

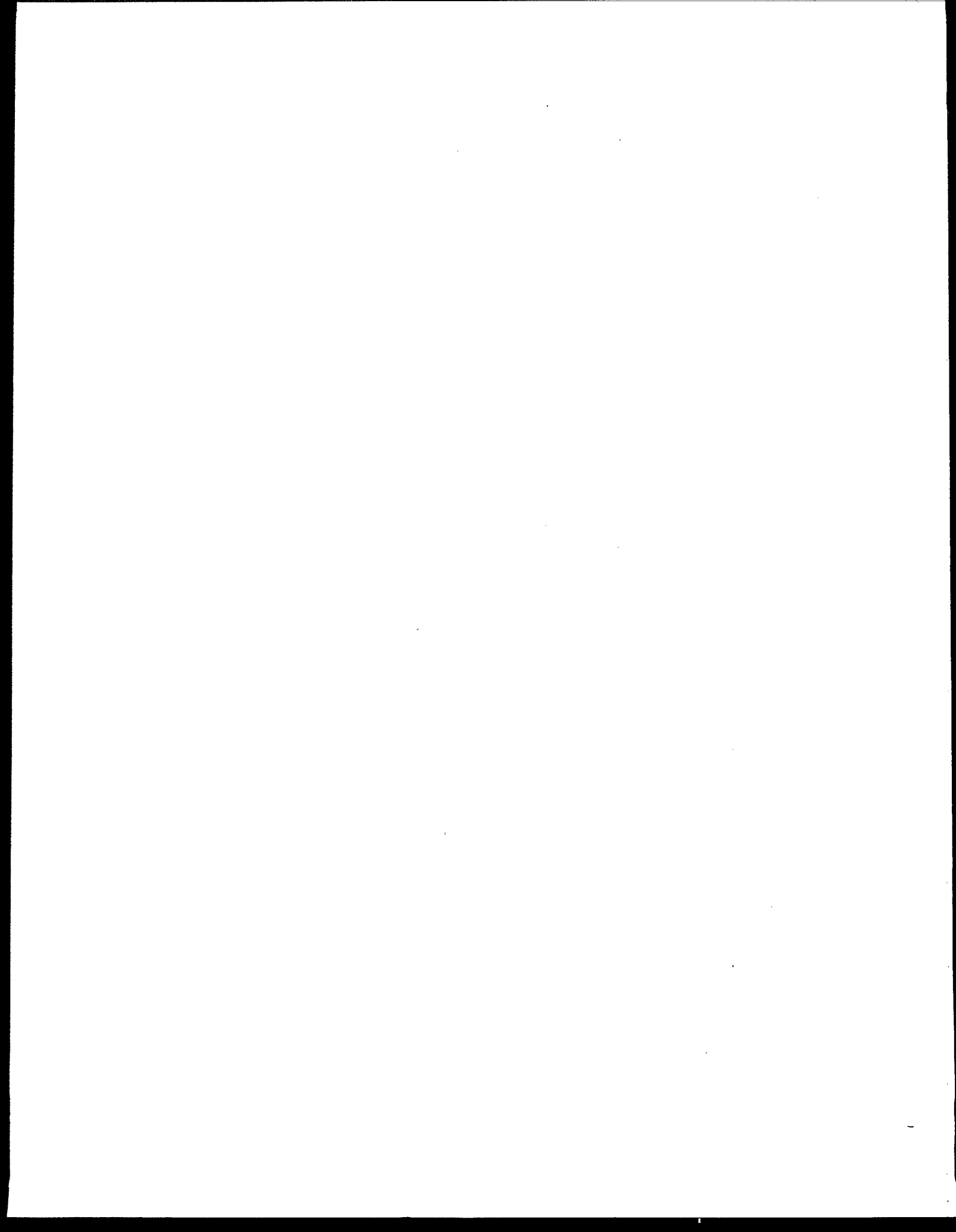


Successful Practices in Title III Implementation

**Chemical Emergency
Preparedness and Prevention
Technical Assistance Bulletin**

**Cherry Hill, New Jersey
Manitowoc County, Wisconsin
Greene County, Missouri
State of Hawaii
Arapahoe County, Colorado
Subject Index**

NEW!



ABOUT THIS BULLETIN

This is another in a series of bulletins that EPA is issuing to provide examples of implementation programs and strategies of the Emergency Planning and Community Right-to-Know Act of 1986, known as Title III, that are innovative or have proven effective. The purpose of these bulletins is to share information on successful practices with Local Emergency Planning Committees (LEPCs), State Emergency Response Commissions (SERCs), fire departments, and other Title III implementing agencies throughout the country in the hope that such information will prove useful to other SERCs and LEPCs as their programs develop and evolve.

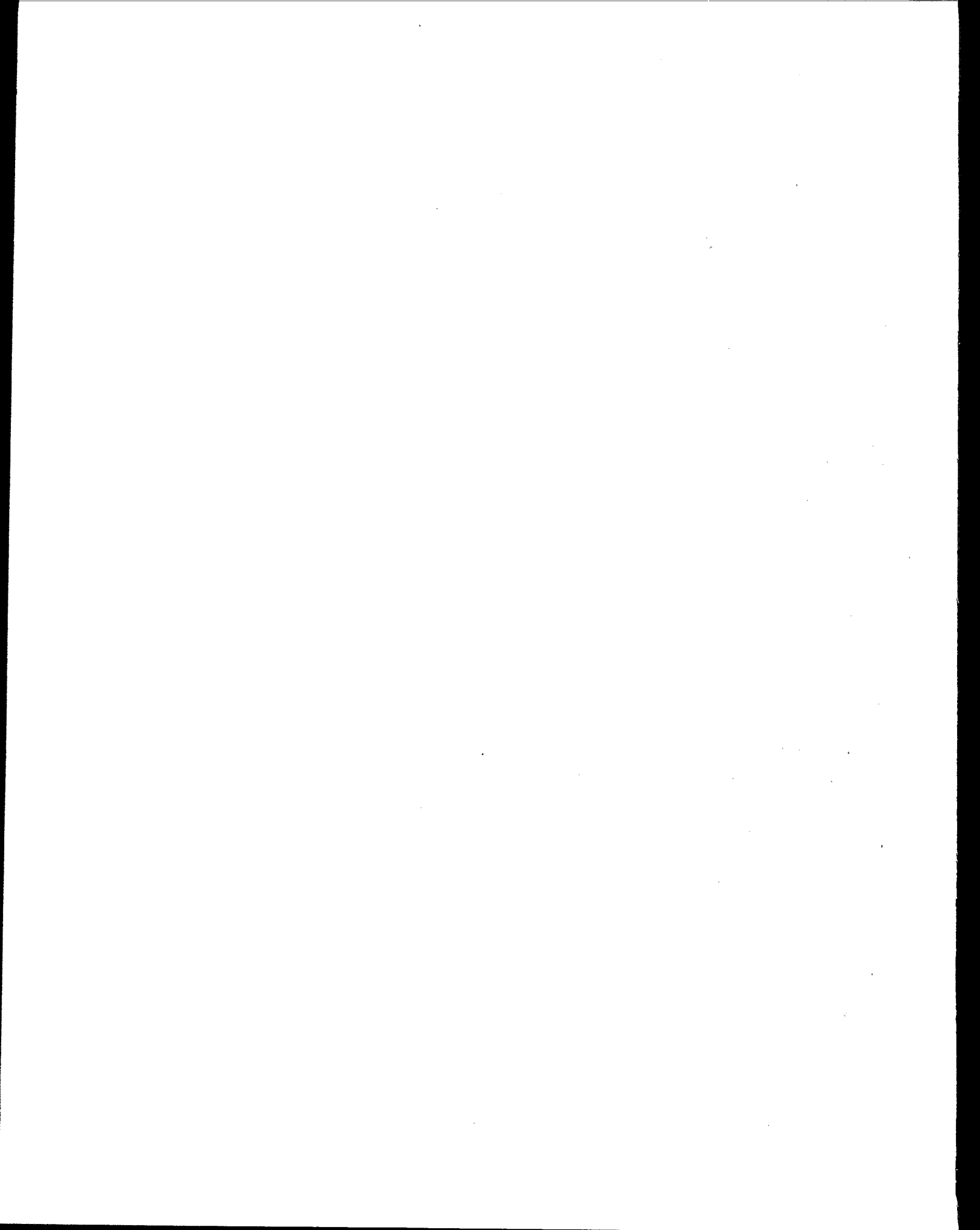
Elements from the programs featured here may be transferable to other programs in similar communities or with similar situations. The bulletins provide information on a variety of practices — for example, planning, compliance, information management, hazard analysis, and outreach. The particular topics covered in each LEPC or SERC profile are listed in the box at the bottom of the first page of the profile for easy reference, along with descriptions of the planning district or state and LEPC or SERC membership.

The descriptions of the innovative and effective implementation programs and strategies are not exhaustive. They are meant to provide readers with enough information to determine if a particular approach is applicable to their own situation. Each profile includes a contact person who can provide more detailed information.

For your convenience, a subject index covering the contents of the eight **Successful Practices** bulletins has been included in this bulletin. The index is designed to allow the reader to identify successful Title III implementation practices by topic area, and then locate the **Successful Practices** bulletin in which the practice was profiled. Details on all eight bulletins, and how to order them, are provided on the page preceding the index.

If you know of Title III implementation efforts you feel would be of interest to others and that we should identify in **Successful Practices**, please contact your EPA Regional Chemical Emergency Preparedness and Prevention coordinator (see the list on page 22), or the Emergency Planning and Community Right-to-Know Information Hotline at (800) 535-0202.







Cherry Hill, New Jersey

The Township of Cherry Hill is located in Camden County, four miles east of Philadelphia. While there are several major industries and industrial parks within the township, the Cherry Hill LEPC is also concerned with hazardous materials transportation throughout the township. Two major interstate highways, the New Jersey Turnpike and I-295, run through the heart of the township and several trucking terminals are located within Cherry Hill.

within the township. This group, the Cherry Hill Emergency Management Council, was created by the mandate of the New Jersey Civil Defense Act of 1942 (Title 58, App. A:9 et al). The Act required New Jersey municipalities to develop emergency operations plans for natural and man-made disasters. Following the passage of Title III, Cherry Hill and many other municipalities in New Jersey incorporated the roles and responsibilities of the LEPC into the structure of these established councils.

LEPC Organization

Prior to the passage of the Emergency Planning and Community Right-to-Know Act of 1986 (commonly known as Title III), Cherry Hill already had an emergency planning group composed of representatives of different public- and private-sector organizations

Planning

Using the existing emergency operations plan developed under the direction of the council, the LEPC updated the hazardous materials annex as well as the overall plan to conform with the comprehensive planning process encouraged by the Hazardous Materials

LEPC Profile

Membership: 15 members, including elected officials and representatives of the Office of Emergency Management, police and fire departments, public works, the American Red Cross, New Jersey Department of Environmental Protection, emergency medical services, the general public, and industry.

Population: 79,000

Facilities: 21, including a major pharmaceutical manufacturer

Topics: LEPC Organization
Planning
Information Management
Training
Outreach

Emergency Planning Guide developed by the National Response Team, as required under Title III. This document provides guidance on identifying and assessing chemical hazards throughout the community and developing an emergency plan that is coordinated and integrated with all organizations, from fire departments to the American Red Cross, that have a role in emergency situations.

To identify chemical hazards within the township, the Cherry Hill LEPC reviewed follow-up notification reports on hazardous material accidents that have occurred within the township, as well as the right-to-know inventory forms (New Jersey's version of the Tier II form required under section 312 of Title III) submitted by reporting facilities. This information highlighted the need to address transportation corridors in the planning process. Because of the size and complexity of the hazardous materials transportation hazards, the Cherry Hill LEPC recognized the need for immediate access to chemical hazard information in a reliable and integrated format.

Information Management

Initially, the information collected by the Cherry Hill LEPC under Title III, which included the right-to-know inventory forms, MSDSs, and facility emergency plans, were alphabetized by facility name and placed in a file cabinet in the Police Communications Center. A copy of the facility's emergency plan and right-to-know inventory form was also provided to the appropriate fire district (there are seven fire districts in Cherry Hill) by each facility. These materials were stored in a file drawer on the fire chief's response vehicle. While the information is available for planning activities, access to hazard and inventory information critical to response operations was limited at best.

The Cherry Hill LEPC decided that a computerized information management system was needed to support their emergency operations. The system would link all response entities (e.g., fire department, the hazardous materials response unit, and emergency

management) to an integrated, centralized database. However, the response community lacked sufficient computer hardware or software for such a system, the LEPC had no funds available, and the township had a cap on expenditures that limited their ability to fund such a major endeavor.

Because of the commitment of its members, the LEPC did not give up in the face of such significant obstacles. Instead, they identified a way to access funds necessary to develop their system. While each municipality in New Jersey operates with a cap on expenditures, the state provides a reserve of funds for major capital improvements such as resurfacing roads or upgrading the computer system for the police department. Recognizing this as an avenue for obtaining the necessary funding, the LEPC made a presentation to a committee of the Township Capital Improvement Committee that manages the reserve for Cherry Hill. Following the presentation, which stressed the need for immediate access to emergency information, the committee, composed of the township's business manager, and the directors of several of the township's departments, approved a capital improvement grant of \$11,000 in May 1991.

The Cherry Hill LEPC has decided to use the CAMEO-DOS software to help them manage their Title III information. CAMEO (Computer-Aided Management of Emergency Operations) is designed to manage chemical- and facility-specific information about hazards in or near a community and to help emergency response personnel plan for the safe handling of chemical accidents. Developed by the U.S. Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA), CAMEO is available at cost to state and local governments through the National Safety Council. Because of its low cost, the LEPC was able to purchase the software prior to obtaining the grant money. Currently, CAMEO is run on the personal IBM-compatible computer of the deputy coordinator for the LEPC. However, the LEPC is reviewing bids for purchasing computers for the Office of Emergency Management and the mobile command response unit.

Training

The Cherry Hill LEPC is currently developing a training program for all potential CAMEO users in the township. The training program will explain how to use CAMEO to develop emergency plans; retrieve facility Title III reports, emergency plans, and information on response resources; and use CAMEO's mapping capabilities to search and display transportation routes, facilities, and sensitive populations and create overlays specific to their planning or response needs. A full-time firefighter with extensive computer experience has been tapped to provide CAMEO training to all personnel in the fire districts as well as other response personnel in the township. The training course is being developed using materials the LEPC's deputy coordinator obtained at the national CAMEO conference held in Washington, DC, in January 1991.

The Cherry Hill fire and police departments have also sponsored several Title III-related training programs, including hazard awareness training for all first responders and incident command courses for all police and fire supervisors. These training courses have helped to develop closer relationships among all emergency services within the community.

In addition, the Emergency Management Office recommended that municipal department directors select certain employees to attend a series of train-the-trainer courses on hazardous materials awareness and employee right-to-know; this training was completed in the first half of 1991. These new trainers, in turn, will ensure that all municipal employees receive hazardous materials awareness and employee right-to-know training on a regular basis.

Outreach

Working to increase awareness of chemical hazards and the Title III requirements is an ongoing process for the Cherry Hill LEPC. A video, Hazardous Materials: An Introduction for Public Officials, was provided to all municipal department directors. The video, which describes the requirements and responsibilities of local government in

Faster Communication -- Packet Radio

The LEPC also has used some funds to purchase radio modems needed to establish a "packet" radio system. Packet radio allows a computer to be connected to a high frequency radio (e.g., police radio) via a radio modem that relays data to a receiving computer that also has a radio modem. The information is transmitted in small "packets" of data (250 characters per packet) to a receiving computer, which must return a message that the information was received correctly before the next packet is sent. Because there is down-time between each packet, one frequency can be used by five or six computer stations at one time. This is important in emergency situations when there is a high demand on communication systems and limited frequencies are available.

The LEPC believes this communications system is an invaluable tool in response actions, especially at remote sites (e.g., transportation-related incidents). Packet radio allows the emergency operations center to transmit Title III information or other emergency information contained in the CAMEO system to response sites where conventional communication systems are non-existent, malfunctioning, or destroyed. In addition, the costs of establishing such a system are very small when compared with other, more elaborate communication systems. Packet radio relies mostly on existing hardware — police and fire radios, cellular telephone, personal computers, and existing short wave radios, run by a network of 29 HAM radio operators in the township more than willing to volunteer in any emergency situation.

implementing Title III, was also shown to the LEPC and to facility representatives. The Office of Emergency Management also makes available the Federal Emergency Management Agency's (FEMA) home study course, Hazardous Materials: A Citizen's Orientation. The LEPC has found that such presentations and courses provide a good catalyst to get more people aware of chemical hazards in the community and, hopefully, more involved in reducing those hazards.

One result of the LEPC's drive to increase public awareness of chemical hazards has been with the township's seven nursing homes. The LEPC has been helping the nursing homes develop emergency plans required under state law. As a result of the LEPC's cooperation, the nursing homes became more aware of chemical hazards

in their immediate vicinity and the potential impact to their establishments. One outcome of this cooperation with the nursing homes is that the nursing homes are working on developing mutual aid agreements. The agreements will establish emergency procedures so that if one nursing home has to be evacuated, procedures will be available to distribute the evacuees among the other homes in a timely and safe manner.

LESSONS LEARNED

"It's All in the Presentation," says Craig Martin, deputy coordinator for the Cherry Hill LEPC, referring to the presentation that got the LEPC a \$11,000 capital improvement grant to purchase a computerized planning and information management system. With the LEPC stressing the usefulness of the Title III information for responding to hazardous materials accidents and the cost effectiveness of the EPA and NOAA-developed CAMEO software, the committee could not say no to the LEPC.

"The pitch was easy," Craig Martin emphasizes, "community right-to-know identifies the potential dangers and, through the software, we can find out how close these dangers are to sensitive populations, like nursing homes or day-care centers."

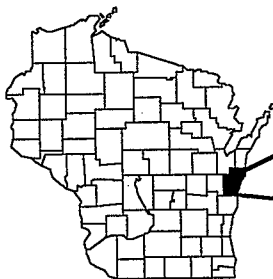
The Commitment Is There, It's the Time That's Needed. The Cherry Hill LEPC has no full-time staff. While the LEPC is composed of people dedicated to fulfilling the Title III mission, they do have full-time jobs and families, and finding the time to accomplish the goals they have set for themselves is difficult. Many training courses have to be offered on weekends, and meetings are held at night. To help lighten the load of the volunteers, the LEPC is working on having the full-time personnel from the fire department take on the role of managing the CAMEO system.

In addition, the LEPC is also considering accessing persons who have been ordered to perform community services as the result of driving while intoxicated or other such violations. These persons, depending on their skills or expertise, can help enter data into the CAMEO system or help write or review emergency plans.

LEPCs also should look anywhere or anyway to find help. Craig Martin is a good example — he is a police officer and an adjunct instructor for FEMA's Emergency Management Institute. His "part-time" role as deputy coordinator for the LEPC and the Emergency Management Office is funded by FEMA's emergency management assistance grant program.

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Manitowoc County, Wisconsin

Manitowoc County, Wisconsin, located near Lake Michigan approximately 90 miles north of Milwaukee and 45 miles south of Green Bay, includes the cities of Manitowoc and Two Rivers. Several railroads and Interstate 43 (I-43) pass through Manitowoc County. Most industry and population in the county are concentrated in the cities of Manitowoc and Two Rivers. The Manitowoc County Local Emergency Planning Committee (LEPC) has established five separate subcommittees to address the following issues: education, funding, planning, exercises, and LEPC membership.

Outreach

Upon establishing the education subcommittee, the LEPC recognized that facilities throughout Manitowoc County must understand the Title III requirements and

their reporting responsibilities. Members of the education subcommittee invited local industry representatives, the county Tavern League, agricultural cooperative (co-op) representatives, and a representative from a local advertising agency to attend their meetings.

At an initial, priority-setting meeting in October 1989, the subcommittee decided that the agricultural community should be the first audience for focused outreach activities, as most local farmers were unfamiliar with Title III reporting requirements. The Manitowoc County LEPC sent a letter to all area farmers introducing Title III and providing contacts and telephone numbers for more information. A list of commonly-used agricultural chemicals covered under Title III was included with the letter.

The LEPC also worked with the local Agricultural Stabilization and Conservation Service (ASCS) office to send this same letter in

LEPC Profile

Membership: 25 members and 12 alternates, including representatives from county emergency government, hazmat response team, county board of supervisors, fire service, law enforcement, hospitals, the American Red Cross, industry, transportation, citizens, news media, the Towns Association, and local health and public works departments.

Population: 82,477

Facilities: 216, including several food processing and storage companies

Topics: Outreach
Exercises
Training

conjunction with ASCS's mailing to area farmers in January 1990. The ASCS is an agency within the Department of Agriculture with approximately 2,800 county offices nationwide that administers federal agricultural programs to local farmers. Coordinating with the ASCS allowed the Manitowoc County LEPC to reach a large audience at little expense. The letter designated area co-op agents as contact persons because local farmers are familiar with these agents. About 1,450 farmers from the total mailing of 1,500 called for more information. As a result of the agricultural outreach campaign, the number of farmers that submitted Tier II forms under section 312 of Title III increased from one to twenty-seven.

Subsequently, the education subcommittee has aimed its outreach campaign at both local industry and the general public. As part of the industry outreach campaign, the subcommittee consulted with representatives from the local industrial council, various members of the press and radio, and a local advertising agency. All parties agreed that the campaign should be short, simple, and to the point and that the goal of the industry outreach campaign was to make businesses aware of Title III in a visual and compelling way.

The LEPC asked representatives from local newspapers and radio stations to attend an education subcommittee meeting to plan the outreach campaign. Pictures with brief Title III-related articles appeared in various local newspapers. An advertising agency donated a billboard as a public service, providing a highly visible Title III message on the well-traveled highway between Manitowoc and Two Rivers. The billboard warned of steep fines for industries that fail to report the presence of hazardous materials on their premises using the message, "By playing this lottery, you could lose \$25,000!" The board depicts a dollar bill in the left hand corner with tiny pieces of it breaking apart, and a phone number for more information. The total cost to the county for the billboard was about \$70 for production and posting fees.

Ads echoing the billboard's warning appeared in various local newspapers throughout Manitowoc County during the first two weeks in October

1990. The costs for printing the ads varied — the Manitowoc County LEPC secured free space in some papers, and received public service- or small business-reduced rates in others. The ads ran in at least one area paper on each day of the two-week period. Since the industry outreach campaign started, the number of facilities that submitted Tier II forms under section 312 of Title III increased from 113 to 216.

The goal of the public outreach campaign, which was developed concurrently with the industry campaign, was to introduce Title III and its community right-to-know message to a largely unaware public. A separate advertisement was developed and appeared every day for the last two weeks in October 1990, in one of the area papers and at least one day per week in all the others. The theme of the advertisement was "It's Your Right to Know," emphasizing the role of the LEPC in planning and preparedness, and providing a phone number for more information. The Emergency Government Director, the LEPC chair, and the chair of the education subcommittee followed the press ads with appearances on local radio talk shows.

The education subcommittee also has formed an LEPC Speakers Bureau whose members are available to speak before area groups on Title III-related topics. A list of speakers is posted at the public library, area colleges, the county clerk's office, and other strategic Manitowoc County locations. Speakers do not charge fees, but groups may make a donation to support LEPC activities.

As a result of its outreach efforts, the LEPC received a "Certificate for Excellence in Hazardous Materials Outreach Programs" from the Region 5 Regional Response Team, a group consisting of regional representatives from the fourteen federal agencies with hazardous materials response and planning expertise, as well as the a representative from each state in the Region. These certificates award LEPCs within the Region that have exceptional outreach, planning, exercise, training, or hazards analysis programs.

Exercises

The LEPC's public awareness campaign was also supported by two field exercises. Manitowoc County has held in cooperation with the local hazmat team. These exercises (held on June 13, 1989, and October 6, 1990) helped to increase awareness of Title III preparedness and response issues. Manitowoc County officials have held various full-scale exercises in the past with two nearby nuclear plants, but only recently have city officials been involved in an exercise in which they have to interact with their county counterparts.

Training

Because the Manitowoc County LEPC is made up of people with diverse backgrounds, the LEPC decided to first understand the emergency preparedness and response duties or interests of each LEPC member. As of May 1991, representatives from the local hazmat team, the Red Cross, local law enforcement, emergency management, and the County Public Works Department, as well as an emergency planner from the Kewaunee nuclear power plant all have made presentations to the Manitowoc County LEPC. These presentations have included a demonstration of hazmat emergency response equipment and tours of the police department and its dispatch center, as well as overviews of Red Cross emergency services, the mobile command center and emergency operations center, progress on a household chemicals outreach campaign, and emergency planning techniques at the local nuclear power plants.

LESSONS LEARNED

Title III Outreach Is a Continuous Process. The Manitowoc County LEPC believes that outreach is an ongoing process even though they have conducted several effective outreach campaigns. The LEPC recognizes that there may be many other facilities which are unaware or uninterested in the requirements of Title III. In fact, the LEPC still receives a large number of calls each month about reporting requirements,

Accident Tests LEPC Plan

The emergency response plans of the Manitowoc County LEPC were tested recently when a tanker truck leaked ferric chloride solution along a stretch of roadway in May 1991. The tanker truck had gotten lost because the driver had no maps and the truck routes may not have been clearly identified. To make matters worse, the truck was not inspected after the initial clean-up, creating new leaks to be addressed by responders. High temperatures and extreme humidity hampered the responding hazmat team, forcing team members to work in short, 15-minute shifts.

The coordinated efforts of a range of organizations, including fire, police, public works, Red Cross, emergency government, news media, and the LEPC, helped to alleviate a potentially dangerous situation. Direct radio links with local radio stations allowed emergency government personnel to make protective action announcements to the public. Mobile phones and fax machines, as well as other communications equipment, were made available to response personnel. With the completion of the responders' work some eight hours after the release began, the efforts to coordinate Manitowoc County emergency planning process had proven extremely effective.

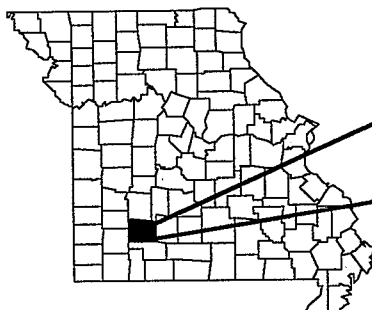
fee payments, and other regulations under Title III. Because turnover at facilities and, more important, within the LEPC and emergency response community is continuous, the LEPC believes providing these groups with continuous information on Title III and the LEPC's role in planning for potential chemical emergencies is essential.

An Emergency Response Plan Is a Living Document. In responding to the recent ferric chloride leak from a tanker truck in May 1991, the Manitowoc County LEPC realized that emergency planning is a dynamic, ongoing process. As a result of that accident, the LEPC recognized that hazardous materials transportation routes should be clearly identified throughout the county and that highway patrolmen should be called earlier to carefully inspect any vehicle involved in a hazardous materials incident before letting the vehicle leave the scene. These issues are to be addressed in future LEPC meetings.

Climate can also be a significant factor in response actions; to avoid exhaustion, hazmat personnel had to receive tremendous amounts of fluids while working in high temperatures. Fatigue on the part of responders can contribute to loss of concentration, especially during a long response incident such as this recent one. To resolve these issues in their emergency plan, the Manitowoc County LEPC plans to establish mutual aid agreements with hazmat teams from neighboring communities to provide back-up support in future incidents of long duration.

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**Greene County,
Missouri**

Greene County is located in southwestern Missouri; the county seat, Springfield, has a population of over 140,000.

Primary transportation routes in the county include the Burlington Northern and Missouri Pacific Railroads, Interstate 44, and U.S. Highways 60, 65, 66, 160, and 266.

Prior to the enactment of Title III, a voluntary Chemical Emergency Task Force, composed of representatives from both the public sector and private industry, began developing an emergency plan for the city of Springfield. The plan developed by the task force was submitted to the City Council in October 1987. The Springfield plan was subsequently converted to a county-wide plan in keeping with the designation of Greene County as a local emergency planning district under Title III.

LEPC Organization

In the late spring of 1989, the LEPC stopped meeting when the LEPC Chair, the Director of the Springfield-Greene County Emergency Management Office, resigned. To avoid the potential for another stoppage or slowdown in its activities, the LEPC began to develop a more formal organizational structure after its re-establishment in November 1989. In June 1991, the LEPC published a document formalizing the structure and procedures which have allowed it to maintain a high level of activity over the last year and a half, as described below.

LEPC Profile

Membership: 111 members, including representatives from the local health, public works, and highway departments, fire services, Greene County Commission, local and state police, hospitals, Amercian Red Cross, utilities, emergency services, the Burlington Northern Railroad, news media, University of Missouri, industry, Watershed Committee, Household Hazardous Waste project, individual citizens, and citizen groups. The chair is the director of the Springfield-Greene County Emergency Managment Office.

Population: 200,000

Facilities: 245

Topics: LEPC Organization
Information Management
Hazards Analysis
Exercises

LEPC Active in Other Community Projects

The varied membership of the Greene County LEPC includes representatives from local environmental projects such as the Watershed Committee and the Household Hazardous Waste Project. The LEPC, through various subcommittees, is working with the Watershed Committee to address potential contamination of the watershed from transportation and fixed facility incidents involving hazardous chemicals. For instance, information on sinkholes located along area highways will be entered into the CAMEO system to identify the sinkholes as possible avenues for watershed contamination in the event of a nearby spill.

The LEPC is also coordinating with the Watershed Committee in developing legislation to require secondary containment at fixed facilities where chemicals, if released, could contaminate the watershed. For the Household Hazardous Waste Project, the LEPC assists in coordinating collection and publicity activities.

LEPC membership is open to any individual who resides or works in Greene County. All members are expected to serve on at least one of the following eight subcommittees:

- Education and Media: develops outreach materials explaining the purpose and goals of the LEPC;
- Data Collection: identifies facilities in compliance and provides assistance to facilities in meeting the requirements of Title III;
- Data Management and Public Inquiry: verifies and reconciles facility submissions and responds to citizen requests for right-to-know information;
- Assessment: evaluates the hazards posed by the storage, production, and use of chemicals at specific locations;
- Resources: identifies all available public and private resources for emergency response purposes;
- Medical and Health: addresses decontamination and emergency medical services issues, including training;

- Evacuation and Sheltering: identifies shelters and develops evacuation and in-place protection procedures; and
- Exercise and Evaluation: organizes exercises to test the emergency plan and evaluates exercise results.

The LEPC also has an Executive Committee, consisting of the heads of the eight subcommittees and the three elected LEPC officers (LEPC members elect a chairperson, vice-chairperson, and secretary every February). The Executive Committee's responsibilities include the approving amendments to the emergency plan; identifying gaps in the plan; reviewing information requests from citizens; and overseeing LEPC elections.

The full LEPC meets bi-monthly at the American Red Cross Center, with the Executive Committee meeting in the alternate months at the county Emergency Operations Center, where all LEPC records and information are maintained. Subcommittees meet as often as necessary to achieve their objectives. To better schedule and track LEPC projects, minutes are published for all meetings — minutes for the Executive Committee and full LEPC meetings are mailed to all members; subcommittee minutes are distributed to all subcommittee chairs and LEPC elected officers.

Information Management

In conjunction with the Missouri Department of Natural Resources (DNR), the LEPC developed a conversion program that allows them to download all the Title III submissions from Greene County facilities from the DNR mainframe. This process avoids a redundant data entry and helps the LEPC's Data Management Subcommittee to identify companies that are reporting to the SERC and not to the LEPC or the local fire department, or that are reporting under some, but not all, of the required sections of Title III. In the fall of 1990, the LEPC sent out a letter to over 100 facilities requesting the submission of information to the LEPC or the SERC to complete this reconciliation process. Almost every one of these facilities have since come into

compliance, and the publicity surrounding the effort alerted several additional facilities that had previously not provided any information under Title III to its reporting requirements.

Continuing to optimize its data management system, in February 1991, the LEPC installed the IBM-compatible CAMEO-DOS system to manage their Title III information and planning efforts. CAMEO is the Computer-Aided Management of Emergency Operations system developed by EPA and the National Oceanographic and Atmospheric Administration. Both the LEPC and the Springfield Fire Department are uploading information and the LEPC hopes to use CAMEO as a resource database and as a means of more accurately identifying vulnerable populations once this process is completed.

Hazards Analysis

To begin the process of identifying these vulnerable populations, the assessment subcommittee has examined over 50 facilities using a simple format developed by the LEPC to assess risk. The initial assessment collects information on the types, amounts, and locations of hazardous chemicals on-site, and potential exposure pathways and vulnerable populations. In the next step, the fire department will review and validate these assessments based on the information collected during their annual fire inspections. The finalized assessments will be provided to the facility to serve as a means of initiating a dialogue with the LEPC on mitigating the potential for a dangerous chemical release. Because the preliminary analysis by the assessment subcommittee indicates that chlorine is one of the primary hazards in the county, the next LEPC simulation exercise will address a chlorine incident.

Exercises

Meanwhile, the LEPC has participated in an evacuation and sheltering exercise in April 1990 with the American Red Cross, the Southwest Missouri State University, the Emergency Management Office, the Springfield Fire Department, amateur radio operators, and other agencies. The exercise simulated coordinating of the evacuation and sheltering

process. The participants — university students and other members of the general public — remained overnight at a local Red Cross shelter.

During the course of the evening, workshops were held on emergency preparedness issues for both the public and first responders. An exercise critique held the next morning identified the need to develop clear procedures for the decontamination of potential exposure victims — two of the simulated victims had been transported to the local hospital without decontamination of their bodies and clothing.

The LEPC held a joint field exercise in April 1991, with the SYNTEX Agribusiness, Inc., facility involving the facility hazmat team and the newly organized Springfield Fire Department Hazmat Team. The week before, a table-top simulation was held to familiarize the participants with the scenario. The incident involved a leak of phosphorus trichloride reacting with water to create phosphoric and chloride acids as liquids and vapors.

The exercise was designed to test both established emergency response procedures and the coordination among the various responding agencies. Two critical issues were identified:

- Limited equipment and insufficient procedures for decontaminating exposure victims by emergency medical personnel; and
- A lack of experience and understanding in making evacuation and in-place protection decisions.

These problems are being addressed by the appropriate subcommittees of the LEPC. In addition, the two hazmat teams have established a cross-training relationship to resolve any procedural differences; the LEPC has also sent out letters to other private facility hazmat teams in hopes of developing similar arrangements.

LESSONS LEARNED

Lead Agency Can Provide Partial Funding for LEPC Activities. The Springfield-Greene County Emergency Management Office (EMO) recognized that the Title III mandate was consistent with its responsibilities under Missouri law to prepare the community for emergencies. Thanks to the support of the Greene County Commission, EMO has become the lead agency for the LEPC, with its director serving as the LEPC chair. Funding for LEPC mailings and other support is supplemented through the annual EMO operations budget.

The EMO director suggests that other planning districts experiencing difficulty in funding their activities should consider coordinating their activities more closely with a local agency(ies). Many of the tasks associated with implementing Title III are already performed, and funded, by local fire, police, health, and civil defense agencies.

LEPCs Require Structure and Definition to Function. To effectively implement the Title III mandate, each LEPC must organize and establish specific operating procedures. LEPCs should design a workable system as soon as possible to serve as a functional basis for operations, and then let experience guide further developing the LEPC's structure and guidelines. During its first years, the Greene County LEPC relied on the leadership of the EMO Director, and when he resigned, a period of inactivity followed. Recognizing this structural flaw, during the November 1989 reorganization, one of the key steps taken by the members of the LEPC was to develop written procedures to prevent a recurrence of this type of situation.

Expanded LEPC Mission Increases

Awareness. The Greene County LEPC realizes that by becoming involved in other community projects relating to chemical usage and environmental protection, it will be better able to fulfill its Title III mandate. The LEPC's work with the Watershed Committee, the Household Hazardous Waste Project, and local environmental groups has increased Title III awareness among the public and industry. In recognition of its achievements, the LEPC received the Missouri Department of Natural Resources' 1990 Resource Steward Award. This award commends the LEPC for its outstanding efforts to promote safe chemical management in an effort to protect the citizens and natural resources of Greene County. The LEPC is now working with the Springfield Area Chamber of Commerce to gain funding for an informational brochure to be distributed to area businesses.

Compliance Efforts Should Rely First on Outreach, Not Enforcement. The Greene County LEPC has had notable success with a compliance policy which stresses assistance to local facilities in being aware of and complying with the requirements of Title III. LEPC members believe that industry wants to be in compliance, and that by adopting an initial, enforcement-oriented approach, the LEPC will place facilities on the defensive and make them less cooperative with the LEPC.

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State of Hawaii

To improve Hawaii's chemical emergency planning and response capability and to streamline the collection of Title III data, the state has been a pioneer in the use of CAMEO (Computer-Aided Management of Emergency Operations) software developed by EPA and the National Oceanic and Atmospheric Administration (NOAA) to help local districts manage and use information about chemical hazards in their communities. Hawaii's use of CAMEO includes an innovative new effort to take Title III awareness "to the streets" through a public information pilot program under an EPA grant. In addition to its use of CAMEO, the Hawaii SERC has conducted emergency response exercises and enhanced its hazardous material training.

The lead agency responsible for implementing Title III in Hawaii is the state Department of Health. The department's Office of Hazard Evaluation and Emergency Response (HEER)

serves as the technical advisor for chemical incidents. HEER also dispatches response personnel to the scene of a chemical incident and has developed — through a committee established by the SERC — an oil and hazardous substance emergency response plan. Civil defense agencies and fire departments manage Title III programs at the LEPC level.

Information Management

Hawaii is one of the first states to have a fully integrated Title III data management system using CAMEO software and Macintosh computers. The CAMEO system — a powerful tool that presents the user with a wide array of databases, including information on chemicals, facilities, transportation, and even street maps to assist response personnel — is offered to state and local governments at cost through the National

SERC Profile

Membership: 15 members, including representatives from the Departments of Health, Defense, Labor and Industrial Relations, Business and Economic Development, and Transportation; Boards of Agriculture and Land and Natural Resources; University of Hawaii; American Red Cross; Office of Environmental Control; and the four Hawaii LEPCs.

Organization: 4 LEPCs representing the four Hawaiian counties

Topics: Information Management
Outreach
LEPC Organization
Training
Exercises

Follow-up Improves Compliance

The Hawaii SERC has found that getting facilities to fill out Title III forms completely and accurately is a vital first step in compiling a good database on chemicals in the community. In 1989, about 30 percent of the state's facilities submitted correct and complete Title III information for the CAMEO database. In contrast, the Title III submissions for 1990 have shown a great improvement, with 85 percent submitting correct and complete information.

This achievement is in large part attributable to the thorough follow-up conducted for the 1989 submissions. Each of these reports was reviewed, and a letter was written to each facility that had submitted an incomplete report. A follow-up phone call was made to those facilities that did not respond to the letter, and a final follow-up letter was sent to each facility that did not respond to the phone call. The HEER office then sent a mailout reminder to all previous Title III submitters in February 1991 for the 1990 submission. The reminder letter included simple examples of a properly completed Tier II form, a list of common TPQs and RQs, a list of SERC and LEPC addresses, and an information hotline number.

Safety Council. (A DOS version also is available for users with IBM-compatible machines.)

In Hawaii's Title III community, data is easily shared. Rather than having right-to-know information scattered around in different formats, all of the agencies with a stake in Title III have agreed to use CAMEO. To get the most out of their CAMEO system, Hawaii has emphasized training programs for LEPC and SERC members who use the software, and has worked with chemical facilities to help them submit Title III data in a more consistent form.

As part of this training, the SERC instituted annual one-week CAMEO training courses, and sent one representative from each LEPC to a national CAMEO workshop. EPA's Region 9, with the assistance of NOAA, also conducted two CAMEO courses in Honolulu, which were attended by representatives from all four LEPCs and the state Department of Health.

To provide general Macintosh training and more specialized instruction in the CAMEO program, a Hawaii data management workshop also was held. Attendees were given a procedural manual, instructions on how to use it, and guidance on Title III topics such as enforcement and facility inspections. The workshop also trained attendees in the use of FEMA's Hazardous Materials Information Exchange (HMIX), a computer bulletin board that include various categories of information on hazardous materials planning and response.

During the workshop, the participants discussed data flow within Hawaii's Title III community and identified potential problems. As a result, a task force was established to address such issues as formatting Title III information so that all users enter data into the system in the same way. A \$50,000 Title III training grant from FEMA and funding from the state Department of Health cover training and travel expenses for the task force.

In addition, the SERC has conducted workshops in each county to help LEPC members and facilities learn more about hazards analysis, and to provide guidance in filling out Tier II forms and the "Hawaii Facility Profile." This four-page profile addresses the storage of hazardous substances at each facility, as well as transportation routes, nearby facilities that contribute to potential risk, geographic features, climate, critical time variables (e.g. rush hours), and the facility's own response capability. These data all feed into the CAMEO system and can be used either for emergency planning and completing a hazards analysis or by response personnel at the time of an actual incident. This information can also be used by each LEPC for cross-referencing against existing files.

Outreach

To enhance the usefulness of its Title III information, the Hawaii SERC recently received a \$73,540 grant from EPA to develop a computer-based public information program. This will allow Hawaii's LEPCs to disseminate Title III data to the general public. The project includes public demonstrations of the Hawaii CAMEO system, installation at permanent public sites, training programs, a publicity campaign to inform the public about

the program and Title III in general, and a survey to determine the effectiveness of this outreach. Under the grant, Hawaii also will produce a draft manual describing how the CAMEO system can be used by other states.

The project is now in the preliminary design phase. A contractor has been hired to develop a system that would allow any user to locate the chemical facility nearest them — perhaps using touch-screen computer displays — and to learn more about the chemicals at that facility.

LEPC Organization

Another central issue for the Hawaii SERC has been incorporating Title III administrative responsibilities into the emergency response structure that had been in place prior to the passage of Title III. A memorandum of understanding facilitated the transition from the pre-existing arrangement to a new, dual structure, whereby the civil defense agency handles natural disasters and the Department of Health handles oil and hazardous materials incidents. A 24-hour civil defense emergency notification hotline supports reporting of both types of events.

Each of the four Hawaiian counties — Hawaii, Maui, Oahu, and Kauai — has formed its own LEPC, but each has its own distinct character based on the emergency planning structure that had been in place before Title III. In all four counties, the director of the civil defense office is the active chair of the LEPC. Fire departments provide assistance to varying degrees. For example, in Kauai, a small county with only fifty facilities, the local fire department's eight-member hazmat team handles initial response, while civil defense officials are responsible for emergency planning and data management. But in Maui (a county composed of several islands), the fire department assumes both roles.

Training

For several years, the Oceania Regional Response Team — the federal coordinating body for chemical emergency preparedness for Hawaii, Guam, and the Pacific Islands — has been supporting the Honolulu Fire Department's efforts to develop a

Level A first-responder hazardous materials response capability, the first such capability in Hawaii. The Coast Guard and other federal agencies have helped in this effort by providing training, equipment, and technical assistance. The goal is to have all four counties equipped with first-responder capability.

A \$60,000 state grant and additional funds from FEMA are supporting hazardous materials training in Hawaii. Using this funding, a technical committee established by the SERC has developed training guidelines that meet or exceed the OSHA minimum standards. The document discusses four categories of hazmat training, ranging from short familiarization sessions to intensive courses:

- Hazardous Materials First Responder: An 8-hour "awareness" course for emergency medical personnel, police, and highway personnel who might be confronted with a hazmat incident.
- Hazardous Materials Incident Response: A 40-hour course on personal protection for first responders.
- Hazardous Materials Supervisor: An 8-hour class for supervisors of response teams, taken in addition to the 40-hour incident response course.
- Hazardous Materials Specialist: A pair of FEMA courses for personnel entering a "hot zone." Two weeks are spent on hazardous materials chemistry and two weeks on tactical considerations.

Response exercises have been designed for personnel in all categories, and courses are offered once or twice a year with state funding.

Exercises.

The Hawaii SERC, along with EPA, FEMA, and the state and county civil defense agencies, have co-sponsored a series of exercises that have proven valuable in highlighting potential emergency response problems. A full-field exercise was conducted in Honolulu, on the island of Oahu, and tabletop exercises have been conducted in Maui, Hawaii, and Kauai counties.

The main lesson learned from these exercises to date has been that response resources are inadequate outside of Oahu. At present, the Oahu emergency response team is the only one with full Level A response capability (including personal protective gear). When a chemical accident occurs on another island, the Oahu team can provide technical advice to initial responders until the Oahu responders arrive with Level A personal protection equipment. As a result of the exercises, each county now recognizes the need for an independent response capability to manage serious incidents until the Oahu team arrives, and Department of Health officials have become convinced of the need for additional personnel and equipment.

The exercises also identified communications issues relating to response coordination among agencies and between field and Emergency Operations Center personnel. One proposed solution is to equip all Department of Health district offices with cellular phones to ensure that there are no breaks in communication.

LESSONS LEARNED

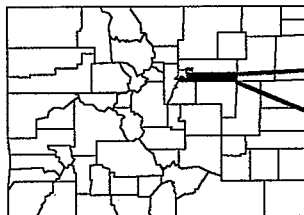
Getting the Most From Title III Data.

Hawaii's pioneering use of CAMEO to create a Title III information database, while still in the early stages, has already produced results, says Mark Ingoglia of the state Department of Health. "It's gotten everybody to pay attention to [the data], to clean it up and make it a tool, instead of just a box full of paper."

Cooperation Is the Key. In agreeing to set up a common data management system, Hawaii's LEPCs and SERC also have learned that working together has helped to identify common problems among the Title III community and foster an atmosphere conducive to developing solutions to these problems. For example, emergency response exercises conducted on islands (other than Oahu) have shown the need for each island's independent response capability, and the state, through the SERC, is supporting the development of these capabilities.

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**Arapahoe County,
Colorado**

Arapahoe County, in the suburbs of Denver, encompasses 14 different fire districts and five law enforcement jurisdictions. Arapahoe County includes several heavily used interstate highways, Lowry Air Force Base, and several major railroad systems. The largest municipality in the county, Aurora, was designated as its own planning district and has formed its own LEPC.

The Arapahoe County LEPC, operating through the Sheriff's Office, has formed two subcommittees to handle LEPC operations, the Emergency Response Subcommittee and the SARA Title III Compliance Subcommittee. The Emergency Response Subcommittee handles emergency planning, hazards analysis, and inter-jurisdictional issues, such as establishing mutual

aid agreements. The SARA Title III Compliance Subcommittee is responsible for facility compliance, public education, outreach, and information management. The two subcommittees meet in alternating months and the LEPC as a whole meets at least annually.

Planning

The Arapahoe County LEPC emergency plan covers the jurisdictions of 14 different fire departments, many of whom have their own emergency procedures. To avoid duplicative or contradictory plans, the Emergency Response Subcommittee developed an umbrella plan for the entire county, focusing on interdepartmental coordination, chain-of-

LEPC Profile

Membership: 18 members, including representatives from county government, law enforcement, local fire departments, county health department, emergency management, industry, local television and newspapers, and private citizens.

Population: 400,000

Facilities: 578 reported under sections 302, 311, and 312, including chemical processors, laboratories, chemical distributors, explosives manufactures, food processors, water treatment plants, metal plating operations, and aircraft parts manufacturers.

Topics:

- Planning
- Information Management
- Hazards Analysis
- Exercises
- Outreach
- Compliance

Inter-LEPC Coordination

An example of the successful coordination among neighboring LEPCs is the efforts of the Arapahoe County and City of Aurora LEPCs. Lowry Air Force Base is located in both the Arapahoe County and the Aurora emergency planning districts. By coordinating closely with each other and with Lowry, the two LEPCs were able to determine the resources needed from each district to supplement the Lowry resources for responding to a chemical incident at the base. As a result of this cooperative atmosphere, Lowry has offered the use of their resources, such as personnel, heavy fire fighting equipment, and evacuation equipment, to support emergency response actions undertaken by both LEPCs, including those not at Lowry Air Force Base.

command structure, mutual aid agreements, and emergency communication procedures.

This umbrella plan also includes provisions for coordination and cooperation with neighboring LEPCs. The city of Aurora and the neighboring counties of Douglas, Jefferson, Adams, and Denver are all covered by the inter-jurisdictional provisions of the Arapahoe County plan. In addition, mutual aid agreements are in place between the Arapahoe County LEPC and these neighboring LEPCs. As a result of this inter-jurisdictional coordination, the Arapahoe County LEPC has access to almost 100 fully certified hazmat responders.

The Emergency Response Subcommittee's planning efforts are also supported by the State of Colorado's Uniform Fire Code, which mandates counties to adopt a fire code requiring the submission of a facility emergency response plan to the LEPC and the local fire department by all facilities required to report under sections 311-312 of Title III. To help incorporate the facility response plans into the LEPC plan, Arapahoe County has developed the Facility Profile and Internal Contingency Plan form. Each facility is asked to provide information on the facility location, emergency coordinator and alternate(s), quantity of chemicals present, list of available material safety data sheets (MSDSs), evacuation distances for worst case accident scenarios, notification procedures, response capabilities, and vulnerable or sensitive populations near the facility. Each completed

Facility Profile and Internal Contingency Plan is then incorporated into the LEPC's umbrella plan.

The completed Facility Profile and Internal Contingency Plans are also used by the local fire departments in their code enforcement and emergency planning activities. In most cases, the local fire department and the covered facility work together to develop specific emergency procedures.

Hazards Analysis

When the LEPC receives the Facility Profile and Internal Contingency Plan, a facility identification number is assigned. With chemical information received from the facility or a computerized database, the LEPC uses National Fire Protection Association (NFPA) section 704 labelling standards, which rate, on a scale of zero to four, health, fire, reactivity, and chemical hazards of chemicals, to calculate overall facility hazard codes. The codes are then entered into the dispatch computer as part of the facility's identification information. When a call is placed to the Sheriff's Office, the dispatch officer is immediately able to provide first responders with general hazard information about the incident site.

The Facility Profile and Internal Contingency Plan forms are also examined by the LEPC to identify the facilities that present the highest likelihood of a chemical incident. The Emergency Response Subcommittee then identifies potential accident scenarios that could be simulated at these facilities in either a table-top or field simulation exercise.

Exercises

The Arapahoe County LEPC conducts exercises to test emergency response procedures, to encourage facility compliance with Title III, and to make facilities more aware of the hazards present at their sites. As a result of the hazards analysis process mentioned above, a large manufacturing facility was identified as a location for a potential field simulation because of the large quantities of chemicals stored on site. The facility agreed to participate in the exercise and helped stage the incident using facility staff and equipment.

The simulated incident involved a truck that, during unloading, rolled into a nearby tank farm and ruptured two storage tanks, releasing plumes of chlorine and ammonia into the atmosphere. The company's emergency responders coordinated with the local first responders in the simulated response. The mutual aid, emergency communications, and transportation elements of the LEPC plan were tested by this exercise. As a result, the facility recognized that the staged truck incident represented a realistic scenario and, subsequently, better isolated the loading dock area from the tank farm. The LEPC determined that the communication procedures established in the plan were inadequate. Although the plan included effective procedures for coordinating vehicles and equipment during a response, the number and type of vehicles were inadequate for evacuating large numbers of people, especially at nursing homes. Since the exercise, the emergency plan has been revised to improved communication procedures and, with the help of Lowry Air Force Base, to increase the numbers and types of vehicles available for evacuations.

The list of high-risk facilities is again being reviewed for a possible exercise in late summer 1991. One possibility being considered for the next exercise is a transportation incident along the Interstate 70 corridor. Interstate 70 is a heavily travelled commercial route with a history of chemical incidents. This exercise will utilize the LEPC's new computerized information management system.

Information Management

To improve access to Title III information, the Arapahoe County LEPC is implementing a computerized information management system to be used in the field by first responders. The computerized system consists of two parts, a computer-aided design (CAD) dispatch system and Macintosh personal computers equipped with the Computer-Aided Management of Emergency Operations (CAMEO) software package. The CAD dispatch system is used by the Sheriff's Office to track locations and activities of patrol cars and consists of a computerized city map and tracking system. The CAMEO software system was developed by EPA and the National Oceanographic and Atmospheric Administration

to assist emergency planners and first responders with their Title III information management, response, and planning activities.

When the first responders reach the incident site, they can use a Macintosh computer, a cellular phone, and a fax modem to access the CAMEO database maintained by the LEPC in the Sheriff's Office. In addition, first responders can phone or radio the dispatch officer to request that MSDSs or facility maps be sent via the fax modem to the responder's computer screen. Although this information management system has been tested by the LEPC, it has not yet been used in an actual response situation — the proposed exercise represents its first real challenge.

Outreach

To inform first responders, facilities, and the general public about the requirements of Title III, the Arapahoe County LEPC developed a series of fact sheets designed for different groups. Each fact sheet explains the purpose of Title III and the general reporting requirements. The fact sheet for the general public includes additional information about how the Title III data are made available to the public and how to use the data to identify chemical hazards in the community. The fact sheet for first responders includes additional information about the usefulness of Title III information to planning and response activities. The fact sheets for private-sector and state and local government facilities include more specific information about the reporting requirements and applicable reporting exemptions. All potentially covered facilities are provided the appropriate facility fact sheet as part of an information packet, which also includes the Facility Profile and Internal Contingency Plan form and the Arapahoe County LEPC-developed version of the Tier II form and instructions.

The Arapahoe County LEPC routinely places articles in newsletters and LEPC members attend meetings of homeowner, community, and special interest groups to foster awareness of Title III, the role of the LEPC, and chemical hazards in the community. One such special interest group is the "Interstate 70 Corridor Group." This group consists of first responders from businesses, law enforcement, and local fire

departments which meets monthly to discuss issues such as chemical incidents and traffic control. On several occasions, members of the Arapahoe County LEPC have responded to incidents along I-70 and, as a result, the I-70 Group is being approached to participate in a possible transportation-related exercise in late summer 1991.

Compliance

Rather than use limited LEPC resources to conduct mass mailings, the Arapahoe County LEPC chose to use an existing fire inspection program to disseminate Title III information, identify subject facilities, and encourage compliance with the provisions of Title III. Under Colorado's Uniform Fire Code, local fire departments in Arapahoe County regularly identify and inspect both new and existing facilities in their jurisdictions for potential fire hazards.

Many provisions of the Uniform Fire Code parallel the requirements of Title III. For example, the fire code requires that MSDSs be submitted to the local emergency planning authority, which in Arapahoe County is the LEPC. Because the Uniform Fire Code is enforced at the local level, the Arapahoe County LEPC encourages compliance with the provisions of Title III by working with the local fire department to enforce the parallel provisions of the Uniform Fire Code.

During a fire code inspection, if a facility is identified as being potentially subject to Title III and has not reported to the LEPC, the fire inspector gives the facility owner/operator a copy of the facility information packet and records the receipt of the information and documents the violation in the inspection report. The identified facilities are reported to the LEPC Emergency Response Subcommittee monthly. Each facility not in compliance is contacted by the LEPC, which offers assistance in complying with the Title III provisions. The facility is then given two weeks (the time allowed to respond to a Uniform Fire Code violation) to comply with the provisions of Title III.

If nothing is submitted by the facility, the facility is contacted again by the LEPC with another offer of assistance and is given another two weeks to comply (per the Uniform Fire Code). If no reports are then forthcoming, the Sheriff's Office informs the facility of the penalties for noncompliance (called a Hazard Notice). The facility is then given seven days and if no reports are submitted by the facility, a summons is issued for the facility owner/operator to appear before a judge to explain this lack of compliance and face possible fines and/or a jail sentence.

Violations of the Uniform Fire Code are misdemeanors with penalties up to \$1,000 and/or a jail sentence of up to 12 months per violation. In addition, every day a facility is out of compliance with the Uniform Fire Code (the time between when the Hazard Notice is received and the summons is issued) can be considered a separate violation under the Uniform Fire Code. Therefore, a facility that does not respond to the Hazard Notice and receives a summons could be assessed penalties for a minimum of seven violations (one for each day between the issuance of the Hazard Notice and the issuance of the summons).

To date, the Arapahoe County LEPC has issued only two summonses for non-compliance with Title III. Both of these cases were settled out of court and the facilities are now in compliance. Most of the facilities that do not immediately comply are unfamiliar with the requirements and need assistance to determine their reporting responsibilities.

LESSONS LEARNED

Piggyback on Existing Programs. Like many LEPCs, the Arapahoe County LEPC was faced with implementing and enforcing Title III on a small budget. Because of the LEPC's commitment to assist first responders by providing Title III information, the LEPC considers identifying all subject facilities very important. Because many provisions of the Uniform Fire Code parallel Title III requirements, the LEPC is able to improve compliance with Title III by enforcing the Uniform Fire Code. The local fire departments,

with their extensive knowledge of facilities in their jurisdictions and their existing inspection program, provide the LEPC with an excellent resource for identifying facilities subject to Title III. Through the innovative use of the Uniform Fire Code, the Arapahoe County LEPC is able to effectively bring facilities into compliance with Title III despite limited resources.

Provide the Tools, Improve the Results. When the Arapahoe County LEPC first approached the various local fire departments with their proposal to have firefighters identify facilities and distribute information about Title III, the proposal was met with much resistance. The local fire departments already had plenty to do with their own jobs. The LEPC provided training to the firefighters on Title III and, more important, the LEPC illustrated the usefulness of the information collected under the Title III to improving the fire department's emergency response capabilities. As a result, the local fire departments have become a very active and knowledgeable component of the LEPC's efforts to improve compliance with Title III.

Similarly, many facilities are wary of reporting requirements due to a lack of knowledge of the regulatory program. By providing the facility information packets and continuous offers of assistance, the LEPC has not only increased the number of facilities in compliance, but also improved the quality of the information submitted.

Build on Existing Plans and Procedures. Prior to Title III, many organizations had developed their own emergency response procedures. In Arapahoe County, the local fire departments had their own emergency procedures, the Lowry Air Force Base had a site contingency plan, and many facilities had standard operating and emergency procedures. Rather than starting from scratch, the Arapahoe County LEPC decided to develop an umbrella plan to coordinate existing plans and procedures. As a

result, the Arapahoe County LEPC has conserved valuable resources and integrated facility-specific information into an LEPC plan that can be easily updated. Because the LEPC umbrella plan coordinates existing plans and sponsors regular exercises, fire department and facility first responders are familiar with each other's procedures and their roles within the LEPC's umbrella plan.

Coordination Encourages Cooperation. A single local emergency planning district often does not have available all the resources necessary to respond to a large-scale incident. The Arapahoe County LEPC recognized that, during an emergency, the county response resources may need to be supplemented. The LEPC then began an active coordination effort with neighboring LEPCs, stressing not only what Arapahoe needed but also what Arapahoe could offer to assist them. The Arapahoe County LEPC used the same approach when contacting subject facilities. By taking the lead in coordinating neighboring LEPCs and facilities into their emergency plan, the Arapahoe County LEPC has successfully created an atmosphere of cooperation not only with neighboring LEPCs but also with facilities within the district.

Industry Must be Aware of Accidents Waiting to Happen. The Arapahoe County LEPC believes that field simulation exercises are important not only to test the provisions of the LEPC plan, but also to make facilities aware of chemical hazards at their sites and identifying ways to mitigate those hazards. The key is effective facility emergency planning to identify, prepare for, and prevent all possible hazards.

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States by Region

4 - Alabama
10 - Alaska
9 - Arizona
6 - Arkansas
9 - California
8 - Colorado
1 - Connecticut
3 - Delaware
3 - D.C.
4 - Florida
4 - Georgia
9 - Hawaii
10 - Idaho
5 - Illinois
5 - Indiana
7 - Iowa
7 - Kansas
4 - Kentucky
6 - Louisiana

1 - Maine
3 - Maryland
1 - Massachusetts
5 - Michigan
5 - Minnesota
4 - Mississippi
7 - Missouri
8 - Montana
7 - Nebraska
9 - Nevada
1 - New Hampshire
2 - New Jersey
6 - New Mexico
2 - New York
4 - North Carolina
4 - North Dakota
5 - Ohio
6 - Oklahoma

10 - Oregon
3 - Pennsylvania
1 - Rhode Island
4 - South Carolina
8 - South Dakota
4 - Tennessee
6 - Texas
8 - Utah
1 - Vermont
3 - Virginia
10 - Washington
3 - West Virginia
5 - Wisconsin
8 - Wyoming
9 - American Samoa
9 - Guam
2 - Puerto Rico
2 - Virgin Islands

More Successful Practices

Additional **Successful Practices in Title III Implementation** technical assistance bulletins are available from your Regional Chemical Emergency Preparedness and Prevention Coordinator (see the listing on the preceding page), or call the Emergency Planning and Community Right-to-Know Information Hotline at (800) 535-0202. The following bulletins are currently available:

Successful Practices #1

Doc. # OSWER-89-006.1, January 1989.

- State of Kansas
- Washtenaw County, Michigan
- Butler County, Kansas
- Jefferson County, Kentucky

Successful Practices #2

Doc. # OSWER-89-006.2, August 1989

- Calhoun County, Alabama
- Pampa, Texas
- State of Wisconsin
- Cuyahoga County, Ohio
- Racine County, Wisconsin
- State of Idaho

Successful Practices #3

Doc. # OSWER-89-006.3, December 1989.

- Woodbury County, Iowa
- State of Virginia
- Fairfax County, Virginia
- Pierce County, Washington

Successful Practices #4

Doc. # OSWER-90-006.1, March 1990.

- New York, New York
- El Paso County, Colorado
- Alexandria, Virginia
- State of Maine

Successful Practices #5

Doc. # OSWER-90-006.2, June 1990.

- Tinker Air Force Base, Oklahoma
- State of Connecticut
- Cumberland County, Maine
- Wyandotte County, Kansas

Successful Practices #6

Doc. # OSWER-90-006.3, September 1990.

- State of Ohio
- Hamilton County, Ohio
- Wallingford, Connecticut
- Ouachita Parish, Louisiana

Successful Practices #7

Doc. # OSWER-91-006.1, February 1991.

- Cameron County, Texas
- Bucks County, Pennsylvania
- Harford County, Maryland
- Dallas County, Texas

Successful Practices #8

Doc. # OSWER-91-006.2, October 1991.

- Cherry Hill, New Jersey
- Manitowoc County, Wisconsin
- Greene County, Missouri
- State of Hawaii
- Arapahoe County, Colorado

Successful Practices in Title III Implementation: Subject Index*

Compliance (Enforcement):

Kansas (SP1:4); Idaho (SP2:14-15); Arapahoe County, Colorado (SP8:26-27)

Identifying/contacting facilities:

Calhoun County, Alabama (SP2:1-2); Fairfax County, Virginia (SP3:9); Alexandria, Virginia (SP4:13); Wyandotte County, Kansas (SP5:15-16); Tinker Air Force Base, Oklahoma (SP5:2); Hamilton County, Ohio (SP6:11); Bucks County, Pennsylvania (SP7:11); Wisconsin (SP2:8); New York, New York (SP4:3-4); Cameron County, Texas (SP7:4)

Inspections:

Racine County, Wisconsin (SP2:12); Pampa, Texas (SP2:4-5)

Emergency Plans:

Jefferson County, Kentucky (SP1:9-10); Idaho (SP2:14); Pierce County, Washington (SP3:13); Tinker Air Force Base, Oklahoma (SP5:2); Bucks County, Pennsylvania (SP7:10-11)

Community Consequences:

Racine County, Wisconsin (SP2:12-13); Wallingford, Connecticut (SP6:13)

Coordination with other LEPCs and communities:

Dallas County, Texas (SP7:19); Harford County, Maryland (SP7:14-15); Arapahoe County, Colorado (SP8:23)

Existing plans:

Cumberland County, Maine (SP5:10-11); Cherry Hill, New Jersey (SP8:1)

Facility input:

New York, New York (SP4:3); Hamilton County, Ohio (SP6:9); Wyandotte County, Kansas (SP5:14-15); El Paso County, Colorado (SP4:6-7); Cuyahoga County, Ohio (SP2:10)

Facility plans:

Fairfax County, Virginia (SP3:9)

Hazard analysis:

Alexandria, Virginia (SP4:11-12); Butler County, Kansas (SP1:7)

Planning guidance:

Connecticut (SP5:5-6); New York, New York (SP4:2), Kansas (SP1:3)

Public alert and notification system:

Wyandotte County, Kansas (SP5:17)

Structure:

Ohio (SP6:1-2)

*The citation provided for each profile refers to the issue number (SP3 refers to the third issue of Successful Practices) and the page number within that issue.

Exercises:**Decontamination:**

Greene County, Missouri (SP8:14)

Evacuation and sheltering:

Arapahoe County, Colorado (SP8:24); Greene County, Missouri (SP8:14)

Field programs:

Woodbury County, Iowa (SP3:2); Cumberland County, Maine (SP5:11); Hamilton County, Ohio (SP6:9-10); Wallingford, Connecticut (SP6:13-14); Ouachita Parish, Louisiana (SP6:21-22); Hawaii (SP8:21); Manitowoc County, Wisconsin (SP8:8); Arapahoe County, Colorado (SP8:24)

Table-top programs:

Hartford County, Maryland (SP7:15); Dallas County, Texas (SP7:20); Hamilton County, Ohio (SP6:9-10); Cumberland County, Maine (SP5:11)

Funding:**Donations:**

Jefferson County, Kentucky (SP1:10); Calhoun County, Alabama (SP2:2); Pierce County, Washington (SP3:14); Cameron County, Texas (SP7:4); Bucks County, Pennsylvania (SP7:9)

Fee systems:

Kansas (SP1:4); Washtenaw County, Michigan (SP1:5); Calhoun County, Alabama (SP2:2); Wisconsin (SP2:7); Fairfax County, Virginia (SP3:10); Maine (SP4:16-18); Ohio (SP6:3)

Grants:

Connecticut (SP5:6)

State and local agency budgets:

Jefferson County, Kentucky (SP1:10); Wisconsin (SP2:7); Connecticut (SP5:6); Ohio (SP6:3); Bucks County, Pennsylvania (SP7:9); Hartford County, Maryland (SP7:16); Dallas County, Texas (SP7:20)

Hazards Analysis:**Hazard identification:**

Cuyahoga County, Ohio (SP2:9-10); Wyandotte County, Kansas (SP5:13-14); Hamilton County, Ohio (SP6:7-9); Arapahoe County, Colorado (SP8:23-24); Alexandria, Virginia (SP4:11-12)

Hazards Incidents Complexity Analysis:

Kansas (SP1:3); Wyandotte County, Kansas (SP5:13-14)

Risk analysis:

Hamilton County, Ohio (SP6:8-9); Dallas County, Texas (SP7:19)

Transportation:

Kansas (SP1:3); Butler County, Kansas (SP1:7); Alexandria, Virginia (SP4:11-12)

Vulnerability zones:

Cuyahoga County, Ohio (SP2:9); Hamilton County, Ohio (SP6:7-9); Wallingford, Connecticut (SP6:14-15); Greene County, Missouri (SP8:13-14)

Information Management (Computer Systems):**CAMEO:**

Jefferson County, Kentucky (SP1:10); Racine County, Wisconsin (SP2:13); Pampa, Texas (SP2:5); El Paso County, Colorado (SP4:7); New York, New York (SP4:2); Wallingford, Connecticut (SP6:14); Hamilton County, Ohio (SP6:10); Bucks County, Pennsylvania (SP7:8); Arapahoe County, Colorado (SP8:25); Hawaii (SP8:17-19); Greene County, Missouri (SP8:13); Cherry Hill, New Jersey (SP8:2-3); Wyandotte County, Kansas (SP5:16)

Conversion software:

Greene County, Missouri (SP8:13)

dBase:

El Paso County, Colorado (SP4:7); Bucks County, Pennsylvania (SP7:9)

Dispatch system:

Bucks County, Pennsylvania (SP7:9)

Modified reporting format:

Ohio (SP6:2), Ouachita Parish, Louisiana (SP6:20), Hawaii (SP8:19)

Networks:

Idaho (SP2:15)

"Packet" radio:

El Paso County, Colorado (SP4:7); Cherry Hill, New Jersey (SP8:3)

Software programs:

Kansas (SP1:3-4); Pampa, Texas (SP2:5-6); Virginia (SP3:5-6); Fairfax County, Virginia (SP3:9-10); New York, New York (SP4:1-2); Tinker Air Force Base, Oklahoma (SP5:2-3); Connecticut (SP5:6-7); Hamilton County, Ohio (SP6:10); Ouachita Parish, Louisiana (SP6:21); Bucks County, Pennsylvania (SP7:8); Arapahoe County, Colorado (SP8:25)

Worksheet forms:

Washtenaw County, Michigan (SP1:5)

LEPC Coordination:**Coordination with SERC:**

Hamilton County, Ohio (SP6:10); Kansas (SP1:2)

Federal facilities:

Tinker Air Force Base, Oklahoma (SP5:1)

Inter-LEPC coordination:

Virginia (SP3:4-5); Alexandria, Virginia (SP4:12-13); Wyandotte County, Kansas (SP5:17); Woodbury County, Iowa (SP3:3)

International coordination:

Maine (SP4:18); Cameron County, Texas (SP7:1-3)

LEPC Organization:**Pre-SARA/Title III organizations:**

Bucks County, Pennsylvania (SP7:7-8); Cherry Hill, New Jersey (SP8:1); Hawaii (SP8:19-20); Racine County, Wisconsin (SP2:11); Woodbury County, Iowa (SP3:1-2)

Subcommittees:

Calhoun County, Alabama (SP2:2); Ouachita Parish, Louisiana (SP6:17-18); Bucks County, Pennsylvania (SP7:7-8); Greene County, Missouri (SP8:11-13); Pampa, Texas (SP2:4); Jefferson County, Kentucky (SP1:10)

Liability:

Virginia (SP3:5); Pierce County, Washington (SP3:15); Maine (SP4:16)

Outreach Programs:

Wisconsin (SP2:8); Hawaii (SP8:19)

Agriculture:

Racine County, Wisconsin (SP2:11-12); Manitowoc County, Wisconsin (SP8:6-7)

Audio/Visual Aids:

Virginia (SP3:4-5); Ohio (SP6:2-3); Harford County, Maryland (SP7:15); Cherry Hill, New Jersey (SP8:4)

Brochures, factsheets, and booklets:

Kansas (SP1:2); Cuyahoga County, Ohio (SP2:10); Idaho (SP2:14); New York, New York (SP4:4); Hamilton County, Ohio (SP6:10); Wallingford, Connecticut (SP6:15); Harford County, Maryland (SP7:15); Arapahoe County, Colorado (SP8:25)

Guidelines:

Cuyahoga County, Ohio (SP2:10); Virginia (SP3:4-5)

Industry:

Virginia (SP3:4-5)

Lectures & workshops:

Butler County, Kansas (SP1:7); Idaho (SP2:14); Pierce County, Washington (SP3:14); New York, New York (SP4:4); Connecticut (SP5:7); Dallas County, Texas (SP7:20); Cameron County, Texas (SP7:4); Manitowoc County, Wisconsin (SP8:6-8)

Library displays:

Pierce County, Washington (SP3:14); El Paso County, Colorado (SP4:8);

Local government:

Cherry Hill, New Jersey (SP8:4)

Mailing lists:

New York, New York (SP4:4)

Outreach Programs (continued):**Media Use (TV, radio, newspaper):**

Kansas (SP1:3); Butler County, Kansas (SP1:7); Woodbury County, Iowa (SP3:2); Fairfax County, Virginia (SP3:10); Pierce County, Washington (SP3:14); El Paso County, Colorado (SP4:8); Tinker Air Force Base, Oklahoma (SP5:3); Ouachita Parish, Louisiana (SP6:18-20); Cameron County, Texas (SP7:4); Dallas County, Texas (SP7:20); Manitowoc County, Wisconsin (SP8:6-8); Harford County, Maryland (SP7:15)

Public schools:

El Paso County, Colorado (SP4:8)

Prevention:

Washtenaw County, Michigan (SP1:5); Hamilton County, Ohio (SP6:11)

Public Alert System:

Wyandotte County, Kansas (SP5:17)

Reporting Modifications:

Ohio (SP6:2); Ouachita Parish, Louisiana (SP6:20); Hawaii (SP8:19)

Right-to-Know Laws:

Washtenaw County, Michigan (SP1:5); Wisconsin (SP2:8); Maine (SP4:15-16); Wyandotte County, Kansas (SP5:16-17); New York, New York (SP4:4)

Section 313 Data:**Accessibility and analysis:**

Connecticut (SP5:8); El Paso County, Colorado (SP4:9); Ohio (SP6:3-5); Dallas County, Texas (SP7:18); Virginia (SP3:6)

Compliance:

Fairfax County, Virginia (SP3:8); Ohio (SP6:4)

Special Planning Features:**Chemical Stockpile Disposal Program facilities:**

Harford County, Maryland (SP7:16)

Federal facilities:

Tinker Air Force Base, Oklahoma (SP5:2); Harford County, Maryland (SP7:14)

Nursing homes:

Cherry Hill, New Jersey (SP8:4)

Schools:

Wallingford, Connecticut (SP6:13); Harford County, Maryland (SP7:14)

Special Planning Features (continued):**Transportation:**

Alexandria, Virginia (SP4:11-12); Ouachita Parish, Louisiana (SP6:21-22)

Training Programs:**Coordination with government organizations:**

Virginia (SP3:4); El Paso County, Colorado (SP4:8); Tinker Air Force Base, Oklahoma (SP5:3); Connecticut (SP5:7); Bucks County, Pennsylvania (SP7:11); Hawaii (SP8:20)

Facility management personnel:

Tinker Air Force Base, Oklahoma (SP5:3); Bucks County, Pennsylvania (SP7:11)

First-responders:

Pierce County, Washington (SP3:13-14); El Paso County, Colorado (SP4:8); Tinker Air Force Base, Oklahoma (SP5:3); Connecticut (SP5:7); Cumberland County, Maine (SP5:11); Wallingford, Connecticut (SP6:15); Harford County, Maryland (SP7:15); Cherry Hill, New Jersey (SP8:3-4); Cameron County, Texas (SP7:3)

Hazmat team personnel:

Jefferson County, Kentucky (SP1:9); Pampa, Texas (SP2:5); Virginia (SP3:4); Connecticut (SP5:7); Harford County, Maryland (SP7:15); Hawaii (SP8:20)

LEPC:

Kansas (SP1:3); Virginia (SP3:4); Alexandria, Virginia (SP4:13-14); Connecticut (SP5:7)

Medical personnel:

Racine County, Wisconsin (SP2:12)

Potential CAMEO users:

Cherry Hill, New Jersey (SP8:3-4)

Public:

Bucks County, Pennsylvania (SP7:11)

Train-the-Trainer:

Idaho (SP2:15); Maine (SP4:18); Cherry Hill, New Jersey (SP8:4)

Vulnerability Analysis:

Cuyahoga County, Ohio (SP2:9); Hamilton County, Ohio (SP6:8); Wallingford, Connecticut (SP6:14-15); Greene County, Missouri (SP8:13-14)

HIRT:

Bucks County, Pennsylvania (SP7:11)

