyeing
February 1988 (EPA 560/4-88-004h)

Rubber Production and Compounding
March 1988 (EPA 560/4-88-004g)

Formulating Aqueous Solutions
March 1988 (EPA 560/4-88-004f)

"Toxic Chemical Release Inventory System Physical Design (Appendix C)" U.S. EPA Information Management Division

This document provides details regarding the computer edits and verification procedures established by the U.S. EPA for entering Form R information into the Toxics Release Inventory database.

This document is available by written request or by contacting:

Regional and State Programs Section (TS-779)
Office of Toxic Substances
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460 (202) 382-2249

"The Toxics-Release Inventory: A National Perspective," June 1989 (EPA 560/4-89-005)

A compilation of information on the release of toxic chemicals by manufacturing facilities in 1987. The report summarizes the first year of Toxics Release Inventory data, and analyzes where toxic chemical are being released, along with the amounts and types of releases.

This document is available through written request or by contacting:

Superintendent of Documents
Government Printing Office
Washington, D.C. 20402-9325
202-783-3238
GPO stock number: 055-000-00290-8
\$14.00

"The Toxics-Release Inventory: Executive Summary," June 1989 (EPA/560/4-89-006)

This document is the Executive Summary to the "Toxics-Release Inventory: A National Perspective."

This Document is available through written request or by contacting:

Superintendent of Documents
Government Printing Office
Washington, D.C. 20402-9325
202-783-3238
GPO Stock Number 055-000-00289-4
\$1.50

"Toxic Release Inventory 1987"

This magnetic tape contains the complete listing of facilities and information submitted to the EPA for the first reporting year (1987) of the Toxic Chemical Release Inventory.

This tape is available by written request or by contacting:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
703-487-4650
Order number: PB89-186068
\$1770 at 1600 BPI density, and
\$890 at 6250 BPI density

"Toxic Release Inventory 1987: Reporting Facilities Names and Addresses"

This is a directory of the 1987 Toxic Release Inventory reporting facilities. the tape contains the following information for each reporting facility: facility name and address, the public contact and phone number, SIC codes, Dunn and Bradstreet number, also parent company name and parent company Dunn and Bradstreet number.

This tape is available by written request to:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
703-487-4650
Order number: PB89-186118
\$220 at 1600 or 6250 BPI density

"The Toxic Release Inventory: Meeting the Challenge" April 1988

This 19 minute overview videotape is designed to explain toxic release reporting to plant facility managers and others who need to know about the requirement. State governments, local Chambers of Commerce, labor organizations, public interest groups, universities, and others may also find the video program useful and informative.

To purchase, write or call:

Color Film Corporation
Video Division
770 Connecticut Ave.
Norwalk, CT 06854
800-882-1120

3/4 inch = \$30.75; Beta = \$22.95; VHS = \$22.00

"Common Synonyms for Chemicals Listed Under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986" November 1989 (EPA 560/4-90-005)

This glossary is divided into two parts. Part I is a listing by CAS number of each Section 313 toxic chemical followed by common synonyms for that chemical. Part 2 contains names and synonyms in an alphabetical listing. This glossary enables the trade and common names of a substance to be matched to that substance's CAS number or to other synonyms.

"Toxic Release Inventory State Data"

Diskettes containing selected information by state. The following information reported on Form R is included on each state's diskette:

- name, location and type of business
- Off-site locations to which facility transfers toxic chemicals in waste
- Quantity of the chemical entering each environmental medium; air, land, and water annually

The state files are available in 5 1/4 high density (1.2Mb) diskettes compatible with the 1 MB/DC-AT microcomputer, in either dBase III or Lotus 1-2-3 formats.

These diskettes are available by written request or by contacting:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
703-487-4650

STATE	LOTUS 1-2-3		dBase III	
	ORDER NUMBER	PRICE	ORDER NUMBER	PRICE
COMPLETE SET	PB89-199541	\$1525	PB89-199004	\$1525
Alabama	PB89-199558	\$50	PB89-199020	\$50
Alaska	PB89-199566	\$50	PB89-199012	\$50
American Samoa	PB89-199582	\$50	PB89-199038	\$50
Arizona	PB89-199590	\$50	PB89-199053	\$50
Arkansas	PB89-199574	\$50	PB89-199046	\$50
California	PB89-199608	\$75	PB89-199061	\$75
Colorado	PB89-199616	\$50	PB89-199079	\$50
Connecticut	PB89-199624	\$50	PB89-199087	\$50
Delaware	PB89-199632	\$50	PB89-199095	\$50
Florida	PB89-199640	\$50	PB89-199103	\$50
Georgia	PB89-199657	\$50	PB89-199111	\$50
Hawaii	PB89-199665	\$50	PB89-199129	\$50
Iowa	PB89-199673	\$50	PB89-199137	\$50
Idaho	PB89-199681	\$50	PB89-199145	\$50
Illinois	PB89-199699	\$50	PB89-199152	\$50
Indiana	PB89-199707	\$50	PB89-199160	\$50
Kansas	PB89-199715	\$50	PB89-199178	\$50
Kentucky	PB89-199723	\$50	PB89-199186	\$50
Louisiana	PB89-199731	\$50	PB89-199194	\$50
Maine	PB89-199764	\$50	PB89-199210	\$50
Massachusetts	PB89-199749	\$50	PB89-199202	\$50
Maryland	PB89-199756	\$50	PB89-199277	\$50
Michigan	PB89-199772	\$50	PB89-199228	\$50
Minnesota	PB89-199780	\$50	PB89-199236	\$50
Mississippi	PB89-199806	\$50	PB89-199251	\$50
Missouri	PB89-199798	\$50	PB89-199244	\$50
Montana	PB89-199814	\$50	PB89-199269	\$50
North Carolina	PB89-199822	\$50	PB89-199285	\$50
North Dakota	PB89-199830	\$50	PB89-199293	\$50
Nebraska	PB89-199848	\$50	PB89-199301	\$50
New Hampshire	PB89-199855	\$50	PB89-199319	\$50
New Jersey	PB89-199863	\$50	PB89-199327	\$50
New Mexico	PB89-199871	\$50	PB89-199335	\$50
Nevada	PB89-199889	\$50	PB89-199343	\$50
New York	PB89-199897	\$50	PB89-199350	\$50
Ohio	PB89-199905	\$75	PB89-199368	\$75
Oklahoma	PB89-199913	\$50	PB89-199376	\$50
Oregon	PB89-199921	\$50	PB89-199384	\$50
Pennsylvania	PB89-199939	\$75	PB89-199392	\$50
Puerto Rico	PB89-199947	\$50	PB89-199400	\$50
Rhode Island	PB89-199954	\$50	PB89-199418	\$50
South Carolina	PB89-199962	\$50	PB89-199426	\$50
South Dakota	PB89-199970	\$50	PB89-199434	\$50
Tennessee	PB89-199988	\$50	PB89-199442	\$50
Texas	PB89-199996	\$75	PB89-199459	\$75
Utah	PB89-200000	\$50	PB89-199467	\$50
Vermont	PB89-200034	\$50	PB89-199491	\$50
Virginia	PB89-200018	\$50	PB89-199475	\$50
Virgin	PB89-200026	\$50	PB89-199483	\$50
Washington	PB89-200042	\$50	PB89-199509	\$50
West Virginia	PB89-200067	\$50	PB89-199525	\$50
Wisconsin	PB89-200059	\$50	PB89-199517	\$50
Wyoming	PB89-200075	\$50	PB89-199533	\$50

- **Trade Secrecy Provisions**

"Trade Secrecy Claims for Emergency Planning and Community Right-to-Know Information; and Trade Secret disclosures to Health Professionals; Final Rule"; FR July 1988 (OSWER-72988)

The final rule containing the procedures for claims of trade secrecy, for EPA's handling of such claims, for submission and handling of petitions requesting reviews of trade secrecy claims and for disclosure to health professionals of information claimed as a trade secret. This Federal Register contains the substantiation form and instructions.

- **Prevention Resources**

"Review of Emergency Systems: Final Report to Congress" June 1988 (OSWER-305B)

This document details the approach, findings and recommendations of the EPA's review of emergency systems as required under Section 305(b) of SARA Title III. This report documents the surveys, evaluations, site visits and expert panels which contributed to the Review.

"Why Accidents Occur: Insights from the Accident Release Program" (Technical Assistance Bulletin 8), U.S. EPA, July 1989, (OSWER-89-008.1)

This bulletin focuses on the causes of accidents from the information collected under the Accidental Release Information Program. The purpose of the bulletin is to present insights taken from the program to LEPCs to help in communications with local facilities.

- **Enforcement of EPCRA**

"When All Else Fails! Enforcement of the Emergency Planning and Community Right-to-Know Act"

This 12 page pamphlet is self-help manual for LEPCs. This pamphlet contains information on State and local authority to request information from facilities and provides tips to help Local Emergency Planning Committees ensure that facilities covered by SARA Title III are complying with the law. The material presented outlines the enforcement authorities granted to citizens, local governments, States, and EPA.

• **Waste Minimization Resources**

Waste minimization or reduction means reducing hazardous waste at its source, before it is generated. The following publications promote waste reduction as a general policy.

"Cutting Chemical Wastes: What 29 Organic Chemical Plants are Doing To Reduce Hazardous Wastes," By David J. Sarokin, Warren R. Muir, Catherine G. Miller, and Sebastian R. Sperber, New York, NY: INFORM, 1985.

Case studies explore some of the methods used by organic chemical plants to reduce hazardous waste at its source. Hazardous waste in this case refers not only to solid wastes but also to air emissions and wastewater discharges. The book's purpose is to "spur heightened initiatives and broader consideration by government and business of how waste reduction can be accelerated."

Source:

INFORM, Inc.
381 Park Avenue South
New York, NY 10016
212-689-4040
\$47.50.

"Promoting Hazardous Waste Reduction: Six Steps States Can Take," Warren R. Muir and Joanna Underwood, New York, NY: INFORM, 1987.

This report identifies six organizational initiatives that State governments can take to promote reduction of hazardous waste at its source before it is generated.

Source:

INFORM, Inc.
381 Park Avenue South
New York, NY 10016
212-689-4040
\$3.50.

"Waste Minimization Opportunity Assessment Manual," July 1988 (EPA/625/7-88/003)

This manual describes the recommended procedure for identifying waste minimization applications.

This manual is available by written request to:

ORD Publications Office
Center for Environmental Research Information
26 West Martin Luther King Drive
Cincinnati, OH 45268

• **Risk Communication and Community Awareness Resources**

"Explaining Environmental Risk" November 1986

This document provides tips on communicating environmental risks to both the media and the general public in an effective and understandable way. The booklet was written by Peter Sandman, a noted expert on risk communication.

"Seven Cardinal Rules of Risk Communication" April 1988

This brochure provides guidelines which should be used to adequately communicate environmental risk.

Toxic Chemical Release Inventory Risk Screening Guide (Version 1.0), U.S. EPA Office of Toxic Substances, Volumes 1 and 2, EPA 560/2-89-002, July 1989.

The Risk Screening Guide provides a framework for interpreting and explaining environmental pollution, exposures, and health risks to the general public, especially at the local or sub-state level. The system uses Section 313 information and other readily available information to generate a qualitative (low, moderate, high) expression of risk for a given geographic area.

"Report of a Conference on Risk Communication and Environmental Management" (Technical Assistance Bulletin 4), U.S. EPA, May 1988.

This bulletin contains a summary of the presentations presented at a risk communication and environmental management conference at Temple University. The bulletin presents opinions and judgements from the "experts" in the field and do not necessarily reflect EPA policy.

"Risk Communication About Chemicals In Your Community: A Manual For Local Officials," U.S. EPA/FEMA, (EPA 230/09-89-66).

This workshop manual will help local officials learn how to respond to public questions about chemical risks. This manual also contains additional assistance and information about hazardous materials.

Toxic and Hazardous Chemicals, Title III and Communities: An Outreach Manual for Community Groups, U.S. EPA Office of Pesticides and Toxic Substances, September 1989, EPA 56-1-89-002.

A three part handbook for state and local government officials, LEPCs, and other community groups involved in Title III. Part I discusses planning a communication program. Part II suggests ways to get and keep people involved in community right-to-know activities. Part III is a how-to-do-it section offering guidance on specific tasks such as holding a public meeting, giving a speech, or writing a press release.

"The Process of Risk Assessment and Risk Management," New York, NY: U.S. EPA, 1987.

The four major steps in a risk assessment are summarized, with examples from an actual assessment and explanations of the most technical terms. Risk management is briefly outlined.

Source:

U.S. Environmental Protection Agency
Environmental Assistance Division (TS-799)
401 M Street, SW
Washington, DC 20460
(202) 382-3442.

"Improving Dialogue With Communities: A Risk Communication Manual for Government" By B. Hance, et al., New Jersey Department of Environmental Protection, January 1988.

This document explains how government agencies can generate two-way communication with communities by emphasizing understanding the community's point of view; earning trust; releasing information; interacting with the community (especially at public meetings); and explaining risk.

Source:

New Jersey Department of Environmental Protection,
Division of Science and Research
Risk Communication Unit, CN 409
Trenton, NJ 08625
609-984-6072

"Risk Assessment, Management, Communication: A Guide to Selected Sources," U.S. EPA, 1987 (EPA IMSD/87-002)

This bibliography includes many journal articles and some monographs on risk assessment, management, and communication, and includes a section on "Informing the Public."

This document is available by written request to:

U.S. Environmental Protection Agency
Office of Information Resources Management and Office of Toxic Substances
Washington, DC 20460

• Other Publications

"The Emergency Planning and Community Right-to-Know Act: A Status of State Actions - 1989"
April 1989

The purpose of this document is to report the status of State Title III program and focuses on how States have addressed key issues, including funding liability of volunteers, and enforcement.

This report is available by sending a pre-paid written request to:

National Governors Association
Hall of the States
444 North Capitol Street
Suite 250
Washington, DC 20001-1572
\$15.00

"Title III Community Awareness Workbook" January 1988

Written for the chemical industry, this guide examines communication issues that chemical companies must consider in light of Title III, including risk communication methods, community relations, and working with the media.

This document is available by written request or by contacting:

Chemical Manufacturers Association
2501 M Street NW
Washington, DC 20037
202-887-1100
Members: \$17.50 Nonmembers: \$26.25

"Chemicals, The Press, and The Public: A Journalist Guide To Reporting on Chemicals in the Community," A Journalist Guide to Reporting on Chemicals in the Community, 1989.

This guidebook gives journalists insights into reporting on the information disclosed under Title III. It reviews the key provisions of Title III and methods to obtain Title III related chemical information.

Source:

Environmental Health Center
National Safety Council
1050 17th Street, N.W., suite 770
Washington, D.C. 20036

"Community Guide to Title III" 1988

Questions and answers that outline the basic provisions of Title III in this handout for chemical companies to distribute in their communities.

Source:

Chemical Manufacturers Association
2501 M Street NW
Washington, DC 20037;
202-887-1100
\$.50 nonmembers, \$.35 members

"Monsanto/Title III Community Videotape" 1987

This 20 minute video written to aid industry in complying with Title III discusses the four main provisions of Title III and depicts community members with environmental concerns, community organizations, local officials, and plant managers all working together to implement the law.

This document is available by written request or by contacting:

Environmental and Community Relations Manager
Monsanto Company, G4WF
800 North Lindbergh Boulevard
St. Louis, MO 63167.

"Understanding MSDSs: Your Right To Know," Massachusetts Department of Labor and Industries, no date.

This pamphlet explains exactly what are Material Safety Data Sheets (MSDSs), the fact sheets on specific chemicals prepared by manufacturers, that will be available to the public under Title III. This tabloid-sized pamphlet explains how to interpret them section by section, and defines some frequently encountered terms.

Source:

Massachusetts Department of Labor and Industries
Division of Occupational Hygiene
Right to Know Program
1001 Watertown St.
West Newton, MA 02165
617-969-7177

Title III of SARA: A Guide for Massachusetts Municipalities and their Local Emergency Planning Committees, Massachusetts Department of Environmental Protection, June 1988.

An envelope-size eight-page brochure targeted at LEPC members describes Title III of SARA, the requirements of §301-303, §304, §311-312, and §313, and the roles of LEPCs in overseeing Title III activities. Also included are a list of contact individuals (with the SERC, and state and federal Title III and emergency response agencies), SARA dates to remember, and emergency telephone numbers.

An Employer's Guide to Title III of SARA: Emergency Planning and Community Right-to-Know Act, Massachusetts Department of Environmental Protection, April 1988.

An envelope-size eight-page brochure targeted at employers in the manufacturing sector describes Title III of SARA, the requirements of §301-303, §304, §311-312, and §313, and how to determine if you are subject to filing requirements under Title III. Also included are a list of state SERCs with which to file MSDSs and emergency notifications, a resource list of individuals at state and federal agencies to contact with questions (organized by subject), SARA dates to remember, and emergency telephone numbers.

"Chemical Advisories," U.S. Environmental Protection Agency, 1984-1986.

This series of fact sheets warns manufacturers, employees, and homeowners of the hazards of the following substances: 2-nitropropane; used motor oil (in English and Spanish); nitrosamines; p-tert-Butyl benzoic acid; 4,4'-methylene bis(2-chloroaniline); toluenediamines; and used oil burned in space heaters.

Source:

U.S. Environmental Protection Agency
Office of Toxic Substances (TS-799)
401 M Street SW
Washington, DC 20460
202-554-1404

"High Tech and Toxics: A Guide for Local Communities" By Susan Sherry, Washington, DC. Golden Empire Health Planning Center, 1985.

The electronics manufacturing and semiconductor industry uses a variety of toxic substances. This manual examines problems of pollution in the high tech industry and provides a detailed guide to citizen involvement in evaluating and regulating these and other local health hazards.

Source:

National Center for Policy Alternatives
2000 Florida Avenue, NW
Washington, DC 20009
202-387-6030
\$25.95.

"Environmental Disease" By David P. Rall, Bethesda, MD, National Institutes of Health, 1982.

An overview of how scientists study the link between chemicals and health effects and what they have learned is presented in general lay terms. The issue of animal testing receives special attention.

Source:

National Institutes of Health News Branch
National Institutes of Health
Building 10, Room 5C305
Bethesda, MD 20892.

"Toxicology for the Citizen, 2nd ed." By Alice E. Marczewski and Michael Kamrin, East Lansing, MI: Michigan State University, Center for Environmental Toxicology, 1987. (Funded in part by the Charles Stewart Mott Foundation)

This booklet explains in lay terms the science of toxicology, describing factors that determine toxicity, how toxicity is measured, and how standards for exposure are set.

Source:

Center for Environmental Toxicology
C231 Holden Hall
Michigan State University
East Lansing, MI 48824
\$1.00

"Toxics in the Air" by Richard A. Liroff. Washington, DC: The Conservation Foundation, 1987.

One of the Foundation's Issue Reports, this monograph summarizes the risks of indoor and outdoor air pollution and describes Federal, State, and local programs to reduce pollution. The Foreword explains that the emphasis is on "focusing attention and remedial action on where the greatest risks occur. This requires paying greater attention both to reducing indoor exposures and to preventing industrial accidents."

Source:

The World Wildlife Federation and Conservation Foundation
Publications Department-86
P.O. Box 4866
Hampden Post Office
Baltimore, MD, 21211
\$13.00 prepaid plus \$1.00 shipping.

"Strategies for Explaining Very Small Risks in a Community Context" By A. Fisher et al., The Air and Waste Management Association, 1988.

This paper, prepared for Air Pollution Control Association's 1988 meeting, discusses risk communication within communities.

Source:

Air and Waste Management Association
P.O. Box 2861
Pittsburgh, PA 15230
412-232-3444
Paper number 88-120.2
Members \$5.00, non-members \$10.00

"The Community Partnership: A Hazardous Materials Management Planning Guide" Chicago, IL: The National Safety Council, 1987.

This guide discusses the formation of Local Emergency Planning Committees and sets out the steps a Committee must take to formulate an Emergency Preparedness Plan, as mandated by Title III. Separate sections address participation in such Committees from industry's point of view, from government's point of view, and from the point of view of a partnership between the public and private sectors.

Source:

National Safety Council
444 North Michigan Avenue
Chicago, IL 60611-3991
312-527-4800
\$7.00 members, \$8.75 non-members.

"The Toxic 500," National Wildlife Federation, 1989

The report ranks the top 500 toxic chemical emitters reporting to EPA on the 1987 Toxic Release Inventory. It gives the facility name, city, county, state and zip code of emitters. The report also ranks the top 100 emitters in 7 other categories and provides known health effects of various toxic chemicals.

This report is available through written request or by contacting:

The National Wildlife Federation
1400 16th Street SW
Washington, D.C. 20036 800-432-6564
Item number: 79965
\$25 non-members, \$13.50 members

"A Who's Who to American Toxic Air Polluters," National Resource Defence Council (NRDC), 1989

This report lists emitters of 11 chemical that have been identified as probable carcinogens to the air. It provides a listing of facilities and the amount of the chemical emitted in 1987. The report also provides information on the health effects and common uses of the 11 probable carcinogens.

This document is available through written request or by contacting:

National Resource Defense Council
1300 New York Ave, NW
Washington, D.C. 20005 202-783-7800
\$25.00

"The Chemicals Next Door" USA Today July 1 August 3, 1989.

A series of articles presented release information from calendar year 1987. The articles highlighted top emitting facilities, rank of states according to quantity of various releases, etc.

Available from:
USA Today
Back Issues Department
P.O. Box 4179
Washington, DC 20904
\$6

"Toxic Chemicals: Information is the Best Defense" Sacramento, CA: League of Women Voters of California, 1986. (Funded by the BKK Corporation)

A two-part, award-winning documentary, this videotape with accompanying handbook shows why it is important for citizens and local officials to know about the chemicals being used in their communities. Part I, "Who Needs to Know," gives an overview of the problems posed by toxics; Part II, "Developing a Community Right to Know Law," shows how people in one community worked together to create a model local ordinance. Available on videocassette, each part 26 minutes.

Source:
Bullfrog Films, Inc.
Oley, PA 19547
1-800-543-FROG
Purchase: \$95.00/part
Rental: \$30.00/parts I and II

"Chemical Risk Communication: Preparing for Community Interest in Chemical Release Data" October 1988

This handbook, prepared by the American Chemical Society, provides a basic understanding of risk assessment concepts and risk communication techniques that can be used as a framework when responding to questions from the public about releases of chemicals to the environment. It is designed to help local public health officials and other local leaders encourage citizen discussions that are productive and constructive.

Source:
American Chemical Society
1155 16th St, NW
Washington, D.C. 20036

"Air Toxics 1"; "Air Toxics Update 2"; "Air Toxics Update 3"; "Air Toxic Update 4"; "Air Toxics Update 5," Sacramento, CA: California Air Resources Board, 1986, 1987

This series of five fact sheets explains to the general public what the State of California is doing to control toxic substances in the environment and discusses the risks associated with several specific chemicals.

Source:
Air Resources Board Stationary Source Division Chief, Toxic Pollutants Branch
P.O. Box 2815
Sacramento, CA 95812
916-322-6023

"What To Do In Case of a Chemical Emergency," Baltimore, MD: Mayor's Hazardous Materials Advisory Council, no date.

A list of short, simple instructions telling people how to protect themselves during a chemical emergency.

Source:

City of Baltimore Fire Department
Oldtown Station
1100 Hillen Street
Baltimore, MD 21202
301-396-5756.

"Directory of Accredited Laboratories, 1988," Gaithersburg, MD: American Association for Laboratory Accreditation, 1988.

Included in this listing are laboratories accredited for environmental testing of drinking water, wastewater, solid waste, hazardous waste, toxic substances, and pesticide residues.

Source:

American Association for Laboratory Accreditation
656 Quince Orchard Road, No. 704
Gaithersburg, MD 20878
301-670-1377

"Health Effects of Toxic Substances: A Directory of References and Resources, 1986," By Hanafi Russell et al. Sacramento, CA: California Department of Health Services, c1984, 1985.

Print reference books, online databases, and organizations are included in this directory; asterisks indicate books essential for a basic reference library on toxics.

Source:

California Department of General Services Publication Section
P.O. Box 1015
North Highlands, CA 95660
916-924-4800
Document Number: 7540-958-1300-3

OTHER SOURCES OF INFORMATION

Organizations

American Chemical Society (ACS). ACS distributes educational brochures on various topics, including groundwater, risk assessment, and risk communication.

Contact:

American Chemical Society
1155 16th Street NW
Washington, DC 20036.

Chemical Education for Public Understanding Project (CEPUP). With the goal of fostering greater public awareness, knowledge, and understanding about chemicals and how they interact with our lives, CEPUP is developing hands-on instructional materials for use both in middle schools and with the public.

Contact:

CEPUP
Lawrence Hall of Science
University of California
Berkeley, CA 94702.

Michigan State University. MSU's Center for Environmental Toxicology produces fact sheets and other materials for the public on toxic chemicals. Some are distributed through the state's Cooperative Extension Service.

Contact:

Center for Environmental Toxicology
C231 Holden Hall
Michigan State University
East Lansing, MI 48824.

Public Health Foundation, Environmental Health Program. Established by the Association of State and Territorial Health Officials, the Public Health Foundation publishes directories of environmental health and laboratory services and other publications on environmental health.

Contact:

PHF Environmental Health Program
1220 L Street NW
Washington, DC 20005
202-898-5600.

Environmental and Occupational Health Sciences Institute. Among other activities the Institute has developed a model program to provide information and services to the general public, small industry, employees, schools, and professionals. The Institute is jointly sponsored by the University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School and Rutgers University.

Contact:

EOHSI
657 Hoes Lane
Piscataway, NJ 08854-5635

Working Group on Community Right To Know. This group, affiliated with the Environmental Policy Institute, represents a coalition of voluntary groups with environmental concerns. It has compiled nine information packets for citizens on Title III, each covering a topic such as documents for Local Emergency Planning Committees, risk communication, and risk assessment. The packets contain newspaper articles, fact sheets, sample forms, case studies, and more.

Contact:

Working Group on Community Right-to-Know
218 D Street, S.E.
Washington, DC 20003
202-544-2600.

Newsletters

Community Right-to-Know News. Washington, DC: Thompson Publishing Group.

Published twice a month, this publication is aimed at companies and communities affected by Title III. It reports on Federal and State activities, emergency response programs, and industry liability.

Source:

Thompson Publishing Group,
Subscription Service Center
P.O. Box 76927
Washington, DC 20013
1-800-424-2959 or 202-872-1766
\$340.00 per year.

Kansas Right-to-Know News, Kansas Department of Health and Environment

The three to four-page newsletter contains news about Title III developments within Kansas, in other states, and in Federal Title III programs. Brief stories usually provide contacts for further information and cover the activities of Kansas' Title III programs, regulatory updates, data management developments, a question (from industry) and answer column, and notification of continuing education opportunities, presentations, and conferences.

Source:

Kansas Department of Health and Environment
Building 740, Forbes Field
Topeka, KS 66620
(913) 296-1690

Right-to-Know Planning Guide, The Bureau of National Affairs, Inc.

Written for the regulated community, this biweekly publication relates current Title III information. Subscription cost includes a biweekly newsletter and supplemental right-to-know material.

Source:

The Bureau of National Affairs, Inc.
Customer Service
1231 25th Street, N.W.
Washington, D.C. 20037
(800) 372-1033
\$452.00/year

The Great Lakes United, Great Lakes United

This newsletter is published by a voluntary organization that monitors pollution in the Great Lakes area and works for a cleaner environment. Articles focus on legislative and regulatory news and on the activities of other environmental groups.

Source:

Great Lakes United
248 Cassedy Hall
State University College at Buffalo
1300 Elmwood Avenue
Buffalo, NY 14222
(716) 886-0142

National Air Toxics Information Clearinghouse Newsletter. Research Triangle Park, NC: National Air Toxics Information Clearinghouse.

This bimonthly newsletter for State and local air pollution control agencies contains news of clearinghouse and other agency activities, State and local programs, and current research.

Source:

Pollutant Assessment Branch
U.S. Environmental Protection Agency, MD-12
Research Triangle Park, NC 27711

Sierra Club Hazardous Materials/Water Resources Newsletter. Olympia, W: Sierra Club National Hazardous Materials and National Water Resources Committees.

This quarterly newsletter provides a means for volunteer activists to communicate with each other about resources, research, and activities.

Source:

Hazardous Materials/Water Resources Newsletter
P.O. Box 474
Olympia, WA 98507
Voluntary contributions requested.

Toxics Law Reporter, The Bureau of National Affairs, Inc., 1989

This weekly newsletter reviews toxic torts, hazardous waste regulation, and insurance litigation.

Source:

The Bureau of National Affairs, Inc.
1231 25th Street, N.W.
Washington, D.C. 20037
800-372-1033

Databases

"TOXLINE," Bethesda, MD: National Library of Medicine.

Available online through a modem connection or in a medical library, this database provides citations, and often abstracts, for journal articles and monographs. Topics are human and animal toxicity studies, effects of environmental chemicals and pollutants, and adverse drug reactions.

For information:

National Library of Medicine,
MEDLARS Management Section
8600 Rockville Pike
Bethesda, MD 20894
800-638-8480 or 301-496-6193.

"TOXNET," Bethesda, MD: National Library of Medicine.

Also available online, this database contains technical information on hazardous substances and research results on potential carcinogens. In addition, the Toxic Release Inventory database is available on this online service.

For information:

National Library of Medicine
Specialized Information Services Division
8600 Rockville Pike
Bethesda, MD 20894
301-496-6531.

"ROADMAPS" U.S. EPA

The ROADMAPS database is a PC-based index to information sources within EPA containing summary information on chemical toxicity and major regulations. ROADMAPS diskettes is available through Regional Section 313 Coordinators.

This document is available by written request or by contacting:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650
Order Number: PB89-133-631 Cost: \$180.00

"CCINFO disc," Hamilton, Ontario, Canada: Canadian Center for Occupational Health and Safety.

CCINFO disc is a compact disk with several toxic substance databases. New Jersey's Hazardous Substance Fact Sheets are also accessible through this service. Subscribers receive four updated disks a year.

For information contact:

CCINFOdisc
Inquiries Service
Canadian Center for Occupational Health
and Safety
250 Main Street East
Hamilton, Ontario, Canada L8N1H6
416-572-2981.

"Hazardous Materials Information Exchange (HMIX)," U.S. DOT.

HMIX is a clearinghouse designed to provide Federal, state, local and private-sector organizations with a means of sharing information about prevention of, preparation for, and mitigation of hazardous material emergencies.

For information contact:

Research and Special Programs Administration
Office of Hazardous Materials Transportation
Federal, State and Private-Sector Initiatives Division
400 Seventh St., S.W., DHM-52, Room 8434
Washington, D.C. 20590
202-366-4900

Appendix D

Example of a Memorandum of Understanding

Such a memorandum of understanding (MOU) can be used 1) to clarify the responsibilities of various agencies involved with EPCRA Section 313; 2) to establish a single lead agency for activities undertaken by more than one agency; and 3) to establish protocols for notification and sharing of information. For the purposes of this example, it is assumed that all Title III programs are located in the state's Department of Environmental Protection (___DEP) and that the state has passed its own version of a community right-to-know law that mirrors the federal act. For each state, the details of any state-U.S. EPA MOU would be different. For example, the Section 313 program may be part of one state agency and the rest of EPCRA may be part of another. In that case, the MOU should include all three agencies.

MEMORANDUM OF UNDERSTANDING

between

State X Department of Environmental Protection

and

U.S. Environmental Protection Agency

This Memorandum of Understanding (MOU) is made and entered into this _____ day of _____, 19__ by the _____ Department of Environmental Protection (___DEP) and the Region _____ United States Environmental Protection Agency (U.S. EPA), for the purposes of identifying and coordinating compliance and enforcement activities and describing the parties' mutual understanding of compliance responsibilities. The object of this MOU is to achieve maximum benefit and efficiency and avoid duplication of efforts while discharging the parties' respective duties. This agreement is made under the authority of the _____ [the state community right-to-know law], and the Emergency Planning and Community Right-to-Know Act of 1986 (P.L. 99-499) (hereinafter referred to as EPCRA). Further, this Memorandum of Understanding will address the responsibilities and activities of these agencies in support of the _____ State Emergency Response Commission established pursuant to said federal and state acts.

Whereas, Section _____ of _____ [state law] provides for the adoption of Sections 302 (c), 303 (d), 304, 311, 312, 313 and 323 of EPCRA;

Whereas, Section _____ of _____ [state law] provides for orders to comply with certain requirements; enforcement; civil penalties; and sharing enforcement authorities; and Section 325 of EPCRA provides for enforcement authority;

Whereas, Section _____ of _____ [state law] and Section 325 of EPCRA provides for civil and criminal penalties for certain actions;

Whereas, the need exists for a sharing of information and inspection findings between the two agencies;

Therefore, it is hereby agreed between ___DEP and U.S. EPA that the discharge of the duties, pursuant to the federal and state acts and in support of the _____ State Emergency Response Commission, are designated to the agencies as indicated:

1. _____ DEPARTMENT OF ENVIRONMENTAL PROTECTION

- A. Provides staff and administrative support to fulfill the compliance and enforcement responsibilities as set forth under the _____ [state law].
- B. Notifies U.S. EPA of all requests for compliance, inspections, or complaints received pursuant to Section 313 of EPCRA.
- C. Maintains primacy for conducting inspections and enforcement actions pursuant to EPCRA Sections 302(c), 303(d), 311 and 312 within the state of _____.
- D. Makes available and forwards to U.S. EPA at their request information or copies of reports generated from inspections by ___DEP.
- E. Agrees to take EPCRA enforcement action in accordance with applicable EPCRA penalty policies.
- F. Upon request, provides the U.S. EPA with support documentation leading to enforcement actions initiated by ___DEP.

2. ENVIRONMENTAL PROTECTION AGENCY

- A. Maintains the lead on inspections and enforcement actions pertaining to EPCRA Section 313. U.S. EPA will notify ___DEP of any scheduled inspections, for the purpose of conducting joint U.S. EPA/___DEP inspections.
- B. Notifies and forwards to ___DEP any requests for inspections to be performed under Sections 302(c), 303(d), 304, 311 or 312.
- C. Upon request, provides ___DEP copies of all EPCRA inspection reports and resulting actions taken within the state of _____.

3. JOINT AGREEMENTS

- A. The parties agree that the costs of all services will be born by the party providing such.

