

REPORT BY THE
AUDITOR GENERAL
OF CALIFORNIA

**OPPORTUNITIES EXIST TO STRENGTHEN
THE STATE'S SYSTEMS FOR RESPONDING TO
EMERGENCIES INVOLVING HAZARDOUS MATERIALS**

REPORT BY THE
OFFICE OF THE AUDITOR GENERAL
TO THE
JOINT LEGISLATIVE AUDIT COMMITTEE

106

OPPORTUNITIES EXIST TO
STRENGTHEN THE STATE'S SYSTEMS
FOR RESPONDING TO EMERGENCIES
INVOLVING HAZARDOUS MATERIALS

APRIL 1982



California Legislature

SENATE MEMBERS
 ALFRED E. ALQUIST
 RUBEN S. AYALA
 ROBERT G. BEVERLY
 PAUL CARPENTER
 JOHN DOOLITTLE
 KEN MADDY
 VICE CHAIRMAN
 ROBERT PRESLEY

ASSEMBLY MEMBERS
 LEROY F. GREENE
 CHARLES IMBRECHT
 ERNEST KONNYU
 RICHARD ROBINSON
 MARILYN RYAN
 JOHN VASCONCELLOS

STAFF
 WALTER J. QUINN
 CHIEF CONSULTANT
 ROBERT W. LUCAS
 PRINCIPAL CONSULTANT
 CHARLES T. SCHULTZ
 SENIOR CONSULTANT
 GWEN YOUNKER
 COMMITTEE SECRETARY

Joint Legislative Audit Committee

925 L STREET, SUITE 750
 SACRAMENTO, CALIFORNIA 95814
 (916) 445-0371

WALTER M. INGALLS
 CHAIRMAN

April 20, 1982

106

The Honorable President pro Tempore of the Senate
 The Honorable Speaker of the Assembly
 The Honorable Members of the Senate and the
 Assembly of the Legislature of California

Members of the Legislature:

The Joint Legislative Audit Committee respectfully submits the Auditor General's report on the management of hazardous spills on California's streets and highways. This report entitled "Management of Hazardous Spills on California's Streets and Highways" was prepared by the Office of the Auditor General in response to a request by Assemblywoman Sally Tanner, Chairwoman of the Assembly Committee on Consumer Protection and Toxic Materials.

This report focuses on the need to improve procedures for responding to emergencies involving spills of hazardous materials. The report concludes that at the local level, additional training, coordination of emergency responses, and planning for spills needs to be improved.

I am confident that if these findings are acted upon that scene management of hazardous spills can be improved so that public safety will be increased.

Sincerely,

WALTER M. INGALLS
 Chairman, Joint Legislative
 Audit Committee

TABLE OF CONTENTS

	<u>Page</u>
SUMMARY	i
INTRODUCTION	1
CHAPTER	
I OPPORTUNITIES EXIST TO STRENGTHEN THE STATE'S SYSTEMS FOR RESPONDING TO EMERGENCIES INVOLVING <u>HAZARDOUS MATERIALS</u>	10
LOCAL RESPONSE AGENCIES NEED IMPROVED CONTINGENCY PLANNING	12
MORE TRAINING COULD ENHANCE THE CAPABILITY TO RESPOND TO EMERGENCIES	26
AUTHORITY FOR ON-SCENE MANAGEMENT NEEDS CLARIFICATION	35
CHAPTER	
II <u>CONCLUSIONS AND RECOMMENDATIONS</u>	41
RESPONSES TO THE AUDITOR GENERAL'S REPORT	
Office of Emergency Services	46
California Highway Patrol	47
State Fire Marshal	50
California Specialized Training Institute	52
APPENDIX	
A OTHER STATE AND FEDERAL AGENCIES WITH RESPONSIBILITIES FOR RESPONDING TO INCIDENTS INVOLVING HAZARDOUS MATERIALS	A-1

SUMMARY

We have reviewed the State's systems for responding to emergencies involving hazardous materials. The goal of these systems is to protect the public and the environment from hazards that occur because of the accidental spill and release of toxic substances. Although state and local agencies have taken steps to prepare for emergency situations, local emergency response organizations need better contingency planning and personnel training, and the coordination of agencies at the scenes of incidents needs improvement. As a result of these deficiencies, the State is not assured of an efficient system for responding to emergencies involving hazardous materials.

State and local agencies develop plans to guide the emergency response to incidents involving hazardous materials. These plans may include such procedures for coordinated response as notifications and communication, designation of a scene manager, and methods for cleanup and abatement. We found that while most counties have plans, the plans often provide inadequate detail about operational tasks. Also, only 43 percent (172 of 404) of the fire and police agencies that responded to our survey have plans, and local agencies

frequently have neither assessed potential hazards in their areas nor conducted emergency response exercises. Problems can occur at incidents involving hazardous materials if planning is not adequate.

In addition, local agencies need to improve training in methods for handling hazardous materials because untrained response personnel have been injured at incidents involving hazardous materials. Over 70 percent (274 of 390) of the fire and police agencies that responded to our survey reported that they lacked adequate training. In addition, the training that is provided does not always meet local needs because of problems in the content of the training courses and in the methods of presentation. Local agencies indicated that they did not provide training because it is too costly and because of insufficient staffing. Further, the training program provided by the State did not meet its training goal.

Finally, the authority for coordinating emergency response agencies at the scene of incidents needs to be clarified. Some local governments are improperly delegating the management of on-highway scenes to fire agencies rather than to law enforcement agencies. Although some officials we contacted reported that fire agencies are generally better prepared and better equipped than law enforcement agencies at the local level, this delegation violates state law and may

result in breach-of-duty suits. If the authority for scene management is not clearly designated, the response to off-highway incidents may also not be coordinated. Local agencies report that situations may occur in which recommended courses of action conflict and in which no single agency assumes management responsibility.

The State can take several actions to assist local agencies in improving preparedness for emergencies involving hazardous materials. While state and local agencies have planned and taken actions in some cases, additional efforts are needed.

To address weaknesses in the State's systems for responding to emergencies involving hazardous materials, we recommend that the Office of Emergency Services (OES) develop guidelines and provide technical assistance to local agencies preparing contingency plans for responding to such incidents. The OES should also establish a framework for coordinating training programs addressing hazardous materials. Further, the California Highway Patrol (CHP) should assess the training needs of local agencies to ensure that sufficient and adequate training is provided to response personnel. Finally, the OES and the CHP should encourage the designation of the authority for the scene management of off-highway incidents involving hazardous materials.

The Legislature may also wish to consider providing local agencies with greater flexibility in their delegation of authority for scene management. This flexibility would help to ensure that all incidents have a designated manager with sufficient expertise to handle emergencies involving hazardous materials.

INTRODUCTION

In response to a request by the Joint Legislative Audit Committee, we have reviewed the State's systems for responding to emergencies involving hazardous materials. This review is the second report by the Auditor General about hazardous materials.* It was conducted under the authority vested in the Auditor General by Sections 10527 through 10528 of the Government Code.

BACKGROUND

This section discusses the risks posed by hazardous materials, the need for emergency preparedness, and the state, federal, and local response systems for handling emergencies involving hazardous materials. This section also includes the scope and methodology of our review.

* The first report (P-053, October 1981) was entitled "California's Hazardous Waste Management Program Does Not Fully Protect the Public From the Harmful Effects of Hazardous Waste."

Risks Posed by
Hazardous Materials

The accidental release of hazardous materials poses a substantial risk to the public health and safety and to the environment. Hazardous materials may include industrial by-products and chemical substances that have toxic, flammable, explosive, corrosive, or radioactive characteristics. When released in the environment, these substances can cause property damage, personal injuries, and death. Transportation accidents can cause the release of hazardous materials, but such incidents may also result from improper handling at manufacturing, storage, and disposal sites and from illegal dumping.

Reported instances of accidents and spills involving hazardous materials are widespread. The federal Department of Transportation (DOT) reported 120,461 incidents nationwide during an 11-year period from 1971 to 1981. The DOT also reported that 261 people were killed and 7,549 injured as a direct result of these incidents. Property losses and clean-up costs were reported to be approximately \$134 million. For California, the DOT reported for the same period approximately 5,200 accidents and spills, which resulted in 624 injuries and over \$10 million in property losses and cleanup costs.

Federal, State, and Local
Requirements For Emergency Response

Recognizing the need to protect the public health and safety and the environment from such incidents, federal, state, and local governments have enacted laws and ordinances for integrated emergency response systems. These systems are designed to ensure safe and efficient responses to mitigate the effects of hazardous materials and to reduce the likelihood of incidents becoming disasters.

The Federal Clean Water Act calls for the development of a national contingency plan for the purpose of minimizing damage to navigable waters and federal lands from discharges of oil and other hazardous substances. The act further provides for the establishment of a national team consisting of personnel who are trained, prepared, and available to provide necessary services to carry out the plan. This team generally responds to incidents that are beyond the capability of local and state organizations, and it generally responds at the request of a designated federal coordinator. Federal legislation also encourages state agencies to prepare for disasters, and it provides funding to reimburse state governments for the costs incurred in responding to incidents involving hazardous materials.

The California Emergency Services Act delineates state requirements for responding to emergencies. This act provides for the development of a contingency plan for responding to toxic disasters within the State, and it requires the plan to coordinate and integrate state agency resources to ensure safe and effective responses. State and local disaster councils have been created to develop and implement coordinated systems for responding to emergencies.

The State may also provide financial and technical assistance to government subdivisions during emergencies involving hazardous materials. State agencies provide training in emergency preparedness to state and local response personnel. In addition, limited state funding is available to provide training to local personnel and to assist local governments in providing equipment and cleanup at the sites of such incidents.

Local governments have the primary responsibility for responding to incidents involving hazardous materials that occur within their jurisdictions. Local contingency plans, disaster councils, and local ordinances delineate the specific roles and responsibilities of their respective agencies. In general, local governments respond first to such incidents and

provide initial notification to other local, state, and federal organizations. Local governmental agencies are also responsible for providing aid to each other during these incidents.

Agencies That Respond to Incidents Involving Hazardous Materials

Various local, state, and federal agencies are responsible for conducting the response planning and operations that laws and contingency plans require. A list of the major agencies and descriptions of their responsibilities follows. Appendix A lists other state and federal agencies that are responsible for responding to emergencies involving hazardous materials.

Fire Agencies

Fire prevention, fire suppression, and rescue are the responsibilities of the local fire agencies. Such agencies may include municipal fire departments, local fire districts (paid and volunteer), and county fire departments, as well as the California Department of Forestry, and the U.S. Forest Service. Fire agencies may be responsible for managing the scenes of hazardous materials incidents not occurring on highways

("off-highway" incidents). . . In metropolitan areas, fire agencies are frequently considered to have the best local expertise in controlling hazardous materials.

Law Enforcement Agencies

Except as otherwise delegated to the California Highway Patrol, local police departments and county sheriffs have major responsibility for law enforcement, traffic control, and scene management during incidents involving hazardous materials that occur on certain streets and highways. Police departments generally are responsible for traffic control and law enforcement and scene management on city streets. County sheriff departments are responsible for law enforcement in the unincorporated areas of their counties, excluding roads, and, in some counties, they provide full police services through contracts with cities. In most counties, the sheriff coordinates law enforcement mutual-aid operations. That is, in an emergency situation that may require the combined response of several law enforcement agencies, the sheriff may coordinate the assignment of law enforcement resources within his county.

County Offices
of Emergency Services

County offices of emergency services are responsible for carrying out planning, notification, and coordination for incidents involving hazardous materials. The local offices develop county emergency plans and serve as centers for establishing policy and for coordinating responses.

California Highway Patrol

The California Highway Patrol (CHP) has primary responsibility for traffic supervision and control on the state highways and on those highways that lie within unincorporated areas of the State. The CHP has been mandated to provide a central notification and reporting mechanism for the State and to manage the scenes of incidents involving hazardous materials that occur on state highways. Finally, the CHP will assume the statewide training program for emergency personnel responding to such incidents.

Office of Emergency Services

The Legislature has mandated the Office of Emergency Services (OES) to develop a "Toxic Disaster Contingency Plan" that provides integrated and effective state procedures for responding to toxic disasters within the State. The plan is to provide for the coordination of training efforts among state

agencies, and the centralized notification and reporting of incidents. The plan will also delineate the specific responsibilities of individual agencies in implementing the plan. The OES also helps local governments generally to prepare for emergencies by developing guidelines and by reviewing the plans developed by local agencies.

SCOPE AND METHODOLOGY

The objective of our review was to determine the effectiveness of the State's systems for responding to emergencies involving hazardous materials. We focused our review on state and local agencies' efforts to prepare for and respond to such emergencies. Specifically, we examined contingency planning, training, and on-scene management.

We reviewed laws and regulations that apply to state and local agencies' efforts to prepare for responding to incidents involving hazardous materials. We interviewed officials and examined reports, plans, and policies at state agencies that are responsible for responding to such incidents. We also interviewed officials at 12 local fire and police departments in six metropolitan areas and contacted county offices of emergency services. In addition, we sent a questionnaire to 657 fire and police departments, representing

both urban and rural areas in all geographic regions in the State, to determine the efforts of local agencies to respond to these incidents.

In Chapter I we discuss problems in local agency training and planning and in the coordination of response actions at the scenes of incidents involving hazardous materials. Chapter II provides our conclusions and recommendations for state actions to assist local agencies in improving their preparedness for responding to emergencies.

CHAPTER I

OPPORTUNITIES EXIST TO STRENGTHEN THE STATE'S SYSTEMS FOR RESPONDING TO EMERGENCIES INVOLVING HAZARDOUS MATERIALS

The State's systems for responding to incidents involving hazardous materials need improvement. Although state and local agencies have made efforts to improve emergency preparedness, many local response agencies are not sufficiently prepared to ensure that these incidents are handled safely and efficiently. Problems with local agencies' planning and training inhibit the effectiveness of responses to emergencies. While almost two-thirds of the counties have contingency plans for handling incidents involving hazardous materials, these plans lack details on important response actions, and in one-fourth of the counties represented in our survey, responses of fire and law enforcement agencies indicate the agencies may be unfamiliar with county plans. Our review disclosed that problems occurring at actual incidents may have been avoided if better planning and training had been available.

Of the fire and police agencies that answered our survey, only 43 percent (172 of 404) have specific plans for response even though these agencies are typically the first ones to arrive at incidents involving hazardous materials.

Furthermore, over 70 percent (274 of 390) of the fire and police agencies that answered our survey reported that their personnel lacked adequate training in methods for the safe handling of such incidents.

In addition, the responsibility for the scene management of incidents involving hazardous materials needs to be clarified. Although state law delegates the authority for on-highway scene management to law enforcement agencies, the authority for off-highway incidents is not specified by statute. This lack of clarification may contribute to confusion and poorly coordinated responses. Also, some local law enforcement agencies lack the necessary expertise and resources to manage the scenes of emergencies involving hazardous materials, and they have delegated their responsibility to fire departments. Although this delegation of the authority for scene management violates state law, such delegation to better-prepared agencies may be an appropriate local decision.

As a result of these problems, the State is not assured of an efficient system for responding to emergencies involving hazardous materials. Without such a system, a greater potential exists for incidents to become disasters, thereby increasing risks to the public and to the environment.

LOCAL RESPONSE AGENCIES NEED
IMPROVED CONTINGENCY PLANNING

Local planning for emergencies involving hazardous materials needs improvement. State laws and federal regulations require contingency planning to ensure the safe and proper handling of such emergencies. In addition, state law requires local jurisdictions to prepare for emergencies. While most counties in California have developed contingency plans for emergencies involving hazardous materials, county plans often lack sufficient detail on emergency procedures to ensure that agencies respond effectively. In addition, most of the fire and police agencies that answered our survey lack specific plans for responding to such emergencies, yet these agencies are typically first on the scene. Further, many of these agencies reported that a systematic identification of potential hazards has not been made. Survey respondents also reported that few emergency test exercises have been conducted within their jurisdictions.

As a result of problems in local agency planning, the State has little assurance that emergencies involving hazardous materials will be handled safely and efficiently. We found that better planning could have reduced the confusion and lack of coordination at several recent incidents involving hazardous materials.

Many of the local agencies that answered our survey reported that plans for hazardous materials incidents were not developed because the agencies rely on general emergency procedures. Further, 41 agencies do not perceive a need to develop specific plans for responding to incidents involving hazardous materials. Also, over 29 percent of those local agencies that do not have plans reported that they lack the staff-time required to develop them.

Incidents Demonstrate the Need for Emergency Plans

Recent incidents have demonstrated the need for local response agencies to improve their response efforts by including key planning elements.

One such incident involved a chemical tank truck that leaked acid wastes on an interstate freeway. A toxic cloud formed from the combination of acids and heavy metals, causing 30 people to be treated at local hospitals for throat and eye irritation, headaches, and toxic exposure. The response to this emergency demonstrates problems that could have been reduced by careful planning. These problems included uncoordinated notification of schools and residents to evacuate, lack of sufficient vehicles to transport school children, lack of emergency communication and breathing

equipment for some response personnel, delayed access of some response personnel to the site because they lacked identification, spreading of the toxic cloud by a news helicopter, and poorly coordinated transmittal of information to the public.

Another incident involved a tanker truck, parked near an interstate freeway, that leaked 2,000 gallons of a solvent. This material can cause dizziness or suffocation if sufficient exposure to the fumes occurs, and it can burn both the skin and the eyes. Over 100 people were treated at local hospitals, and several emergency personnel had residual effects that caused them to be absent from work. The response to this incident demonstrated problems with evacuation notification and instructions, decontamination arrangements for people exposed to the material, and availability of training in protective breathing equipment for response personnel.

One further example involved a pipe carrying silicon tetrachloride in a metropolitan industrial site. The pipe ruptured, releasing vapor that turned to hydrochloric acid upon contact with moisture. Twenty-eight people were injured and 5,000 people were evacuated in this incident. Hydrochloric acid causes irritation and burns to skin and eyes and can be

fatal if inhaled sufficiently. This incident demonstrated the need for identifying potential hazards and the need for improved emergency communication systems for evacuation notification and news releases.

Requirements for Emergency Planning

The California Emergency Services Act requires the State and its political subdivisions to be prepared to meet any emergency. The act requires contingency planning for emergencies by state and local agencies, and it authorizes testing for the effectiveness of planning. The act also provides a statewide system of mutual aid. This act also mandates the creation of the State Emergency Plan to meet the State's obligation to be prepared for emergencies. Finally, the act created the state Office of Emergency Services (OES) to coordinate the activities of state agencies responding to an emergency. The Director of the OES is the state director of emergency planning.

The state plan sets out the basic system for responding to emergencies. The foundation of emergency response in the State is the master mutual-aid agreement, in which the State and its political subdivisions agree to give assistance when requested during an emergency. The state plan also includes individually mandated contingency plans for

certain hazards, including nuclear power plant accidents, dam failures, and toxic disasters. Legislation authorizing these specific contingency plans emphasizes the need for planning for unusually hazardous incidents in addition to the need for general emergency planning.

As mandated by law, the OES is in the process of preparing a state plan for responding to incidents involving hazardous materials. The OES expects this draft plan to be adopted by July 1982. This plan will supersede the 1977 state contingency plan for incidents involving oil and other hazardous substances. State and local agencies are reviewing the new plan in draft form. The draft plan designates local and state responsibilities for handling hazardous material incidents, and it recognizes that compatible local planning for these incidents is essential to the success of the state plan. The draft plan recommends that specific local plans be produced, and it calls for the State's review of local contingency plans.

The Emergency Services Act also encourages local governments to create local disaster councils. These councils are established in every county and in 408 of the 429 cities in the State. The councils must develop effective local contingency plans for meeting any emergency, including those that local agencies can handle alone. These councils may

recommend emergency rules and regulations to cities and counties. To assure further preparedness, the act also authorizes cities and counties to conduct emergency test exercises.

The State's Emergency Plan contains several companion plans for mutual aid, including ones for fire and rescue and law enforcement. Almost all political subdivisions, along with their local fire and rescue and law enforcement agencies, have adopted both the master mutual-aid agreement and the companion plans. The master mutual-aid agreement stipulates that each party to the agreement must develop operational plans detailing the manner in which that party will make its resources and services available. These plans may also include provisions for the training and testing that are needed to make mutual aid effective.

Like the State, the Federal Government recognizes the need for planning for emergencies involving hazardous materials. The National Oil and Hazardous Substances Pollution Contingency Plan of 1980 requires plans for coordinated local, state, and federal responses to incidents. In addition, the federal Disaster Relief Act requires specific planning to respond to emergencies that may become disasters.

In general, local, state, and federal entities are required to develop plans that enable effective and coordinated responses to hazardous materials incidents. We examined federal regulations and reports and state guidelines to determine the elements of effective responses. Such elements include the following:

- Assessment and identification of potential hazards within localities;
- Procedures for emergency response, including identification of hazardous substances and handling of materials;
- Methods for interagency notification, communication, and coordination;
- Procedures for evacuating persons endangered by the substance;
- Dissemination of information to the public and the news media;
- Advance training and simulation exercises for responding to incidents;
- Identification of resources available for response and cleanup;

- A system for issuing reports on incidents, evaluating responses, and reviewing and updating plans; and
- Establishment of agencies responsible for cleaning up and recovering hazardous materials.

These elements would help ensure effective responses, and all agencies that are expected to respond to an incident should include them in their plans.

Lack of Adequate
Local Agency Planning

We reviewed the contingency planning developed by state agencies and counties and by local fire and law enforcement agencies to handle emergencies involving hazardous materials. While the state agencies that most frequently respond to such incidents have developed plans to fulfill their responsibilities and while almost all counties now have or are preparing contingency plans, over half of the local agencies that responded to our survey reported that they have not specifically planned for incidents involving hazardous materials. In addition, less than half of these agencies reported that they had conducted a systematic assessment of potential hazards. Only 19 percent reported that they had conducted test exercises in their areas.

Although 37 of the 58 counties in the State have developed contingency plans and 13 others are in the process of developing plans, many such plans do not include the key elements we listed earlier in this report. Only 3 of the 17 county plans that we reviewed stipulate that fire and law enforcement agencies develop their own standard operating procedures for responding to incidents involving hazardous materials as an attachment to, and compatible with, the county plan. None of the 17 plans provides a list of specialized equipment and trained personnel within public agencies in the county available for response and for cleanup of hazardous materials, although 5 plans list private cleanup firms. The national contingency plan, the 1976 state prototype for counties, and the state draft plan all recognize the importance of such information.

Further, 11 of the 17 county plans do not provide for test exercises using the plan, and 7 do not provide for the updating of plans. Testing and updating assure that the information in the plan is current and accurate. Agencies responding to recent incidents have found that post-incident critiques are useful in updating and refining response plans; yet only 5 of the 17 plans reviewed require such a critique.

In our survey, we sent 657 questionnaires to local fire and police agencies, of which 404 agencies responded with completed questionnaires. Table 1 describes the activities of local response agencies in improving preparedness for handling incidents involving hazardous materials.

TABLE 1

PREPAREDNESS OF LOCAL RESPONSE AGENCIES
(404 of 657 Agencies Responding)

<u>Activity</u>	<u>Agencies Conducting Activity</u>	<u>Percent of Agencies Conducting Activity</u>
Contingency Planning	172	42.6%
Identification of Potential Hazards	159	39.4%
Area-Wide Test Exercises	78	19.3%

As shown in the table, only 172 (42.6 percent) of the 404 agencies have response plans, even though state law and mutual aid agreements require that local agencies be prepared to meet any emergency even though local agencies reported an awareness of and concern about spills of hazardous materials. A number of officials we interviewed indicated that specific agency plans were necessary in addition to general operating procedures. These agencies are often charged with such specific responsibilities as evacuation, proper containment of the material, or management and coordination of responses, and they are often the first to respond to an incident.

Some agencies within counties with large volumes of hazardous materials reported that they do not have their own specific plans for responding to incidents involving such materials. For example, 22 out of 30 respondents from a southern California county reported that they do not have specific plans; 7 out of 15 respondents from a Bay Area county do not have such plans; and 7 of 11 respondents from a Central Valley county also do not have specific response plans. Respondents from these counties reported 914 incidents involving hazardous materials in 1980 and 1981.

Furthermore, our survey showed that some local fire and police agencies may not be familiar with county response plans. In over one-fourth of the counties represented in the survey, respondents gave conflicting answers about whether a county-wide response plan exists, indicating that their familiarity with county response plans may not be adequate to provide a coordinated response.

Our survey also showed that local response agencies may not be sufficiently aware of hazards that exist in their areas. Of the 404 respondents to our survey, only 39 percent reported that an agency in their county had made a systematic identification of potential hazards. Knowledge of the types and locations of potential hazards can aid in developing

specific action plans for response. For example, the Santa Clara Fire Department conducted a door-to-door survey to identify potential hazards in the city and followed up the survey by planning for a coordinated response, including evacuation.

We found that only 19.3 percent of the 404 local fire and law enforcement agencies that answered our survey reported that they had participated in any area-wide test exercises for responding to incidents involving hazardous materials, even though test exercises are recognized as necessary to train and familiarize personnel with emergency procedures. Of the 404 agencies, 47.5 percent reported that no such area-wide exercises had taken place in their areas.

Factors Affecting Local Planning

Although incidents involving hazardous materials may occur anywhere, 18 percent of the agencies without plans in our sample reported that they had found no need to develop specific plans. Yet 11 of the agencies that had found no need for specific plans reported responding to 36 incidents in the last two years. An additional 4 agencies did not know how many incidents they had responded to because they kept no specific

records of such incidents. Several agencies without specific plans are in counties where many incidents have been reported by other agencies.

Counties and individual emergency response agencies need sufficient guidelines and models to assist them in developing the necessary specific response plans. County plans generally include standard elements that were in the 1976 model plan; however, these elements are not all of the elements we identified as important for adequate response. Further, a county emergency response plan may be inadequate unless those with assigned responsibilities are prepared to carry them out. The draft state plan includes elements important for comprehensive and coordinated response. However, the State has not yet adopted the plan, and local response agencies cannot plan for coordinated action that is compatible with the state plan until it is actually adopted. Despite the absence of an operative state plan, some counties developed plans within the last year in conjunction with the CHP's efforts to develop local interagency agreements delineating responsibilities at incidents.

Twenty-nine percent of the survey respondents that have no specific plans reported that they have not had adequate staff-time to do additional planning. The lack of sufficient

models and guidelines requires local agencies to spend more time to develop their own plans and may cause a lack of consistency and compatibility with the state plan.

Of the respondents that do not have specific plans, 78 percent reported that they rely instead on general standard operating procedures for responding to emergencies. These standard operating procedures may not be adequate, however. For example, in a recent case, city firemen routinely washed a large amount of gasoline into storm drains, creating a greater potential for explosions, instead of using an alternate method, such as covering the material with foam. An incident like this demonstrates the need for developing specialized procedures to handle incidents involving hazardous materials.

MORE TRAINING COULD
ENHANCE THE CAPABILITY
TO RESPOND TO EMERGENCIES

Local emergency response personnel need more training in methods for handling incidents involving hazardous materials. In several cases improper handling has resulted in injuries to response personnel. Although training is available from various sources in the State, over 70 percent (274 out of 390) of the fire and law enforcement agencies that responded to our survey indicated that their response personnel lack adequate training. In particular, law enforcement agencies have received limited training for handling hazardous materials emergencies, even though they are responsible for coordinating the response to these emergencies when they occur on the streets and highways. Also, over 42 percent of those agencies reporting inadequate training stated that training curricula was not sufficiently comprehensive to meet their needs. Both the Legislature and the Governor have recognized the need for specialized training by establishing statewide programs for training response personnel in handling incidents involving hazardous materials.

Requirements and Specialized Training Programs

Federal and state studies have shown that training is the key to successful emergency response systems. Training provides certain assurances against incidents' escalating into disasters. These studies also point out the need for specialized training that specifically addresses the complex problems that incidents involving hazardous materials can create.

Various programs exist that offer this specialized training. Common training elements include basic awareness of hazardous materials, tactical training, scene management preparation, and courses in overall planning. The objective of basic awareness training is to instruct personnel in the potential hazards associated with hazardous substances. Tactical training includes the use of specialized methods and equipment that various agencies will employ in responding to emergencies involving hazardous materials. Scene management training addresses methods for coordinating the various agencies that respond to the incidents, and courses on planning highlight the elements that should be included in contingency plans and the procedures that should be employed in developing those plans.

Several state agencies have provided specialized training to local response personnel. They include the California Specialized Training Institute (CSTI), the State Fire Marshal, and the California Highway Patrol (CHP). The CSTI was mandated to assist the Military Department in training personnel at state agencies, cities, and counties in their planning and preparation for disasters. The CSTI has offered a number of topics concerning disaster preparedness, and since 1977 it has offered a hazardous material course that has provided instruction in basic awareness, scene management, and planning activities to approximately 900 persons.

At the request of the Governor's Office, the State Fire Marshal developed a statewide program to provide basic awareness training. The goal of the program was to train at least 25,000 persons per year by offering courses at various local sites throughout California. Instruction began in February 1981 but was discontinued in November 1981 (after training approximately 13,700 persons) because of reduced budgets.

The CHP assumed responsibility for continuing the program and will offer basic awareness courses again in April 1982. The CHP also intends to offer scene management training to local agencies starting in April 1982 and training in planning activities at a later date. The CHP plans to offer

approximately 526 training classes by June 30, 1984. Although some other state agencies have hazardous materials training programs, they are generally in-house programs intended to instruct agency personnel on tactics to be used in carrying out the agency's statutory duties. For example, the California Department of Transportation (Caltrans) is responsible for restoring contaminated state highways and has trained 87 teams in determining if spilled substances are considered to be hazardous materials. This tactical training includes the proper use of the self-contained breathing apparatus, protective clothing, and other specialized equipment. Caltrans has also provided basic awareness training to all of its personnel who may become involved in incidents involving hazardous materials.

Other sources of training for local emergency response personnel include area community colleges, private industry, and some programs sponsored by the Federal Government.

Local Emergency Response
Personnel Need More Training

Over 70 percent (274 out of 390) of the local agencies reported that their personnel lacked adequate training in methods for responding to incidents involving hazardous materials. These agencies indicated that less than 45 percent

of their personnel have received basic awareness training. Thirty percent of the personnel identified as appropriate for training received scene management training and 35 percent received tactical training.

Furthermore, training programs offered to local agencies may not sufficiently meet local needs. Over 42 percent of those local agencies that felt training was not adequate indicated that the courses offered were not sufficiently comprehensive; over 18 percent cited weaknesses in the curriculum; 10 percent cited weaknesses in presentation. One local agency commented, "The curriculum has been in such a state of disarray that it has often been totally unresponsive to the needs of first responders."

Local law enforcement personnel receive far less training than local fire service personnel, even though mandates give law enforcement agencies on-scene management responsibilities for hazardous materials incidents occurring on streets and highways. Of the personnel that our survey identified as appropriate for scene management training, less than 18 percent of the law enforcement personnel had been trained. In comparison, over 43 percent of the fire service personnel had received training. Table 2 illustrates that law enforcement personnel have received less training in other categories of training as well.

TABLE 2
COMPARISON OF TRAINING RECEIVED
BY LAW ENFORCEMENT AND FIRE AGENCY PERSONNEL

<u>Type of Training Received</u>	<u>Percent of Law Enforcement Respondents</u>	<u>Percent of Fire Agency Respondents</u>
Basic Awareness	30.5%	60.2%
Tactical	20.3%	38.2%
Scene Management	17.7%	43.2%

Lack of Training Can Result in Injuries to Response Personnel

Since local emergency personnel are usually the first on the scene of a hazardous materials incident, adequate training is necessary to help ensure that they take safe and correct actions. For example, an officer found a white substance that was discarded in an open field. After the officer picked up the substance with his fingers and sniffed it, his eyes and face became severely inflamed. In another incident, an officer who responded to the scene of an overturned tractor and tank-trailer walked through the spilled solution and immediately noticed a hot, tingling sensation in his feet.

Although these incidents did not result in major injuries to the officers, had the substances been more hazardous, greater injuries would have resulted. An incident

in which more serious injuries did occur involved a traffic accident that caused the spilling and burning of a soil fumigant. Because emergency workers did not initially know the extent of the danger, more than 80 persons had to be sent to area hospitals, 25 of whom were admitted for treatment. Several fire fighters suffered long-term injuries in the same incident.

Reasons for Inadequate Training

We found that local agencies lack adequate training because of limited resources and, to a lesser extent, because of deficiencies in state agency training programs. Specifically, 167 of 404 agencies (over 41 percent) of those local agencies that responded to our survey indicated that they had not trained their personnel because of insufficient funds, while over 35 percent indicated that they lacked sufficient staffing. One agency official commented: "Training...is necessary, but we are unable to send officers to classes in outlying areas due to manpower shortages. Our preference would be a training session for the entire department held locally."

Although the training program provided by the State Fire Marshal attempted to address some of the above concerns by offering classes locally, we found that the program did not achieve its goal of training 25,000 persons in basic awareness

for the first year and that it did not sufficiently meet the needs of those trained. Specifically, the program provided training to approximately 13,700 emergency personnel or approximately 55 percent of the first year's goal. Officials from the State Fire Marshal's office stated that the budget authorization for the training program was late, causing delay in program implementation.

However, the program may also have failed to attain its goal because of administrative and operational problems. We believe that better planning may have prevented such problems. For example, the program experienced delays partly because of problems encountered in the development of the curriculum. We found that schedules were not established that would have given the Office of the State Fire Marshal more control over this critical stage in the development of the program. This problem contributed to delays in the presentation of the program and to fewer responders receiving training.

Furthermore, a needs assessment was not conducted before the development of the program. To address the needs of targeted agencies adequately, those needs should first be identified. For example, paid fire service personnel have received more training in the handling of hazardous materials incidents than have volunteer fire service personnel, yet the

program was not offered with this consideration in mind. We received several comments from responders indicating that the curriculum was too long and too elementary and that it was not tailored to local needs. Had needs been assessed, a decision may have been made to provide basic awareness instruction only to those persons who were in most need and to develop goals based upon that decision. Officials from the Office of the State Fire Marshal indicated that time restrictions prohibited them from assessing needs because established goals were based on a request from the Governor's Office that emergency response personnel should be trained within a 3-year period.

Because several state agencies provide training to state and local emergency response personnel, coordination is necessary to help ensure a more consistent and standardized approach to instruction. The State toxic disaster contingency plan should include a framework for the coordination of state agency training programs.

AUTHORITY FOR ON-SCENE
MANAGEMENT NEEDS CLARIFICATION

Effective response to hazardous materials incidents requires coordination of efforts by response organizations at the scene of emergencies. Although recent state legislation attempts to minimize poorly coordinated response efforts by assigning on-highway scene management authority to law enforcement agencies, a further need to clarify authority for the management of hazardous materials incidents exists. Law enforcement agencies often lack expertise, training, and equipment for hazardous materials response actions. Some local governments are delegating scene management responsibilities to local fire departments. While delegation of scene management authority violates state law and may result in liability problems, such delegation to better-equipped and better-trained agencies may be an appropriate local decision.

We also found that delay or confusion about who is in charge may occur at the scene of off-highway incidents if no line of command exists. Local agencies report that situations could occur where recommended courses of action conflict and no single agency assumes management responsibility. Poorly coordinated emergency response actions may occur in part because the responsibilities of federal, state, and local response agencies are not adequately identified and integrated.

Coordination Among Response
Agencies at Incidents
Involving Hazardous Materials

Coordinated response actions at the scene of incidents involving hazardous materials are essential to an effective emergency response system. Without coordinated scene management, conflicts and confusion can occur between agencies; this may turn incidents into even more serious hazards to public safety and to the environment.

A major railroad accident in North Carolina illustrates problems that inadequate on-scene coordination can cause. This accident involved a spill of radioactive substances and ammonium nitrate, a chemical that accelerates the burning of combustible materials. Some of the spilled materials caught fire and the fire quickly spread to boxcars and then to the surrounding area. Seventeen different organizations responded to the accident. The fact that no agency assumed command contributed to uncoordinated action, significant delays, and confusion in resolving the incident. Several of the agencies received duplicate notification, operated independently, and experienced communication difficulties. Also, agencies disagreed about the assessment of the hazard and the methods for handling it. Although only one person was hurt during the operation, the potential for serious problems existed, and property damage was estimated to be

\$750,000. As a result of the problems occurring during this incident, the National Transportation Safety Board conducted a special investigation and recommended the development of scene management criteria by the U.S. Department of Transportation.

In response to incidents like the one described above, federal, state, and local governments have passed laws and developed various systems to help ensure coordinated responses to accidents involving hazardous materials. The Federal Government assigns scene management authority over federal agencies to a federal coordinator in instances involving potential hazards to the environment. Generally, the federal response agencies are the U.S. Coast Guard and the Environmental Protection Agency. These agencies provide a federal on-scene coordinator and will assist the state and local agencies in cleanup operations.

The proposed state approach to scene management is to support local agencies by providing resources and encouraging local planning for coordinated operations. The State has designated a person to plan and direct the operations of all state agencies and to coordinate activities with local and federal agencies in incidents involving hazardous materials. In addition, state law assigns authority for coordinating emergency response at the scene of hazardous materials incidents occurring on highways to the law enforcement agency

with jurisdiction. The California Highway Patrol has management authority on all state highways and roads in unincorporated areas. City police departments have scene management authority on streets within city limits. County sheriffs have responsibility for areas in which they contract to give full police services.

Further Need to Clarify Scene Management Authority

Although federal, state, and some local governments have designated certain authority for scene management in various laws and planning agreements, problems may still occur in coordinating emergency response at the scene of incidents involving hazardous materials, indicating a further need to clarify scene management responsibilities.

Improper Delegation of the Authority For Scene Management

Contrary to state law, several cities we contacted are delegating scene management responsibilities for city streets and highways to fire agencies rather than to law enforcement agencies. Officials in these cities report that fire agencies are often better prepared and better equipped to handle incidents involving hazardous materials. Also, fire agencies traditionally have been the first agencies to respond to emergencies involving fires and explosions.

Although it may be effective to assign scene management authority to personnel judged to be better trained and better equipped, this delegation violates state law governing incidents on highways. In a recent opinion, the California Attorney General stated that the delegation of the authority for scene management at incidents involving hazardous materials on highways is improper and violates the requirements of the Government Code and the Vehicle Code.

The cities delegating scene management authority may be held civilly liable for breach of duty and negligence if property damage or injuries occur during an incident as a result of the improper delegation. A case in which improper scene management resulted in an allegation of breach of duty illustrates the potential for liability. The case involved a freeway accident and fire where the CHP had assumed the responsibility for managing the scene and controlling traffic. The CHP discontinued its scene management actions before the hazard was eliminated, resulting in injuries to an employee of another response agency. The case was settled against the CHP for \$200,000.

Responsibility for
Scene Management at
Off-Highway Incidents

State legislation has not designated the responsibility for coordinating emergency response efforts at incidents occurring off the highway. Although some county and city emergency plans assign responsibilities to specific groups, no state requirement does so. Currently, scene management at off-highway incidents falls under several agencies' jurisdictions. At the local level, fire, police, sheriffs, and public health agencies, as well as county emergency offices, respond to incidents involving hazardous materials. (Local fire and police agencies often respond first.) State agencies that respond to such incidents include the CHP, the Department of Fish and Game, and Regional Water Quality Control Boards. Also, the Department of Health Services may authorize emergency funds for cleanup. In addition, a federal on-scene coordinator may respond. Some officials we interviewed expressed concern over potential conflicts at incidents. Problems at incidents might be avoided through clarifying the authority for scene management and establishing a line of command.

CHAPTER II

CONCLUSIONS AND RECOMMENDATIONS

State and local governments have made significant efforts to address problems in responding to incidents involving hazardous materials. Yet opportunities exist to strengthen the system further through improved planning and training and by clarifying the authority for scene management. Specifically, counties and local response agencies need to improve planning for emergencies to ensure that they are adequately prepared for emergency situations. Currently, less than half of the local response agencies in our survey reported having planned specifically for hazardous materials emergencies, and some local agencies lack detailed plans for responding to emergencies. Hazard potentials in certain areas need to be assessed, and emergency test exercises should be conducted. The State could assist cities and counties through technical assistance and advice and by reviewing plans.

Further, local response personnel need more training in methods of handling emergencies involving hazardous materials, and current training courses need improved curriculums and presentations in order to meet the needs of local agencies. Currently, over 70 percent of the local agencies in our survey reported that they lack adequate

training. The CHP has assumed the responsibility of training local emergency responders statewide. The CHP intends to continue training in basic awareness and to initiate training in scene management and planning techniques. Duplications may exist insofar as the California Specialized Training Institute is also mandated to provide training to local responders and also provides instruction in basic awareness, scene management, and planning techniques.

Furthermore, the CHP has yet to develop detailed plans for establishing and implementing training priorities and schedules for responders to be trained. State agency training programs should be coordinated so that those local agencies with the greatest training needs are served according to a specific time schedule. The framework for this coordination should be established by the State Office of Emergency Services, and should ensure a more consistent and standardized approach to instruction.

In addition, the scene management of incidents involving hazardous materials could be improved by clarifying the roles of responsible agencies. Response agencies need to better coordinate actions related to off-highway incidents in order to help ensure that confusion does not occur.

RECOMMENDATIONS

To strengthen the response to emergencies involving hazardous materials in the State, we recommend that the following actions be taken:

- The State Office of Emergency Services (OES) should provide technical assistance and advice to local planning and response agencies in developing specific contingency plans for incidents involving hazardous materials. The OES should distribute comprehensive guidelines to local planning groups to assist them in this effort. The OES should systematically review for completeness the hazardous materials contingency plans of local jurisdictions, assuring that response agencies within the jurisdictions have adequately planned for responding to incidents involving hazardous materials.

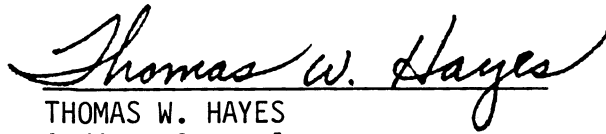
- The State Office of Emergency Services, in conjunction with the California Highway Patrol (CHP), should ensure that local fire and law enforcement agencies receive these contingency plans.

- The State Office of Emergency Services should ensure that local plans are consistent with the statewide plan in order to ensure an integrated and coordinated capability for response.
- The State Office of Emergency Services should establish a framework for coordinating training programs. This framework should ensure a more consistent and standardized approach to hazardous materials training.
- Under the framework to be established by the State Office of Emergency Services, the California Highway Patrol and the California Specialized Training Institute (CSTI) should coordinate their own efforts to ensure that adequate training is provided to emergency response personnel. Training needs should be assessed, training goals and schedules should be met, and services should be provided to those agencies in greatest need of training. In addition, the CHP and the CSTI should review their own training curriculums and eliminate duplication to ensure consistency and the efficient use of state resources.

- The State Office of Emergency Services should encourage local agencies to designate clearly the authority for scene management at off-highway incidents.

- The Legislature may wish to consider providing greater flexibility for local agencies in designating the authority for scene management. Such flexibility would ensure that those agencies most prepared to coordinate incidents assume the responsibility for scene management.

Respectfully submitted,


THOMAS W. HAYES
Auditor General

Date: April 19, 1982

Staff: Robert E. Christophel, Audit Manager
Richard C. Tracy
Margaret E. Vanderkar
Christopher Myers

OFFICE OF EMERGENCY SERVICES

POST OFFICE BOX 9577
SACRAMENTO, CALIFORNIA 95823
(916) 427-4990



April 15, 1982

Thomas W. Hayes
Office of the Auditor General
660 J Street, Suite 300
Sacramento, CA 95814

Dear Mr. Hayes:

We have reviewed your draft report entitled "Opportunities Exist to Strengthen the State's Systems for Responding to Emergencies Involving Hazardous Materials" and find it generally accurate and to the point.

We thank you for the opportunity to review and comment upon your draft report which we trust will draw attention to the significant areas where additional effort and resources should be directed.

Sincerely,

A handwritten signature in cursive script that reads "Alex R. Cunningham".

ALEX R. CUNNINGHAM
Director

Memorandum

To : Thomas W. Hayes, Auditor General
Office of the Auditor General
660 J Street, Suite 300
Sacramento, CA 95814

Date : April 15, 1982

File No. : 1.3470.A4889

Subject : COMMENTS AUDITOR
GENERAL'S REPORT

From : Department of California Highway Patrol
Office of the Commissioner

We have reviewed the draft of your recent report concerning response to hazardous material emergencies. We share some of the same concerns expressed in your report regarding training, clarification of authority for scene management, and planning. However, I would like to discuss these concerns from the standpoint of what the California Highway Patrol (CHP) is doing to improve the State's effectiveness in dealing with highway emergencies involving hazardous material spills.

The Statewide Hazardous Materials Training Program previously administered by the Office of the State Fire Marshal was cited by your report as being inadequate. On this point we are in complete agreement. When the CHP accepted responsibility for this program, it was at a stage where re-evaluation of both scheduling methodology and training needs of responding agencies was necessary. After completing this evaluation, we concluded that with some curriculum refinements, Module I could continue to be an appropriate and timely course. It is offered as a basic awareness course with its objective to establish minimum levels of job knowledge and performance within the various emergency response agencies. Although it may be too elementary for some highly trained personnel, it does achieve its basic objective.

Various hazardous materials courses offered by other organizations range from 24 to 80 hours, while the CHP's Statewide program consists of three 8-hour modules. The decision to utilize three training modules allows delivery of very specific material to selected audiences, and avoids the problem of committing personnel to extended training sessions with attendant travel and per diem costs. When developing Module II curriculum, we did ensure that it was designed to the needs of most emergency response agencies. Specifically, this course will provide supervisory personnel with technical and management information on such topics as spill containment, evacuation, obtaining specialized assistance, command posts, special problems, and predicting spread or travel of hazardous materials spills.

Thomas W. Hayes
Page 2
April 15, 1982

The need to establish statutory responsibility for scene management was recognized in a 1978 CHP study which was conducted in response to Senate Resolution No. 52. As a result of this study, new legislation was chaptered in 1980 which vested scene management responsibility with the law enforcement agency having primary traffic investigative responsibility on the highway where the spill occurs. The CHP has worked closely during the last year with various local agencies in an attempt to develop legislative proposals that would provide more flexibility for local authorities in designating other agencies as scene managers. Legislation has just recently been introduced by Senator Marks and Senator Vuich which will specifically address this issue.

Your report also indicates that law enforcement agencies, when compared with fire departments, often lack the technical expertise, training, and equipment to act as scene managers. I'm sure you recognize that management is not as much a matter of technical knowledge as it is the capability of an agency to coordinate the efforts of all response agencies at the scene.

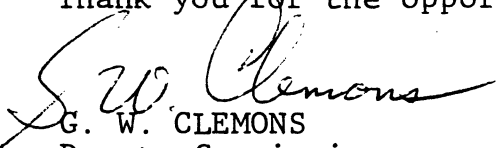
Another area of concern involves the need for effective planning since it is obviously a prerequisite to the successful handling of an emergency incident. Although your report indicates that only 43% of those agencies surveyed have hazardous material response plans, this may be directly related to the fact that no agencies have yet had the opportunity to attend Module II and III training. This training emphasizes the need for preplanning and will soon be made available.

Historically, the CHP has accepted scene management responsibilities for highway emergencies, and more recently, the problem has been magnified by increasing occasions of hazardous materials incidents. In order to deal with this more effectively, CHP Field Commanders over the past year have been meeting with local response agencies, developing local plans, and entering into working agreements with their counterparts. Much has been accomplished in a short time in this effort. I feel that these efforts will provide the framework for implementation of Statewide planning requirements that are contained, in the soon to be released, State Hazardous Materials Incident Contingency Plan.

Before any major changes are made regarding the State's response capabilities, the current system should be allowed to remain in effect. I don't believe a fair assessment of the system can be made until it has been in place and in effect for a reasonable amount of time.

Thomas W. Hayes
Page 3
April 15, 1982

Thank you for the opportunity to comment on your report.


G. W. CLEMONS
Deputy Commissioner

STATE FIRE MARSHAL

7171 BOWLING DRIVE, SUITE 600
SACRAMENTO, CALIFORNIA 95823(916) 427-4161
ATSS 492-4161

April 15, 1982

Thomas W. Hayes
Auditor General
660 J Street, Suite 300
Sacramento, California 95814

Dear Mr. Hayes:

I have reviewed your report entitled, "Opportunities Exist to Strengthen the State's Systems for Responding to Emergencies Involving Hazardous Materials." Although I agree with the report's general conclusions of need for planning and training, I am disturbed by some wording which I believe places undue criticism on the Office of the State Fire Marshal.

In paragraph 3, on page 33, a reference is made to the absence of a needs assessment. Indeed, a formalized assessment was not made. It was not made for two reasons: (1) The goal presented to us by the Administration was to provide a basic awareness to all emergency responders. (2) Budget, staff, and time were not provided for such an assessment. The report should therefore state these facts.*

The report should also indicate that the Fire Service Training and Education Program (FSTEP), through which the State Fire Marshal works daily with local fire departments, gives us a good, general idea of what is needed at the local level. (Obviously, no single program of this magnitude can meet the individual needs of 1,700 police and fire departments, let alone the individual needs of 75,000 emergency responders.) In addition, both the Statewide Steering and the Curriculum Development Committees (composed of local government fire and police officials) were involved in identifying local needs. And, in fact, the curriculum that was developed satisfied the great majority of those who participated in the training.

On a more positive note, we have found that in dealing with hazardous materials training the biggest stumbling block is the absence of a mandatory requirement that all emergency responders receive training. It is clear to me that if we are to adequately prepare these emergency responders, that each and every one - without exception - be given training to meet their identified needs, that the training be a required part of their job, and that the training be reinforced on a regular (perhaps 3-year) basis.

* Auditor General Comments: Our report mentions budget and time limitations on pages 33 and 34.

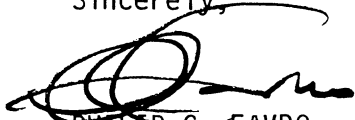
Thomas W. Hayes

-2-

April 15, 1982

In summary, good planning is essential for good training, but good planning (and training) can only be achieved with sufficient authorization, budget, and staff.

Sincerely,



PHILIP C. FAVRO
State Fire Marshal

PCF:cog

CALIFORNIA SPECIALIZED TRAINING INSTITUTE

Post Office Box G
San Luis Obispo, CA 93406
(805) 544-7101



April 16, 1982

Thomas W. Hayes
Auditor General
Office of the Auditor General
660 J Street, Suite 300
Sacramento, CA 95814

Dear Mr. Hayes:

Please find herein our initial reactions and comments relative to your draft report titled "Opportunities Exist to Strengthen the State's Systems for Responding to Emergencies Involving Hazardous Materials". We appreciate the opportunity you have provided us to comment on this report; our only regret is that the time constraints do not allow for the comprehensive review that a report of this importance deserves.

In brief, we are largely in agreement with the findings and recommendations identified in your report. In many areas, they parallel our own thoughts arrived at from the Institute's past experience in this field and from the feedback we have received from our over 25,000 students since 1971.

However, there are some areas which we felt deserved some special mention or clarification:

- 1) In the report, the point is well made about the need for training in the smaller agencies, especially in the volunteer fire departments. However, we should be cautious about attempting to transfer too much of the required training to on-site locations as there are serious concerns about the degradation of quality and cost effectiveness of the more sophisticated programs when delivered in this fashion. For example, a high quality management course directed at a very limited number (relative to the total department size) of command level officers may result in a very high cost per student. A more thorough analysis of the problem of training the smaller agencies may likely indicate advantages to providing state funding to support their attendance at the various academic facilities around the state. Within the limits of our budget, CSTI will continue to make every effort to accommodate those who most need the training.

2) It is understood that this report focuses on purely state agencies involved in preparations for response to Hazardous Materials Emergencies. However, for others who may read this report to properly appreciate the spectrum of efforts in this field we feel some mention must be made of other training programs available, including, but certainly not limited to:

a) Hazardous materials courses available through the State Fire Academy at Asilomar, operated by the California Fire Chief's Association and the State Fire Marshal's Office.

b) Private industry programs available to emergency response agencies such as the Union Pacific Railroad's modular program.

c) Programs offered outside the State of California such as the National Fire Academy courses.

d) A wide variety of in-service and academy level programs offered by city and county emergency response agencies.

3) We are especially concerned that any training needs assessment surveys and/or curriculum development conducted as a result of this report truly reflect a non-parochial, broad based effort with an equitable representation from practitioners nominated from the fire, law enforcement and health/medical disciplines. Previous efforts in this area have too often been incomplete or focused only on certain elements of the problem such as "waste sites" or "transportation incidents". To that end, "neutral" agencies such as CSTI or OES should perhaps take the coordinating role.

4) The discussion concerning the exercising of hazardous materials plans is of special interest to CSTI. We have scheduled (as a regular part of our curriculum) a number of on-site plan exercise programs available to jurisdictions in the state wherein the requesting agency may specify the type of disaster to be "exercised". In the light of this report, it is interesting to note that only one of the jurisdictions has so far requested a hazardous materials scenario. It is our intent to continue with these on-site programs, as well as two other courses pertinent to this report; our Emergency Management of Hazardous Materials course and our Planning Techniques course addressing the design and construction problems of emergency plans in general.

In closing, we are regretful that time did not allow us to respond in more detail but it is our hope that we may be a part of continuing discussions in this arena. As a state agency with a sincere and deep commitment to this problem, we appreciate the efforts of the Auditor General's Office in this area and hope that this report is indicative of future improvements in the State's response to the Hazardous Materials problems.

Sincerely,

NEIL E. AULGOOD
Director



JAMES J. PETRONI
Chief, Planning and Research Branch

JJP: la

OTHER STATE AND FEDERAL AGENCIES
WITH RESPONSIBILITIES FOR RESPONDING
TO INCIDENTS INVOLVING HAZARDOUS MATERIALS

California Department of Transportation

The California Department of Transportation is responsible for containing and cleaning up all materials that pollute any state highway.

Military Department--California
Specialized Training Institute

The California Specialized Training Institute (CSTI) has been mandated to assist the Military Department in training personnel in state agencies, cities, and counties in planning and preparing for disasters. To provide this training, the CSTI offers resident courses in responding to incidents involving hazardous materials.

Department of Health Services

The Director of the Department of Health Services was mandated to administer the Hazardous Substance Account, referred to as the state "superfund." This "superfund" provides money for the State's program for responding to releases of hazardous substances. "Superfund" money will be used for several purposes, including the purchase of equipment

for responding to hazardous substances, the training of emergency personnel, and the cleanup of spills and accidents. For fiscal year 1982-83, \$292,000 for training and \$800,000 for equipment has been proposed.

Furthermore, the Department of Health Services may use "superfund" money to take immediate corrective actions to remedy or prevent imminent danger to public health or the environment from the release or threatened release of a hazardous substance. Such actions may include renting tools and equipment and obtaining the labor necessary to accomplish the work.

State Water Resources Control Board

The State Water Resources Control Board coordinates the activities of nine semi-autonomous regional boards. The regional boards play direct roles in responding to spills by monitoring water, providing technical advice, and enforcing water quality regulations. Although the State Water Resources Control Board does not respond to spills, it does coordinate the employee protection and training activities of the regional boards.

Department of Fish and Game

The Department of Fish and Game is the State's lead agency for responding to spills involving oil or toxic substances that pollute resources or water supplies or threaten to pollute inland water or the State's navigable waters. This role was established under the State's Oil Spill Contingency Plan. This plan will remain in effect for spills involving hazardous substances until the completion of the State Toxic Disaster Contingency Plan.

Federal Agencies

The National Oil and Hazardous Substances Pollution Contingency Plan, pursuant to the Federal Clean Water Act, requires the predesignation of a federal on-scene coordinator to respond to incidents that threaten navigable waters and federal lands. Generally, an official from either the Environmental Protection Agency or the Coast Guard acts as the coordinator. This person is responsible for coordinating and directing federal emergency response efforts. If necessary, the on-scene coordinator will ensure the cleanup of spills if the spiller or state and local officials are unwilling or unable to conduct a cleanup in a manner that protects the environment. The on-scene coordinator provides reports to and

receives advice from a regional response team that consists of members from 12 federal agencies and representatives from state and local governments.

The regional response teams request federal, state, and local government or private agencies to consider taking action under their existing authorities to provide the necessary resources for containing and cleaning up a discharge. The regional response teams may also request these agencies to deploy personnel to monitor responses to such discharges.

cc: Members of the Legislature
Office of the Governor
Office of the Lieutenant Governor
State Controller
Legislative Analyst
Director of Finance
Assembly Office of Research
Senate Office of Research
Assembly Majority/Minority Consultants
Senate Majority/Minority Consultants
Capitol Press Corps