STATE OF CALIFORNIA GEORGE DEUKMEJIAN, *Governor*

COMMISSION ON CALIFORNIA STATE GOVERNMENT ORGANIZATION AND ECONOMY

11th & L Building, Suite 550, (916) 445-2125
Sacramento 95814

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Vice-Chairman
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Assemblyman

RICHARD C. MAHAN
Executive Director

A REVIEW OF THE ORGANIZATION AND MANAGEMENT OF THE STATE "SUPERFUND" PROGRAM FOR CLEANING UP HAZARDOUS WASTE SITES

JULY 1984

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A Report
of the

COMMISSION ON CALIFORNIA STATE GOVERNMENT
ORGANIZATION AND ECONOMY

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Honorable George Deukmejian
Governor of California

Honorable James Nielsen
Senate Minority Floor Leader

Honorable David A. Roberti
President pro Tempore of the Senate
and Members of the Senate

Honorable Robert W. Naylor
Assembly Minority Floor Leader

Honorable Willie L. Brown, Jr. Speaker of the Assembly
and Members of the Assembly

Dear Governor and Members of the Legislature:

No environmental or public health issue of recent memory has reached into our communities and touched our families and children so fearsomely as the exposure to toxic substances. In a recent California poll, 60 percent of our citizens stated that they are extremely concerned about toxic wastes. Furthermore, the safe control of toxic substances has now become one of the public's top three concerns, along with crime and education.

California was the first state to recognize the dangers resulting from the indiscriminate dumping of hazardous wastes. In 1972, the State Legislature enacted the Hazardous Waste Control Act followed nine years later by the establishment of the State "Superfund" program -- a ten year $100 million program managed by the Department of Health Services to clean up California's most hazardous toxic dumps.

However, California's progressiveness in identifying the dangers of toxic wastes has been followed by years of failures in regulating the disposal of hazardous wastes and cleaning up our toxic dumps. Because the State has continued to fail to adequately protect the public from the harmful effects of hazardous waste, the Little Hoover Commission in November 1983 initiated a major study of the California "Superfund" program. The objectives of our study were to develop findings and recommendations which would 1) accelerate the identification and analysis of abandoned dump sites; 2) remove obstacles that have prevented the State from cleaning-up Superfund sites; 3) protect citizens who live near toxic dump sites; and 4) prevent the creation of new Superfund sites.

During the course of our seven month study, the Commission held three public hearings across the State, conducted extensive research, visited 15 Superfund sites, and spoke with scores of families who live near these sites. At two of our hearings, the Commission heard some of the most moving testimony in its 22 year history. The following excerpt

(This letterhead not printed at taxpayer's expense)

is representative of that testimony and illustrates the effects of California's toxics crisis.

> "I don't think this Commission can really understand what it is like to live next to a toxic waste dump site simply by going through testimony, reams of paper, or even quick tours of sites. It is those of us who have to live with that situation, day after day, year after year, who really understand what the toxic waste issue is all about.
>
> We understand it from the viewpoint of people who cannot send their children into their own backyards to play because the air makes them ill. We understand it as friends who comfort young women who have just suffered their sixth miscarriage in trying to bring forth life. We understand it as frustrated parents, families who cannot sell their homes, and cannot afford to move out of the area, and find themselves trapped in this hopeless situation.
>
> We understand it as parents who lie awake at night listening to their children struggle to breathe, or have to hold their child after one of their seizures, who is so dizzy you have to hold him to convince him he is not moving.
>
> That's a reality of this issue, and it isn't just at Cadillac Fairview, it isn't just at Stringfellow, it isn't just at Capri. There are hundreds of these sites, and we've got to start looking at all of them, not just isolated cases where we are worried about a fence or parking lot. Let's start worrying about the people."[1]

As this testimony demonstrates, people are afraid and they are frustrated with the extremely slow pace of cleanups. California's dismal record gives them cause to be frustrated. After nearly three years of attempting to clean up California's worst dump sites, the data shows that we have lost more ground then we have gained. The record reveals:

- only two sites have actually been cleaned up and removed from the Superfund list;

---

[1]Testimony presented by Mrs. Penny Newman at November 30, 1983 public hearing.

- the list of sites requiring clean up has grown by over 50 percent and will increase by at least another 100 percent;

- almost 3,000 sites still need to be evaluated;

- very little progress has been made in analyzing the type and extent of contamination at known Superfund sites;

- clean-up work has not begun at California's worst sites: Stringfellow, McColl, and Purity Oil; and

- the State has not yet collected any funds from the parties responsible for the contamination of these sites.

The State's discouraging performance to date is certainly due in part to the extremely complex, time-consuming, and expensive process involved in cleaning-up toxic dumps. There have been improvements in the program under the leadership of the current administration combined with a new commitment to the program. Nevertheless, our Commission has identified extensive organizational, management, and resource deficiencies which necessitate major reforms if California is ever going to resolve this crisis. Specifically, our Commission's findings include the following:

- The potential and real health risks from exposure to toxic waste is a critical danger to our citizens. There is a growing body of evidence indicating that exposure to chemicals can lead to specific health problems. Moreover, our precious groundwater resources are being contaminated which may spread the exposure well beyond the immediate boundaries of a toxic dump site.

- The Department of Health Services (DHS) cannot accurately predict the cost of cleaning up the hundreds of toxic waste sites in California because it has not systematically assessed the magnitude of the problem.

- The DHS is underestimating the number of sites which will require clean up under the State Superfund.

- The system for ranking State Superfund sites attempts to be unrealistically precise and in fact is not. This results in constant and misleading changes in clean up priorites.

- The DHS has no policies 1) for notifying residents about potential health hazards near toxic dumpsites; 2) to guide decisions on when and how to deal with site security; 3) to guide decisions on when to evacuate residents; 4) for determining the extent to which a site should be cleaned up; and 5) to force action by responsible parties and trigger Superfund expenditures.

- The Superfund program receives inadequate attention, support, and priority within the Department of Health Services.

- There have been major delays and inefficiencies in hiring staff.

- The DHS has failed to develop an effective and efficient process for awarding and monitoring Superfund contracts.

- The DHS has failed to provide important information to residents living near toxic dump sites.

- There is inadequate coordination among State, federal, and local agencies in the clean up of contaminated sites.

- The State Superfund is seriously underfunded; yet the Commission has serious concerns about using general obligation bonds to generate revenues to pay for clean up of toxic dump sites.

- Existing legal and regulatory tools have not been effective to pay for the clean-up of Superfund sites.

- The cost of cleaning up a Superfund site ranges from 10 to 100 times greater than the cost of properly operating and safeguarding these sites.

- California's existing regulatory program is not adequate for preventing the creation of new Superfund sites.

In order to accelerate the identification and clean up of Superfund sites and improve the organization and management of the program, the Commission has developed over 30 detailed reforms and actions under the following six major areas of recommendation:

1. The Governor and Legislature should create an Office of Superfund Management within the Governor's Office to centralize authority, establish accountability, and improve coordination. The Office would exist for two years while major reorganization proposals are considered and evaluated.

2. The Governor and Legislature should immediately double the resources available to clean up toxic dumps. The legislature and administration should determine the percentage of clean up costs to be borne by the general taxpayer prior to developing any long-term financing for Superfund.

3. The Director of the DHS should create a special task force to resolve serious management and administrative problems (specific areas are itemized in Chapter IX of this report).

4. The Legislature should enact new legal procedures to accelerate the collection of funds from responsible parties.

5. The Legislature should require that all existing hazardous waste facilities meet the requirements and standards of new facilities.

6. The Legislature should require the Department of Health Services to develop regulations prohibiting the land disposal of hazardous wastes which present serious risks to human health and the environment.

The members of this Commission believe there is no more central role for government than to protect its citizens. Today the State faces a toxics crisis that demands a rapid and effective response from our State government. Now is the time for not a bi-partisan response but rather non-partisan action by all to arrest the toxic threat.

The work of this Commission does not stop with the issuance of this report. During the following months we will monitor the actions taken in response to our recommendations and offer our assistance in their implementation.

Respectfully Submitted,

NATHAN SHAPELL, Chairman
Senator Alfred E. Alquist
Albert Gersten, Jr.
Brooke Knapp
Haig G. Mardikian
Senator Milton Marks
M. Lester O'Shea
Assemblyman Phillip D. Wyman*
Assemblyman Bruce Young

Members, Toxic Waste Superfund
Study Subcommittee:
James M. Bouskos, Vice Chairman
Michael E. Kassan
Mark Nathanson
Jean Kindy Walker

*Assemblyman Wyman does not support the recommendation for creating an Office of Superfund Management

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EXECUTIVE SUMMARY

CHAPTER I: INTRODUCTION.

Since 1981, when both the Federal and California Superfund programs first began, little has been done nationwide or in California to clean up toxic dump sites. During the first two years the U.S. Environmental Protection Agency spent only $13 million on actual cleanup efforts. During the same period the California Department of Health Services (DHS) was unable to spend 65% of the funds appropriated by the Legislature for cleanup contracts.

In nearly three years only two sites have been cleaned up and removed from the State Superfund list. Even assuming California can triple its current rate of cleanup, it will take 46 years to clean up the 93 sites now on California's Superfund list. If the list grows to 200 sites, as anticipated by DHS, the Superfund program will have to be extended to the year 2084.

Purpose of this Report

In the Fall of 1983, the Commission undertook the first major examination of the State's program to clean up toxic dump sites. The objectives of this study were to:

- evaluate the program and make recommendations which will accelerate the identification and cleanup of the State's toxic sites;
- improve the protection of the residents who live near these sites; and,
- determine how California can prevent the creation of "new" toxic waste Superfund sites.

The State Superfund Program

Created in September of 1981, the State Superfund is a $100 million, ten year program to clean up toxic dumps, support emergency response, and compensate people for "hardship" losses caused by exposure to toxic substances. The State Superfund is supported entirely by taxes on those industries which generate hazardous wastes. Despite claims by industry representatives that the State Superfund was unnecessarily large, it quickly became clear that the Fund was inadequate to pay for the cost of cleaning up even the top 50 sites in the State. The extent of the underestimation, however, is just now becoming clear.

In 1984, the State ranked 93 sites on the Superfund List. In testimony before the Commission, representatives of DHS stated their estimate that the Superfund List would grow to as many as 200 sites in the next few years. These estimates of the number of sites have a profound effect on the additional funding and staffing levels required by the Superfund program and can influence its course for years to come.

Scope of the Problem

In 1980, as the EPA adopted its first set of hazardous waste regulations, the EPA Administrator made the prophetic statement:

> Let me predict now that the process we are starting will turn up information and situations which will shock our Nation. We will find waste sites which are unknown. We will document leaching of chemicals into (groundwater supplies) that we assumed were safe. We will gather hard data on a problem whose dimensions we now can only guess.

These predictions have been born out. The "hard data" collected by the EPA reveals:

- there are as many as 50,000 toxic waste disposal sites across the country;
- in 1981 over 90% of all hazardous wastes were still being disposed of improperly and unsafely;
- it will cost at least $44 billion just to clean up the most dangerous sites in the country;
- over 4 million people in California alone have had their drinking water contaminated with toxic chemicals; and,
- over 80% of all general commercial chemicals (paints, plastics, solvents, etc.) which make up hazardous wastes have never been tested for their health effects.

The Nation's shock over these discoveries has made the control of toxic substances one of the public's top three concerns, along with crime and education. In a recent California Poll, 60% indicated that they are extremely concerned about toxic wastes.

It is with this backdrop of intense concern over toxic wastes that the Commission undertook a systematic examination of the State's program of toxic dump cleanup -- the State "Superfund" program.

Scope and Methodology

During the course of this investigation, the Commission held three public hearings throughout the State, inspected fifteen dump sites, and conducted extensive background research on the State and Federal Superfund programs. The entire investigation required over six months to complete. It involved Commission staff, the Toxics Assessment Group (a research and consulting group specializing in toxic substances), and Michael Gersick of Gratten/Gersick/Karp who investigated legal obstacles to the cleanup of Superfund sites for Chapter VII. The entire project was directed

and supervised by a special subcommittee of the Commission.

CHAPTER II: HAZARDOUS WASTE: A CRITICAL DANGER TO OUR CITIZENS.

On November 30, 1983, the Commission learned first hand of the personal suffering and harm caused by the improper disposal of toxic wastes. In some of the most moving testimony the Commission has received in its 22 year history, residents of communities near toxic dumps spoke of the fear and frustration that toxic wastes have brought to their lives. Linnea Samanc, a resident near the Del Amo Boulevard dump site in Los Angeles, told the Commission at its first hearing:

> Our children suffer from headaches and stomach aches. I have three children and all of them suffer from headaches. I massage them to go to sleep at night because their legs and arms hurt... (we've experienced) hearing loss among adults and children, seizures, birth defects such as spinal bifida, cleft palate, and boys who have urinary tract defects that require surgery.

The Commission learned that the experiences of Linnea Samanc, and others from whom the Commission heard testimony, are supported by a growing body of scientific evidence. A recent study by Harvard University has linked the consumption of contaminated drinking water with the increased incidence of childhood leukemia, birth defects and other childhood diseases in a community that drew its drinking water from two wells just downstream from a large chemical manufacturing complex. In California, a study of the McColl toxic dump site in Fullerton concluded that there was a statistically significant link between 14 symptoms, including headaches, nausea and dizziness, and exposure to toxic chemicals in that dump.

Chemical Contamination of Drinking Water: Expanding the Risks of Human Exposure

California and the Federal government have spent millions of dollars developing new sources of water, constructing aqueducts and canals, and pumping water from one end of the State to the other. Yet today, Californians still draw about 50% of their drinking water from underground supplies (a very high percentage in relation to other states). Evidence is growing that precious groundwater resources are being contaminated by past and present hazardous waste disposal methods, coupled with the heavy use of pesticides in agricultural sections of the State. Toxic chemicals have been detected in more than 2,200 drinking water wells around the State. Today it is estimated that up to 4 million Californians are drinking water containing toxic chemicals.

Toxic chemicals escaping from a site can extend far beyond the immediate boundaries of the site, into the drinking water and the lives of people who believed they were safe from the misfortunes of those who live immediately adjacent to the site. The risk of this occurring is increased by the fact that critical steps necessary to protect groundwater drinking supplies have not been taken.

CHAPTER III: CALIFORNIA HAS NOT ASSESSED THE MAGNITUDE OF ITS HAZARDOUS WASTE PROBLEM.

Findings

1. The Department of Health Services Cannot Accurately Predict the Cleanup Costs for Toxic Dump Sites. To date, DHS has had little experience in estimating cleanup costs for toxic

dump sites. Of the total funds spent on cleanup contracts, over 75 percent has gone for work at only two sites out of the 93 on the current list. Furthermore, the level of toxic contamination and the physical characteristics of the 93 Superfund sites are not sufficiently understood to predict cleanup costs.

2. DHS is Underestimating the Number of Sites Which Will Require Cleanup Under the State Superfund. DHS has yet to complete an inventory of sites which contain hazardous waste and will require cleanup. Although 3,000 toxic waste sites have been identified for further inspection, in no county has a survey of abandoned sites been completed; 28 counties have not even been scheduled for surveys. Furthermore, DHS has excluded categories of toxic disposal sites which may ultimately require cleanup under the Superfund program. Finally, DHS has been unable to adequately evaluate the thousands of potential dump sites listed by its own Abandoned Site Project.

3. DHS Has No Orderly Program to Assess Sites. The Department cannot fully account for its actions at the 105 sites referred for Superfund ranking by its Abandoned Site Project. Additionally, DHS has not tracked actions taken on over 1,300 sites referred by the ASP for enforcement action. Finally, the Department's plans are inadequate for testing the 3,500 sites identified by the Abandoned Site Project as requiring further testing.

4. The Ranking System of the State Superfund Attempts to be Minutely Exact and Results in Constant and Misleading Changes in Cleanup Priorities. The Department has adopted in regulation a system of ranking sites on the Superfund List that attempts to be

rigorously definitive, but in fact is only misleading. Each site is ranked against all others, producing a scale from 1 to 93. This attempt at precision, examplified by the determination of whether a site is 43 or 44 on the list of 93 sites, exceeds any honest reflection of what is actually known about these sites. The result of this ranking scale is that 64 of the 65 sites which have been ranked for more than one year have changed rank from year to year. This produces confusion for residents near the Superfund site and produces a constantly moving target for policy decisions regarding cleanup expenditures.

CHAPTER IV: THE DEPARTMENT HAS FAILED TO DEVELOP POLICIES TO PROTECT PUBLIC HEALTH AND GUIDE CLEANUP ACTIVITIES.

Findings

1. The Department Places Inadequate Emphasis on Site Characterization. Site characterization is the most important task facing the Superfund staff in the protection of public health. Cleanup plans, site security, evacuation, legal actions against responsible parties, and plans for disseminating information are dependent upon a site characterization. However, DHS lacks clear policies on how to conduct a complete site characterization study.

2. The Department Has No Clear Policy on How and When to Notify Residents Living Near Toxic Sites About Possible Health Hazards. The best protection against illnesses caused by toxic substances is to avoid exposure whenever possible. The Department relies upon its Office of Public Information and Participation to develop and disseminate information. However, the poor performance by this office prevents the Department from achieving this goal.

3. The Department Has No Policy to Guide Decisions on What Security Measures to Take at Various Superfund Sites. Alternatives available to DHS include posting warning signs, erecting fences, posting guards, and installing high security fencing and alarm systems. Although improvements have been made, problems have continued.

4. The Department Has No Policy to Guide Decisions on When to Evacuate Residents Either Before or During Cleanup. Nor does DHS have a policy on developing emergency evacuation plans in the event of a large, unexpected release of toxic gasses. Release of toxic gasses during evacuation has occurred at some sites.

5. DHS Has Not Developed Policies and Guidelines for Determining the Extent to Which a Site Should be Cleaned Up. DHS prefers to use flexible site-specific standards. However, the failure to develop consistent public health standards may result in individual site cleanup standards which are inappropriately influenced by the interests of responsible parties.

6. DHS Has Failed to Develop Policies and Procedures to Force Action by Responsible Parties and Trigger Superfund Expenditures. DHS has not set any deadlines for timely action which would trigger Superfund expenditures. The absence of clear and fast deadlines in direct correspondence with responsible parties creates a class of sites where inactive responsible parties effectively delay access to Superfund monies.

CHAPTER V: ORGANIZATIONAL AND MANAGEMENT PROBLEMS PRESENT A MAJOR OBSTACLE TO THE IDENTIFICATION AND CLEANUP OF CONTAMINATED SITES.

Findings

1. The Superfund Program Receives Inadequate Attention and Support as a Result of its Present Placement Within DHS. From its inception, the Superfund program has been plagued by delays and institutional problems. By the end of Fiscal Year 1983-84, when the program has been administered equally by Democratic and Republican Administrations, a total of two toxic dump sites will have been cleaned up through the State Superfund. A total of 13 sites will have received Superfund monies for cleanup activities. The limited progress that has been made during the last three years is due primarily to lack of resources and serious organizational and management problems. Although progress has been made by the program toward the cleanup of toxic dumps, the Commission found its 1981 findings on the State's Hazardous Waste Program are still fully applicable today. Those findings were that, efforts to control toxic substances...have been hindered by:

- first, the submersion of the Hazardous Waste Management Section deep within the bureaucracy of the Department of Health Services;
- second, by the preoccupation of the Department by other health and medical issues; and,
- third, by extremely sluggish and limited administrative support, particularly for personnel and contract actions.

Today, the Superfund Program (now called the Site Mitigation Unit) is still one of hundreds of Units within DHS competing for the attention of the Director and limited administrative support. The Unit continues to be grossly understaffed and hampered by

administrative problems in contracting, hiring, and purchasing.

2. There Have Been Major Delays and Inefficiencies in Hiring Staff. From 1981 to 1983, DHS Toxic Substances Control Program, including Superfund, has experienced 20 to 30 percent vacancy rates. In December 1983, the Legislative Analyst testified that "there have been major unjustified delays" in filling vacant and newly established positions.

3. DHS has Not Developed an Effective Process for Awarding and Monitoring Superfund Contracts. The Department has failed to issue contracts in a timely manner. According to an Auditor General study conducted at the request of the Commission, DHS's sluggish contracting has been due in part to problems in hiring staff, delays in securing Federal funds, and internal and external review procedures that are so cumbersome that it can take up to 200 days to process a single contract. The Department also lacks the expertise and experience needed to prepare and monitor complicated cleanup contracts.

4. The Department Has Failed to Develop Procedures to Track the Status of Contaminated Sites. According to sources within DHS, the Department is not tracking the more than 1,300 sites identified by the Abandoned Site Project and referred for enforcement action.

5. The Office of Public Information and Participation has Been Unsucessful in Providing Information and Participation Opportunities to Communities Affected by Toxic Dump Sites. The Department's public information office has done a poor job of providing information and assistance to communities affected by Superfund sites. Additionally, the Department has failed to

fulfill its statutory responsibilities to inform victims as to how they can receive compensation for injuries stemming from exposure to hazardous materials. Finally, the OPIP staff is inexperienced and lacks the expertise necessary to fulfill the program's goals.

6. There is Inadequate Coordination Among the State, Federal, and Local Agencies Involved in Cleanup Activities. The cleanup of a contaminated site requires coordination among a number of agencies. Unfortunately, California has failed to sort out the jurisdictional responsibilities of these various agencies and to develop procedures to effectively coordinate the resources that are available to clean up sites contaminated with toxic chemicals. As a result, California's cleanup program lacks: (1) an integrated strategy for the identification, assessment and cleanup of sites; (2) a clear indication of priorities; (3) a clear division of responsibility; and, (4) accountability. There is inadequate DHS coordination with the State Water Resources Control Board, as well as with local agencies.

CHAPTER VI: CALIFORNIA HAS COMMITTED INSUFFICIENT RESOURCES TO CARRY OUT AN EFFECTIVE CLEANUP PROGRAM.

Findings

1. The State and Federal Superfunds are Seriously Underfunded. The current State Superfund provides for only $100 million. While the State may additionally receive as much as $90 million to $970 million from the Federal Superfund and responsible parties, the cost of cleaning up the State's 200 Superfund sites ranges from $820 million to $2.6 billion. The currently proposed program to provide $300 million through

general obligation bonds may be inadequate, and the $526 million in interest payments may place too large a burden on the general taxpayer for cleanups.

2. DHS and the State Water Resources Control Boards Have Failed to Allocate Adequate Staff to the Cleanup of Contaminated Sites. Despite the complexity of dump site cleanups, the DHS has only 17 authorized positions in the Site Mitigation Unit located in Sacramento. Of these positions, only six staff have responsibility for site characterization, design, and cleanup work at specific sites.

3. The Attorney General's Office is indequately staffed to undertake the civil prosecutions which DHS intends to initiate as part of the Superfund program. The State has yet to successfully sue a responsible party for reimbursement of State Superfund monies spent in cleanup. The Attorney General's office has been asked to initiate only four legal actions against responsible parties by DHS. Yet, if the State expects to recover current Superfund expenditures, much less the $184 million in cleanup expenditures the Administration recently committed to collect from responsible parties, then the Attorney General will require additional staff and resources to undertake successful legal actions.

CHAPTER VII: EXISTING LEGAL AND REGULATORY TOOLS HAVE NOT BEEN EFFECTIVE TO PAY FOR CLEANUP OF SUPERFUND SITES.

Findings

1. California Statutes Establishing the Standard and Scope of Liability for Site Cleanup are Inconsistent with Federal Law and Weak by Comparison. California law fails to define who is a

"liable person." The effect of the absent definition is to create a gap in the government's case against each potentially responsible party and may serve as a disincentive for the State to litigate. Additionally, the State's failure to adopt Federal standards of strict, joint and several liability delays site cleanups.

2. If Adjudication of Responsible Parties is Going to be an Effective Tool for Compelling Reimbursement on a Timely Basis, Then the State Must Change the Judicial Procedure. The Commission believes that the requirement that damages be apportioned among responsible parties places considerations of equity among tortfeasors before considerations of public health, water quality, and environmental protection. Consequently, the State needs to develop alternative methods for assessing damages to ensure that the process is expedited to the extent possible.

CHAPTER VIII: CALIFORNIA'S EXISTING REGULATORY PROGRAM IS NOT ADEQUATE FOR PREVENTING THE CREATION OF NEW SUPERFUND SITES.

Findings

1. There are Major Deficiencies in State and Federal Regulations. Deficiencies in existing and proposed State and Federal regulations are so significant that they call into question whether the State's hazardous waste management program is intended to prevent the creation of future Superfund sites. The criticisms of the State's hazardous waste program lead the Commission to conclude that California's existing regulatory program is not adequate to prevent the creation of new Superfund sites.

2. Most Hazardous Waste Facilities Have Not Received Permits. The Resource Conservation and Recovery Act requires that every person owning or operating a hazardous waste facility must obtain a permit. Seven years after passage of this law, over 90 percent of all hazardous waste facilities continue to operate under "interim status." DHS has made major improvements in issuing final permits to facilities which store and treat hazardous wastes in tanks. However, little progress has been made in permitting land disposal facilities - the facilities which represent the greatest risk of contamination and that show up most frequently on the Superfund list.

3. Many Hazardous Waste Facilities Have Not Been Routinely Inspected. Based on data collected in July 1983, California had inspected only 18 percent of all the State's hazardous waste facilities and had conducted inspections at less than half of the major disposal facilities. The reason for this appears to be confusion over which agency is responsible for conducting inspections.

4. There is Widespread Noncompliance with Hazardous Waste Regulations. The EPA, the U.S. General Accounting Office, the Assembly Office of Research, and the California Auditor General have all reported extensive noncompliance with requirements for groundwater monitoring. Yet early detection of contamination is necessary to avoid millions of dollars in the cost of site cleanups.

5. Most Hazardous Wastes Continue to be Dumped in Surface Waters, Sewers, and Land Disposal Facilities. In the absence of direct disincentives, such as regulatory restrictions of land

disposal and strong enforcement of the industrial pretreatment standards, disposal of untreated or minimally treated waste to sewers, surface waters and surface impoundments (toxic ponds) will always represent least-cost waste management options. When all costs, the immediate cost to the generator as well as the cost of eventual cleanup, are considered, waste reduction and treatment techniques become economically feasible. The present regulatory system focuses on minimizing the front-end costs. Yet the Congressional Office of Technology Assessment estimates that cleaning up a contaminated site and compensating victims costs from 10 to 100 times as much as taking the proper initial steps to prevent contamination.

6. The Use of Improved Waste Management Technologies Will Help Prevent the Creation of New Superfund Sites. Advanced waste management technologies are already in use in other countries such as Denmark, the Netherlands, and Japan. As a result, land disposal has been significantly curtailed in these countries. Although full use of these technologies may increase costs from $20 to $30 million annually, these costs would be distributed among several thousand California businesses with gross annual sales of over $30 billion.

7. California's Hazardous Waste Program Does Not Place Adequate Emphasis on the Reduction of Hazardous Wastes and On the use of Alternative Waste Management Technologies. California adopted a policy in 1981 to reduce dependence on land disposal facilities and to encourage the construction of alternative waste management facilities. However, DHS has not yet developed an aggressive program to increase the development and use of

technologies which can safely reduce, recycle, treat, or destroy hazardous wastes. An analysis of the budget shows that the Alternative Technology Program was reduced by six positions and $266,000 in 1983-84 and has been slated for further reductions in 1984-85.

8. The costs of cleaning up contaminated hazardous waste sites vastly exceed the costs of preventing the contamination. Recent examinations of cleaning up toxic waste dumps that have leaked into the environment, and compensating victims, show the costs to be **10 to 100 times greater** than the cost of properly handling the wastes. Proper disposal of the wastes at Love Canal would have cost an estimated $2 million, but the cleanup program is expected to exceed $100 million.

CHAPTER IX: RECOMMENDATIONS

The dangers posed by toxic wastes to human health and water supplies demand far greater attention than they are receiving from State agencies. Despite intense public and media attention, the State's efforts to clean up toxic dumps have been modest in comparison to the dimensions of the toxic waste threat.

While the Department's past efforts to correct deficiencies and willingness to make further improvements is to be commended, the Commission believes that there is a serious danger in placing too much emphasis on "fine-tuning" specific elements of the Superfund program. Many of the problems documented by the Commission are related to major organizational conflicts, the failure of the State to commit needed resources, and serious management deficiencies linked to the placement of the program

within the Department of Health Services. Many of these problems are well beyond the control of the Department and can only be corrected through major legislative reforms and reorganization.

Recommendation #1: The Governor and the Legislature should create an Office of Superfund Management within the Governor's Office to:

- **Immediately accelerate the cleanup of hazardous waste sites; and,**
- **Centralize authority, establish accountability, and improve coordination while major and permanent reorganization proposals are considered.**

Attempts by the Department to reorganize internally and to streamline certain support activities have been largely unsuccessful. Efforts to improve coordination with other State agencies, particularly the State Water Resources Control Board, have also failed to resolve serious problems that have led to confusion and inaction by both agencies.

The Commission strongly urges that a special Superfund Management Office be created within the Governor's Office to plan, organize and supervise the work of the State agencies which are responsible for cleaning up toxic dump sites. This office would be responsible for overseeing the following activities:

1. Developing a multi-year plan to guide the identification, assessment and cleanup of toxic dump sites, and to assess the financial and staff resources needed to carry out an effective cleanup program.

2. Supervising the completion of the Abandoned Site Project.

3. Coordinating the evaluation of all sites identified as potential hazardous waste sites.

4. Revising the ranking system for hazardous waste sites and setting priorities for the allocation of resources.

5. Issuing a complete list of all the sites in California which are contaminated with toxic substances and will require cleanup.

6. Establishing strategies for using available Superfund monies as efficiently as possible. One strategy should be to use funds for early and complete characterization of sites, and then developing tough schedules for responsible party negotiations and cleanup work. This would ensure that Superfund monies can be immediately spent by the State if responsible parties fail to take action.

7. Coordinating the approval of cleanup plans by the Department of Health Services, the State Water Resources Control Board, and the Air Resources Board.

8. Designating lead agencies for all cleanup projects, and coordinating the activities of State agencies involved in the cleanup.

9. Coordinating the development of policies to guide cleanup decisions and to protect public health.

10. Coordinating the preparation of a strategy to strengthen the laws and regulations needed to prevent the creation of new Superfund sites.

The Commission recommends that the Superfund Management Office be established for a two-year period as an interim strategy to improve the effectiveness of the program. During this time serious consideration should be given to major and permanent reorganization of the State's toxics programs.

Recommendation #2: California should immediately double the resources available to clean up toxic dumps.

The Commission concluded that both State and Federal Superfunds are inadequate to clean up sites which are known to be contaminated with hazardous wastes. Although it is impossible at this time to estimate the total amount of the revenue shortfall, the Commission believes that California may need at least $400 to $500 million in State revenues during the next 10 to 20 years.

Furthermore, the Commission has concluded that many organizational and management changes must occur if additional funds are to be used effectively. During the past two years the Department has been unable to spend the entire $10 million appropriated by the Legislature and has encountered enormous difficulties in awarding and monitoring a small number of cleanup contracts.

Therefore, the Commission recommends:

A. The Legislature should pass urgency legislation increasing the amount of the Superfund Program from $10 million to $20 million per year.

B. The Legislature and the Administration should determine the percentage of cleanup cost activities that should be borne by the general taxpayer prior to developing any long-term financing program for Superfund.

C. The Legislature should memorialize Congress to:

- Increase the amount of the Federal Superfund to a level not less than $1.8 billion per year for each of the next five years;

- Require EPA to award a portion of the Superfund revenues to states under a block grant formula that considers the number of sites in each state.

D. The Administration should double the authorized staff positions for site characterization and cleanup within the Department of Health Services, the State Water Resources Control Board, and each of the Regional Water Boards. Furthermore, the Administration should approve additional resources for the Attorney General's Office to pursue civil and criminal actions to clean up these sites.

These recommendations represent a constructive interim step towards resolving the resource shortfall within the Superfund program. They are designed to help the Legislature and Administration plan and carefully manage the growth of the Superfund program while avoiding many of the problems that have plagued the program in the past.

Recommendation #3: The Director of the Department of Health Services should create a special management task force to resolve serious management and administrative problems.

Many of the problems discussed in this report are the result of bureaucratic delays, inefficiencies, inadequate legal and administrative support, and the failure to develop effective procedures. The Commission believes that many of these problems can be resolved by creating a special task force or management team within the Department. These efforts are not dependent on any major organizational reforms and should begin immediately.

The Commission recommends that the Department immediately create a Superfund Management Task Force to consider and follow up on the following recommendations:

1. Assess staffing needs (clerical, professional, technical) to determine the number and type of staff that will be needed to carry out an expanded program.

2. Develop guidelines on when and how to conduct site characterizations.

3. Prepare a comprehensive staff training and development program for new and existing staff.

4. Assemble a highly specialized team to prepare and monitor Superfund contracts.

5. Re-evaluate the job requirements and the qualifications of key management staff to ensure that managers have been appropriately placed.

6. Create an Advisory Committee which includes victims of toxic chemical exposure to assist the Office of Public Information and Participation in developing a more effective program.

7. Develop specific policies to guide decisions on when to construct fences, when and how to notify residents of potential health hazards, when to evacuate residents, and supply alternative sources of water.

8. Develop a computerized data management system to track the status of all abandoned sites.

9. Prepare regulations revising the ranking system for Superfund sites. The new regulations should create a system which is less susceptible to constant change and should categorize sites as follows:

Priority One: Sites which represent an immediate threat to human health or have a high potential to contaminate groundwater.

Priority Two: Sites which represent a less immediate threat to human health or to the environment.

Priority Three: Sites which will require cleanup, but present a limited threat to human health or the environment.

10. Develop a special recruitment program to attract highly qualified candidates into the State's Superfund Program.

Recommendation #4: The Legislature should amend certain State statutes and consider new legal procedures to accelerate the collection of funds from responsible parties.

First, the Commission recommends that the Legislature amend State statutes defining responsible parties so that the standards and scope provisions of strict liability conform to Federal law.

Second, the Commission recommends the State initiate either of two options to expedite the judicial process. The first option would be for the Legislature to amend current statutes regarding joint and several liability so that they would conform with Federal law. The second option would be for the Legislature to consider establishing a bifurcated litigation procedure for Superfund cases. The initial phase of the trial would be exclusively concerned with determining, as a matter of fact, the amount of damages being sought and the "responsible" parties. In the second phase of the bifurcated trial, within a matter of days prescribed by statute, the trial judge would determine, for the purpose of assessing damages, the amount of the total cleanup costs to be borne by each of the liable parties. Within another statutorily prescribed period, the amount of damages assessed to each party would be due. Subsequently, a full trial would be

held to readjudicate apportionment with greater particularity, or establish the liability of a previously unidentified party, or determine the proper contribution of the Superfund to the cleanup costs where there are insolvent liable parties.

Recommendation #5: The Legislature should require that all existing hazardous waste disposal facilities meet the requirements and standards for new facilities no later than 1988.

Both State and Federal regulations for hazardous waste facilities differentiate between requirements for new and existing facilities. Existing facilities are "grandfathered" into the regulatory system and have been allowed to operate under "interim status." Although these facilities will eventually be granted full permits, they will be allowed to operate under conditions that the regulatory agencies have determined are inadequate for new facilities.

The Legislature should close this regulatory loophole by requiring that new and existing facilities be treated equally. Although there will be significant costs associated with bringing these facilities into compliance with new regulations, the Commission believes that these costs are reasonable when compared to the enormous costs of cleaning up a leaking hazardous waste site.

Recommendation #6: The Legislature should require the Department of Health Services to develop regulations prohibiting the land disposal of all hazardous wastes which present serious potential risks to human health and the environment.

In December 1982 the Department of Health Services adopted regulations restricting certain highly toxic wastes from land disposal. These wastes were to be phased out of land disposal

facilities between 1983 and 1985 as alternative waste treatment capacity became available.

Since the Department has made no effort to extend the existing land disposal restrictions, the Legislature should require the Department to prohibit from land disposal all wastes which present serious potential risks to human health and the environment.

CONCLUDING NOTE TO THE EXECUTIVE SUMMARY

This Executive Summary serves to provide the reader with an abridged version of the full report of findings and recommendations. However, to fully understand the nature of the Commission's conclusions and recommendations, we encourage you to read the full text, particularly Chapter IX where our recommendations are presented in detail.

CHAPTER I

INTRODUCTION

The Commission on California State Government Organization and Economy was created in 1961 to assist the Governor and the Legislature in promoting economy, efficiency, and improved service by the various agencies of State Government. The Commission first learned of problems in the State's hazardous waste program in 1981, when it held hearings on an Administration proposal to create a new Department of Toxic Substances Control. Although the proposal was ultimately withdrawn, the Commission continued to follow the State's progress in developing effective regulatory and cleanup programs to protect the public from toxic substances.

In October 1983, the Commission decided to undertake a major investigation of the State's program to clean up toxic dump sites. The Toxics Assessment Group (a research and consulting group specializing in toxic substances) was hired as consultants to the Commission on the project and Michael Gersick of Gratten/Gersick/Karp was hired to investigate the legal obstacles to the cleanup of Superfund sites for Chapter VII. The purpose of the study was to evaluate the existing program and develop recommendations to:

- accelerate the identification and analysis of abandoned dump sites;
- remove obstacles that have prevented the State from

cleaning up Superfund sites;

- protect citizens who live near toxic dump sites during the lengthy process of site assessment, mitigation planning, and actual cleanup; and
- prevent the creation of new Superfund sites.

BACKGROUND

A. The Toxic Waste Crisis

Problems resulting from the improper disposal of hazardous wastes were virtually unknown until a single event captured headlines throughout the country. On August 2, 1978, New York health officials ordered the evacuation of 240 families living within two blocks of the Love Canal. The evacuation followed the discovery that highly toxic and carcinogenic chemicals were oozing from a canal which had been used as a dump site for an estimated 43 million pounds of industrial wastes.

Awareness of the Nation's hazardous waste problem increased dramatically after discoveries at the Love Canal. By 1979 dozens of new toxic dump sites had been identified in most major industrial states. These discoveries confirmed suspicions that Love Canal was not an isolated case of environmental contamination, but rather the first sign of an impending crisis.

One year later the EPA released startling estimates concerning the magnitude of the Nation's hazardous waste problem. The Agency reported that:

- there were as many as 50,000 disposal sites containing hazardous wastes;
- 90% of all hazardous wastes were being disposed of improperly and unsafely; and
- it would cost over $44 billion dollars just to clean up

the most dangerous sites in the country.

By 1980 polls revealed that two-thirds of the population were expressing "a great deal of concern" about the disposal of hazardous wastes. The Love Canal was soon pushed from the spotlight as officials discovered massive environmental contamination at such sites as Aerojet General, the Stringfellow Acid Pits, and the McColl Dump site.

B. Superfund: New Resources and Authority to Clean Up Toxic Dump Sites.

In December, 1980, the President signed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) -- commonly referred to as "Superfund". The Act created a $1.6 billion fund over a five year period that was intended to allow EPA to take immediate actions to clean up hazardous waste contamination from spills and abandoned dump sites. It also allows the Government to recover cleanup costs from the individuals and companies contributing to the contamination (commonly called responsible parties).

One of the most important provisions of CERCLA deals with liability. The Act imposes **strict liability** for the cost of cleanup on the past and present owners or operators of facilities; transporters who accepted wastes and selected the disposal facility; and generators whose wastes were sent to a toxic site. Strict liability describes a set of legal concepts which hold one party responsible for damages caused to another without any showing that the responsible party was negligent in causing the damages.

The Federal Superfund provides only a small portion of the total funds needed to clean up the thousands of dump sites located throughout the country. As a result, the Act requires the creation of a National Priorities List. A cleanup funded by the Federal Superfund can occur only if a site is on the National Priorities List; however, inclusion on the NPL does not ensure access to Federal funds. In many cases cleanup funds come from:

- voluntary agreements with the party or parties responsible for the wastes;
- legal action to force cleanup by responsible parties; or
- state or local governments which choose to assume the responsibility without Federal dollars.

Only 19 of the several hundred sites in California that are contaminated with toxic wastes are currently included on the National Priorities List.

The Federal Superfund requires states to play a major role in the cleanup of hazardous waste sites. The Act demands both financial participation and assistance in the actual cleanup program. Thus in September 1981, California enacted legislation to create a State-level fund similar to the Federal Superfund. The purpose of the legislation was to:

- generate revenues to provide the State's 10% match required under the Federal cleanup program;
- clean up hazardous waste sites that do not qualify for Federal support;
- support emergency response activities; and
- compensate persons injured by exposure to releases of hazardous substances.

During the ten-year life of California's Superfund program the State will collect $100 million dollars through a tax on the

disposal of hazardous and extremely hazardous wastes. The Department of Health Services is authorized to spend up to $10 million dollars per year to carry out the provisions of the Act.

C. Superfund: Too Little, Too Late?

The hope and enthusiasm which accompanied the creation of the Superfund programs have now been replaced by frustration and disappointment. After nearly three years of attempting to clean up California's worst dump sites it appears that we have lost more ground than we have gained. The record reveals that:

- only two sites have actually been cleaned up and removed from the Superfund list;
- the list of sites requiring cleanup has increased by over 50%;
- almost three thousand sites still need to be evaluated;
- very little progress has been made in analyzing the type and extent of contamination at known Superfund sites;
- major cleanup work has not been started at California's worst sites (Stringfellow, McColl, or Purity Oil); and,
- the State has not yet collected funds from any of the parties responsible for the contamination at these sites.

The limited progress that has been made under the State and Federal Superfund programs is due in part to the magnitude and complexity of the waste cleanup program, and the failure to recognize until quite recently the dangers resulting from the improper disposal of hazardous wastes.

For nearly a century, industrial wastes were dumped in landfills, open pits, and abandoned wells. Little was known about the danger these wastes presented to human health, and few anticipated that these wastes would become major sources of

environmental contamination.

California's Hazardous Waste Control Act was enacted in 1972, making it the first state in the Nation to recognize the dangers represented by the indiscriminate dumping of hazardous wastes. The Act (AB 598) required the Department of Health Services to adopt regulations governing the handling, processing and disposal of hazardous wastes. Yet the first major set of hazardous waste regulations were not completed until 1979. By the time these regulations were in place it was too late to prevent widespread environmental contamination resulting from improper disposal.

It wasn't until 1976 that Congress finally passed legislation requiring the Environmental Protection Agency to establish a national program for the control of hazardous wastes. The Resource Conservation and Recovery Act (RCRA) was modeled after California's earlier legislation and required the EPA to develop a national program to regulate the treatment, storage and disposal of hazardous wastes.

The Resource Conservation and Recovery Act provided EPA with the basic authority needed to prevent emergencies and health hazards resulting from the improper handling and disposal of hazardous wastes. The Act specifically required the Administrator of EPA to:

- publish criteria for identifying hazardous materials;
- establish a labeling and tracking system for shipments of hazardous waste;
- establish standards for hazardous waste disposal facilities;

- inspect and permit facilities which treat, store, or dispose of hazardous wastes; and
- delegate authority for hazardous waste management to states that establish programs which are at least as stringent as the EPA program.

Three years after the enactment of RCRA, EPA had still not issued its first set of regulations. When the Agency finally issued some of the required regulations in 1980, the EPA Administrator warned:

> Let me predict now that the process we are starting will turn up information and situations which will shock our Nation. We will find waste sites which were unknown. We will document leaching of chemicals into aquifers (underground water supplies) that we assumed were safe. We will gather hard data on a problem whose dimensions we now can only guess.

The Administrator's prediction was almost immediately verified. Although we still have not assessed the full magnitude of the hazardous waste problem, there is evidence that millions of Californians have been affected by unsafe waste disposal practices. Today there are hundreds of sites throughout the State at which toxic wastes were dumped or spilled due to poor management practices. Most of these sites represent uncontrolled sources of air and water contamination, and many of the chemicals that are escaping into the environment represent a serious health threat to nearby residents.

D. The Superfund Process: Complex, Time-Consuming and Expensive

The cleanup of toxic dumpsites is the most complex and problematic of all hazardous waste responsibilities assumed by the government. On November 30, 1983, the Deputy Director of the Department of Health Services stated:

> Of all the activities of the Division, from permitting of sites to development of alternative technology,...the cleanup of sites is the most difficult. In the vast majority of sites, the chemicals have soaked into the soil. In 80% of Superfund sites, the poisons have leached into the groundwater and have begun to move offsite. Cleaning the soil and water is literally more difficult than unscrambling an egg.

The cleanup of any toxic dump invariably turns out to be a time-consuming and expensive task. This is particularly true for those sites where the owners or responsible parties are unknown or do not have the financial resources to carry out the cleanup. These are the sites that ultimately end up on State and Federal Superfund lists.

A major remedial action under the Federal Superfund generally involves the following sequence of events:

1. collecting information and preparing a remedial action strategy;
2. determining the extent and type of contamination;
3. conducting a feasibility study to analyze various clean-up alternatives;
4. selecting a "cost-effective" remedy -- the alternative that provides the most protection to public health and the environment at the least cost;
5. designing the remedial action; and
6. cleaning up the site.

According to the EPA this complete process usually takes at least two to three years, and the average cleanup costs about $6 million. A complicated site such as Stringfellow or Aerojet can cost up to $100 million or more to control, and may require perpetual pumping and treatment of contaminated groundwaters to prevent the spread of toxic pollutants.

During the first three years of our Superfund program, California has only completed two minor cleanup projects. Furthermore, most of the sites have not progressed past the second step of the cleanup process -- site characterization. Thus it appears that the cleanup activities in California are taking far longer than the EPA estimates.

E. Who Is Responsible for Cleaning Up Toxic Dump Sites?

The Department of Health Services is the State's lead agency for management of hazardous wastes and administration of the State Superfund program. However, the Commission discovered that identifying the agency responsible for actually cleaning up a toxic dump site is not as straightforward as it would seem. Lead agency responsibilities are currently divided among the Department of Health Services, the nine Regional Water Qualtiy Control Boards, and the Environmental Protection Agency.

Since the focus of this study was on the State Superfund Program which is administered by the Department of Health Services, the findings and recommendations presented in this report are directed primarily at the Toxic Substances Control Division of the Department of Health Services.

The Toxic Substances Control Division was created in October 1981 to consolidate existing departmental activities relating to toxic substances. This reorganization followed hearings by the Commission on an Administration proposal to create a new Department of Toxic Substances Control. Although the proposal was ultimately withdrawn, an internal reorganization of the Department was intended to accomplish similar goals by providing

a higher level of management attention on toxics.

The Division has been reorganized several times since October 1981. The most significant of these reorganizations took place approximately one year ago, when the Department transferred all of the laboratory, epidemiology and toxicology staff back to the Health Protection Division where they were located prior to 1981.

The Division's proposed budget for 1983-84 was approximately $57 million. About $48 million (84%) was related to the cleanup of toxic dump sites and included:

- $10 million from the State Superfund,
- $17 million from the Federal Superfund, and
- $21 million from responsible parties.

The current year budget was recently revised to delete funds anticipated from responsible parties and to reduce the amount of funds anticipated from EPA. Although the Department expects to spend all available State Superfund monies in 1983-84, almost 40% of available State revenues were unexpended in 1982-83. Table 1 shows that of $10 million in State revenues actually budgeted in 1982-83, only $6.28 million were actually spent.

The Governor's Budget for 1984-85 includes 220 authorized positions for the Toxic Substances Control Division. Although cleanup activities represent the major item of expenditure ($31.8 million), the budget includes less than 40 permanent positions to administer the cleanup program. Most of the remaining positions are allocated to permitting, inspection and enforcement activities.

TABLE 1

SUPERFUND PROGRAM MONIES BUDGETED AND SPENT
IN STATE FISCAL YEAR 1982-83
(millions)

Expenditure Category	Expenditure Budgeted	Expenditure Spent	Expenditure Unspent
Contracts to Clean Up Hazardous Waste Sites	$ 4.53	$1.58	$2.95*
Contracts to Clean Up Releases of Hazardous Material	1.00	.24	.76
Equipment to Clean Up Releases of Hazardous Material	.80	.80	0
Contracts for Health Studies	.28	.14	.14
Compensation to Injured Persons	.30	0	.30
Agreements with State Agencies	.94	.67	.27
Salaries and Operating Expenses	2.15**	1.36	.79
Administrative Overhead	0***	.31	(.31)
Repayment of General Fund Loan	0***	1.18	(1.18)
Total	$10.00	$6.28	$3.72

*Includes $1.5 million appropriated specifically to implement cleanup plans at the McColl hazardous waste site. Since the department was unable to complete all work to prepare the McColl site for cleanup, these monies were neither spent nor available for other cleanup projects.

**Includes $41,170 in administrative overhead.

***The department did not account for all administrative costs or its obligation to repay a portion of its loan from the General Fund when preparing its state fiscal year 1982-83 budget.

Source:
Report by the Auditor General of California
The State's Hazardous Waste Management Program:
Some Improvement, But More Needs to Be Done.
November 1983, p. 31

Note: This information was presented to the Commission as part of the testimony of the Auditor General at the November 29 hearing.

PURPOSE, SCOPE AND METHODOLOGY OF THE REPORT

During the course of this investigation, the Commission held three public hearings throughout the State, inspected fifteen dump sites, and conducted extensive background research on the State and Federal Superfund programs. The entire investigation required over six months to complete. It involved Commission staff, consultants specializing in toxic substances and an attorney who investigated legal obstacles to the cleanup of Superfund sites. The entire project was directed and supervised by a special subcommittee of the Commission.

This report synthesizes testimony presented by over 35 witnesses and summarizes the research conducted by the Commission's staff and consultants. The report is intended to provide the Governor and the Legislature with organizational options and detailed recommendations that will lead to major reforms in California's program to clean up toxic dump sites.

The organizational options presented in this report have been limited to those which offer opportunities for immediate improvements in the cleanup and prevention of toxic dump sites. Because the Governor has formed a cabinet level Task Force for that purpose, this study does not attempt to look at the issues regarding reorganization of all 12 State agencies regulating hazardous substances. Since the Commission limited its investigation to the cleanup program, this report focuses primarily on the Toxic Substances Control Division of the Department of Health Services, and only in a limited way approaches the subject of coordination of this Division with

other agencies which have authority in the area of hazardous waste control.

The period that this study examined covers the creation of the State Superfund program in 1981, until the writing of this report began in May of 1984. It is important to point out that the Superfund Program has been in existence for nearly three years. The program was established and administered by Governor Brown for approximately 15 months. The Deukmejian Administration has now managed the program for an equivalent period of time. While the Commission acknowledges that many of the problems discussed in testimony before the Commission and described in this report preceeded Governor Deukmejian, some of these problems persist and have not been affected by the change in administration.

CHAPTER II

HAZARDOUS WASTE: A CRITICAL DANGER TO OUR CITIZENS

The real and potential problems posed by improperly managed hazardous waste sites are enormous. Hazardous waste is seeping into the Nation's groundwater supplies, contaminating the land, and escaping into the air. The rapid rate at which reports of damage are being accumulated suggests that these sites present problems of awesome proportions, constituting perhaps the single most important environmental issue of the decade ... the problem has been called a 'sleeping giant', and individual sites have been referred to as 'ticking time bombs' with the potential to cause severe damage to human health and the environment.

Comptroller General of the United States
April 24, 1981

The hazardous waste disposal problem in the United States is one of enormous complexity. It has only been in recent years that we have attempted to get accurate figures on the types and volumes of wastes produced, and on the methods being used to dispose of these wastes. As our information-gathering has become more sophisticated, the estimates have increased dramatically. As recently as 1982 the EPA estimated that U.S. industries were generating 40 million metric tons of hazardous wastes each year. However, in the fall of 1983 EPA revised its estimate on the basis of preliminary data on 1981 waste generation. The revised estimate was 150 million metric tons of hazardous waste generated each year -- 375% greater than was earlier estimated. Yet in April of this year the final results of this study showed that even this figure was far too low. The final data showed

that in 1981 American industries generated 264 million metric tons of hazardous wastes, a 60% increase over the previous estimate, and more than 1 ton of hazardous waste for every man, woman and child in the country.

California has had similar problems pinning down the volumes of wastes generated within the State. In 1981 the Department of Health Services estimated that California industries were generating 5 million tons of waste a year. By the fall of 1983 this estimate had doubled to 10 million tons a year. As the State improves its regulatory program and consequently its information-gathering ability, the numbers will almost certainly go higher.

While the volumes of the wastes produced are alarming, of even greater concern is the difficulty in getting accurate information on what methods are being used to dispose of these wastes. The EPA study found industries reporting that only 54 of the 264 million metric tons produced each year are disposed of. While the rest was reported as being treated or stored, there is little information on the types or effectiveness of the treatment methods used.

The disposal methods reported by most firms also give cause for concern. In 1981, 73% of the 430 disposal facilities reporting used landfills or surface impoundments to dispose of hazardous wastes. Notwithstanding the regulations of the EPA and DHS, both disposal techniques are highly susceptible to leakage and post-closure maintenance problems. Even more disturbing is EPA's finding that, although only 20% of the facilities reported

using underground injection wells to dispose of wastes, this disposal method accounted for the greatest volume of wastes: 32 million metric tons, or 60% of the 54 million metric tons disposed of in 1981.

Although ten times more hazardous waste is disposed of in injection wells than is disposed of in landfills, little is known of the actual security of injection wells. The potential for serious groundwater contamination resulting from the injection of that volume of hazardous waste into wells appears high. Recently, in one of the first enforcement actions against a hazardous waste well injection operation, the EPA fined Waste Management, Inc. $10 million dollars because their well had leaked 45 million gallons of hazardous waste into geologic formations that were required to be protected from toxic chemicals.

CHEMICAL CONTAMINATION OF DRINKING WATER: EXPANDING THE RISKS OF HUMAN EXPOSURE.

California and the federal government have spent millions of dollars developing new sources of water, constructing aqueducts and canals, and pumping water from one end of the State to the other. Yet today, Californians still draw over 50% of their drinking water from underground supplies (a very high percentage in relation to other states). Evidence is growing that precious groundwater resources are being contaminated by past and present hazardous waste disposal methods, and the heavy use and mismanagement of pesticides in agricultural sections of the State. Toxic chemicals have now been detected in more than 2,200 drinking water wells around the State. Today it is estimated that up to 4 million Californians are drinking water containing

toxic chemicals.

Toxic chemicals escaping from a site can extend far beyond the immediate boundaries of the facility. Underground plumes of contamination can travel miles and reach the drinking water of people who believed they were safe because they didn't live immediately adjacent to the site. The risk of this occurring is increased by the fact that critical steps necessary to protect underground drinking water supplies have not been taken. These steps include:

- o studying the health risks posed by the presence of organic chemicals in our air, food and water prior to their commercial production and widespread use;
- o developing regulatory programs which prevent toxic chemicals from entering groundwater supplies; and,
- o monitoring and enforcing water quality standards to ensure that contaminated water does not enter homes.

Many of our most serious Superfund clean-up problems involve contamination of groundwater, including the Stringfellow Acid Pits, Aerojet General, and Los Angeles' San Fernando and San Gabriel Valleys. It is estimated that the total cost to clean up these sites will exceed $200 million.

What this information tells us is that the hazardous waste problem is vastly greater and more complex than we had anticipated. Many of the toxic dump sites now being cleaned up by Superfund programs date from previous decades, when the manufacture and use of chemical products was not widespread. The amount of hazardous and toxic chemicals now in widespread use, and the volume of wastes now being generated are so very much larger that it raises urgent questions about the number of new

toxic dump sites we may be creating. As the volume of waste increases, so too does the potential for environmental contamination and for human exposure to toxic substances. When we add to this the information we are now receiving about groundwater contamination arising from current, operating facilities, we see that the risk of human exposure is increasing enormously. As this risk grows, the debate over what this means to human health becomes more intense.

HEALTH EFFECTS RELATING TO EXPOSURE TO TOXIC DUMP SITES: A GROWING BODY OF EVIDENCE.

There is a growing body of evidence that exposure to toxic substances can lead to specific health problems. A Harvard University research team was recently able to link the consumption of contaminated drinking water with the increased incidence of childhood leukemia, birth defects and other childhood diseases in a community that drew its drinking water from two wells just downstream from a large chemical manufacturing complex.[1] Data for this study was collected from 3,527 families in Woburn, Massachusetts -- 54% of the Woburn population. This was the largest study ever conducted on the effects of industrial poisons in a single geographic area. (No such study has ever been conducted on a California population exposed to industrial wastes.)

Information on health effects experienced by residents near a toxic dump site was brought to the Commission by Dr. Beverly Paigen, who conducted studies of residents at Love Canal, New York. In her first study, Dr. Paigen found increased incidences of asthma, urinary tract problems, miscarriages, birth defects

and central nervous system problems. In a later study that focused on Love Canal children, Dr. Paigen found slowed nerve conduction velocity, impaired hearing, learning problems in school, hyperactive behavior, and increases in seizures.[2]

Health effects data is also available from a case in Tennessee, in which pesticide wastes were dumped into pits and leached into underground water supplies near the small community of Medon. Consumption of contaminated water reportedly caused loss of hair, insomnia, dizziness, respiratory problems, kidney pains, liver damage and limb numbness. Simply bathing in the water caused skin rashes and chaffing. Tests conducted at Kettering Laboratories in Ohio confirmed liver damage in exposed individuals.[3]

Another health study was conducted by the California Department of Health Services at the McColl dump site in Fullerton. Residents who were questioned in the survey complained about a number of acute, discomforting symptoms, including nausea, headaches, and dizziness. The Department determined that there was a statistically significant chance that 14 of 25 symptoms recorded by residents were in fact associated with exposure to toxic chemicals known to be present in the dump.[4]

Though this body of evidence is growing, most health officials still feel unable to state categorically that persistent health problems experienced by residents near a site are the direct result of exposure to toxic materials. This reluctance is one of the fundamental causes of the adversarial

relationship that frequently exists between residents near toxic dump sites and public officials.

The problem for health officials is that a cause-and-effect relationship between health problems and proximity to a site cannot be scientifically established without first analyzing the relationship according to the requirements of prescribed scientific methodologies. These methodologies are usually not designed to diagnose individual symptoms and trace their cause to exposure to toxic wastes. Rather, they are designed to assess the probability that symptoms of illness are caused by toxic wastes escaping from the dump site.

In addition to statistical difficulties encountered by health officials in assessing the health impacts at a toxic dump site, there are informational needs which further complicate matters. Some of these include the need for information about the identify and quantity of the chemicals which were dumped at the site, and incomplete knowledge of the soil, rock formations and water courses that underlie the site. Other questions that must be answered include:

- How much and what kind of toxic substances are residents exposed to?
- How are residents exposed (air, water, skin contact)?
- How often and when are residents exposed?
- What are the known health effects associated with the chemicals now present in the dump?

These questions deal with the dose that individuals could receive as a result of living near a dumpsite. Dose figures are among the most important pieces of information scientists need in assessing potential health impacts from exposure to toxic

substances. Yet precise answers to these questions are, in most instances, extremely difficult to obtain. This is especially true when exposures are spread over a long period of time. For example, concentrations of air contaminants can vary from hour to hour and day to day. Under these circumstances, calculating total dose is rarely possible. The absence of such data is another factor which prevents health officials from making strong statements in support of cause and effect relationships between proximity to a toxic dump site and symptoms recorded by residents.

Another problem facing public health officials is determining the potential for a toxic waste site to cause long-term health problems such as cancer, birth defects and genetic damage. Since these effects are not immediately apparent, cause and effect relationships are easily obscured. For example, the cause of any particular case of cancer cannot, with certainty, be linked to exposure to one or a combination of toxic substances. Some forms of cancer do not appear until as long as 10 or 20 years after exposure to a cancer-causing substance. In such cases, cause and effect relationships can only be estimated by employing very complex statistical models to study the exposed populations.

Complicating matters even further is the fact that, for many commonly used chemicals, only the most rudimentary information exists regarding their potential to cause health effects in exposed populations. A recent study conducted by the National Academy of Sciences found that:

> Of the tens of thousands of commercially important chemicals, most have been scarcely tested at all. No health tests have been performed on 80% of all general commercial chemicals (paints, plastics, solvents, etc.) now in use. Even for the most thoroughly tested class of chemicals - pesticides - complete health information exists for only 10%.[5]

The widespread lack of basic toxicological data and the limited knowledge about how we are affected by varying doses of toxic substances are common obstacles to understanding the potential health consequences of living adjacent to a toxic dumpsite.

It is factors such as these which explain the reluctance of most health officials to tell residents near a site that the health problems they are experiencing are linked to a nearby dump. Yet for parents convinced that their children are suffering because of chemicals leaking from a site, such scientific integrity is of little comfort, and is more likely to be viewed as "scientific hair-splitting."

The human dimensions of this problem were brought home to the Commission through powerful and frightening testimony from residents, who tried to describe what it is like to live near a toxic dump site:

> Our children suffer from headaches and stomach aches. I have three children and all of them suffer from headaches. I massage them to go to sleep at night because their legs and arms hurt ... (We've experienced) hearing loss among adults and children, seizures, birth defects such as spinal bifida, cleft palate, and boys who have urinary tract defects that required surgery.
>
> Linnea Samanc

Del Amo site
(formerly Cadillac Fairview)

> My daughter is now getting glasses and she is losing her hearing ... she has constant headaches, terrible headaches. She is 10 years old and she rarely plays any more. She just sits around the house and it hurts. And now I am being tested for my heart. I want to be around to watch my kids grow up and I'm scared.

Kitty Rader
Del Amo site

> I have a 12 year old daughter who is continually passing out at school. She's gone in for quite a few medical tests, brain scans and everything but they find nothing.

Sandy Felix
Del Amo site

> It is those of us who have to live with that situation day after day, year after year, who really understand what the toxic waste issue is all about. We understand it from the viewpoint of people who cannot send their children into their own backyards to play because the air makes them ill. We understand it as friends who comfort young women who have just suffered their sixth miscarriage. We understand it as parents who lie awake at night listening to their children struggle to breathe or have to hold their child after one of his seizures.

Penny Newman
Stringfellow Acid Pits

The frustrations of residents seeking confirmation from the State that their health problems are linked to chemicals from a nearby dump site was perhaps best summarized by Sheila Garber, who used to live near the McColl dump in Fullerton. Garber stated:

> What is bothersome to me is the State's attitude that tends to downplay what we know is a very real problem affecting daily the well being of ourselves and especially our children. When you are living with

> these health problems daily they are horrendous, not bothersome ... This lack of responsibility on the part of DOHS has already made a horrible situation more frightening and more aggravating than it should be. It is as if, for some reason, without prior knowlege, the residents of McColl have been sentenced to live near a toxic dump and the DOHS has compounded the situation with cruel and unusual punishment.
>
> Sheila Garber
> McColl Dump

Clearly, much more basic health research needs to be done if the frightening, unacceptable health problems testifed to at Commission hearings by residents living near dump sites are to be solved, and if these problems are not to be extended far beyond the boundaries of the actual site.

CHAPTER III

CALIFORNIA HAS NOT ASSESSED THE MAGNITUDE OF ITS HAZARDOUS WASTE PROBLEM

SUMMARY OF MAJOR FINDINGS

1. The Department of Health Services cannot accurately predict the cleanup costs for toxic dump sites.

2. The Department is underestimating the number of sites which will require cleanup under the State Superfund.

3. The Department has no orderly program to assess sites discovered through the Abandoned Site Project.

4. The Superfund ranking system is unrealistically precise and results in constant and misleading changes in cleanup priorities.

INTRODUCTION

When Congress and the California Legislature created their respective Superfund programs in 1980 and 1981, the budget appropriations and staffing levels were based on very limited data and preliminary "guesses" about the magnitude of the hazardous waste problem. No one knew how many sites would require cleanup, or how much the cleanup would cost.

Today it is clear that the hazardous waste problem is much larger and far more serious than first imagined. The $1.6 billion

federal program and the $100 million State program will not be adequate to cleanup our most dangerous sites. Yet the Commission found even today that there is little information available on the magnitude of the problem and the resources needed to develop an effective cleanup program.

Although the California Superfund Program was enacted nearly three years ago, the Department of Health Services has made little progress in developing an accurate assessment of the State's hazardous waste problem. Throughout this project, the Department was only able to provide very tentative information concerning:

- the estimated cost of cleaning up the 93 sites which are currently listed on the State Superfund list;
- the number of sites which may be contaminated with toxic wastes;
- the number of sites which are currently being cleaned up under the Superfund program and through other State and Federal enforcement programs; and,
- the risks these sites pose to public health;

This chapter describes many of the problems inherent in the State's current program for identifying, assessing and ranking toxic dumpsites.

FINDING #1: DHS Cannot Accurately Predict the Cost of Cleaning Up the Hundred of Toxic Waste Sites in California, Due in Part to its Failure to Systematically Assess the Magnitude of California's Toxic Site Cleanup Problem.

A. DHS has had little experience in estimating cleanup costs for toxic dump sites.

In the three years since the passage of the State Superfund, the Department has entered into cleanup contracts at only 13 of State's 93 Superfund toxic waste sites. These contracts have

resulted in the cleanup of just two sites, the Llano Barrels and the Celtor site.[1] Of the total spent on all cleanup contracts, over 75% has gone for work at Capri Pumping and McColl. Work is continuing at both these sites. At Capri, the State has had to appropriate three times the amount originally estimated as necessary for complete cleanup. Among other reasons, the costs at Capri were underestimated because of the discovery of underground tanks at the site several years after the initial site assessment and cleanup work began.

In each of the last two years, DHS has overestimated what it would spend on contracts for site cleanup. In FY 1982-83 the Department spent only 35% of the funds budgeted for cleanup contracts. In FY 1983-84 the Department now anticipates spending 12% less on cleanup contracts than originally estimated in the budget. The Legislative Analyst has reported that the constant overestimation of expenditures is due to a combination of factors including freezes on hiring and contracts, inefficient contract approval process, and the reduction of services rendered through interagency agreements, as well as a variety of factors outside the control of the Department.

It is with this uncertain and limited experience that the Department faces the task of estimating its costs of cleaning up at least 200 State Superfund sites.[2] The vagaries of projecting cleanup costs for toxic dumps in California is highlighted by the differing cost estimates supplied by DHS and the California Legislative Analyst. DHS believes that the cleanup of 200 Superfund sites will average $6 to $7 million for a total of "as much as $1 billion".[3] The Legislative Analyst estimates a

range of average cost running from $4.1 to $12.9 million with a total cost for 200 sites ranging from $820 million to $2.6 billion.[4]

B. The level of toxic contamination and the physical characteristics of the 93 Superfund sites are not sufficiently understood to predict the cost of their cleanup.

Absent extensive information on the nature of a dump site, it is difficult if not impossible to make anything other than rough estimates of cleanup costs. Most sites have yet to be sufficiently characterized (assessed to determine the types and amounts of toxic substances present, and the physical situation of the site) to permit even a choice of the best method of cleanup. Even for those sites characterized well enough to permit cleanup to begin, "startling" discoveries of the true nature of the dump site can occur late in the cleanup process, doubling or tripling costs. Two good examples of this are the Capri and Stringfellow sites. As mentioned earlier in this Chapter, the cost of cleaning up the Capri site has tripled due to discoveries after cleanup began of underground tanks and other unforeseen characteristics. Even more suprising was the recent discovery of radioactive contamination at the Stringfellow site -- the most studied site in California.

To date, every State and Federal effort to estimate the total costs of cleaning up toxic dumps has grossly underestimated the costs of cleanup. Today, the $1.6 billion Federal Superfund is barely sufficient to pay the estimated $1.3 billion cleanup costs at one site, the Rocky Mountain Arsenal. Congress is considering expanding the federal program to $11.2 billion.

Similarly, the State's $100 million Superfund is insufficient to fund even 1/8 of the current "minimum" estimate of California's cleanup costs.

FINDING #2: DHS is Underestimating the Number of Sites Which Will Require Cleanup Under the State Superfund.

In testimony before the Commission on November 30, 1983, the Deputy Director of the Toxic Substances Control Program, stated:

> Concerning first the number of sites, there are approximately 3,000 sites which need further assessment to determine the extent of hazardous waste contamination. We have roughly extrapolated that our ultimate State list of sites might be as large as 200.

Yet, the information presented in this section suggests that the number of sites which will ultimately end up on the Superfund list will be much higher than the Department's estimate.

A. DHS has yet to complete an inventory of sites which contain hazardous waste and will require cleanup.

In 1980, DHS initiated the Abandoned Site Project (ASP) to systematically search for abandoned toxic dump sites. The program was intended to identify sites where hazardous wastes were disposed between 1945 and 1975[5] -- three decades which saw rapid growth in California's chemical and petroleum industries unchecked by consistant land use policies or laws restricting the disposal of toxic wastes.

The ASP survey has yet to be completed in any county. According to ASP staff, it is anticipated that completed surveys will be available for 24 of the State's 58 counties by the end of 1985. An additional 6 counties, including Los Angeles, will have

surveys in progess at that time, although completion will not occur until after 1985. DHS staff has indicated that for some of the larger counties, such as Los Angeles, the survey may never be completed because new sites are constantly being discovered and created. The remaining 28 counties in California are not scheduled for surveys. According to DHS staff, no new money is budgeted for surveying potential toxic dumps in these counties, and there are no plans to do so in the future.[6] (See appendices for a list of counties surveyed.)

The 3000 toxic waste sites identified by the Deputy Director as requiring further inspection have been uncovered through the Abandoned Site Project. The fact that the ASP search is far from complete raises questions about the validity of the Department's estimates of potential Superfund sites based on an upper bound of 3000. One indication of the potential of discovering Superfund sites outside the present scope of the ASP is that over 10% of the sites currently on the Superfund List are from counties not yet surveyed by the ASP.

B. Some categories of toxic disposal sites which may ultimately require cleanup under the State Superfund Program were excluded by DHS from the Abandoned Site Project.

Several significant categories of toxic disposal sites have been excluded from investigation by the ASP. Among them are the following:

1. Hazardous material disposal or storage sites operating after 1975.

The Department's ASP made the assumption that sites at which hazardous materials were disposed or stored after 1975 were adequately regulated by the Department's permitting and enforcement programs. The assumption that such sites pose no potential for becoming Superfund Sites represents the largest gap in the ASP search. The EPA's search for toxic dumps covers wastes disposed prior to 1980, the year the Federal hazardous waste regulations first took effect.[7] As discussed in Chapter VIII, DHS did not promulgate its first major set of hazardous waste regulations until 1979. Therefore, there appears to be little or no basis for the ASP's exclusion of post-1975 sites. The exclusion of post-1975 sites is further challenged by the finding that even the current regulatory program of the EPA and DHS falls short of that necessary to prevent existing disposal facilities from becoming new Superfund sites.

DHS's exclusion of wastes disposed after 1975 also fails to take into account that underground storage tanks containing toxic substances are still not regulated by the State. The number of such operating facilities using underground tanks which will require remedial cleanup may number in the hundreds.[8]

2. Oil field production sumps.

The exclusion of the oil field production sumps from the ASP search is the result of an agreement reached in 1982 between the Department and oil industry representatives to dismiss all such sumps from the abandoned site survey in Kern County. (Oil field production sumps are distingushed from oil refinery waste sumps such as exist at the McColl or the Purity Oil sites). Industry representatives argued that the wastes sent to these production sumps were not hazardous. Yet, the memo detailing the agreement specifically lists potential hazardous wastes, including: "Drilling muds, production waters, tank bottom sludges, scrubber wastes, and oil field chemical drums."[9] Drilling muds may contain arsenic, chromium and other heavy metals, and a report of the California Division of Oil and Gas states that water in oil field sumps, "... has caused death, nervous disorders, diarrhea and decreased reproduction in livestock and wildlife."[10] EPA documents list numerous hazardous materials as components of some drilling muds.[11]

3. Sludge ponds that exist in conjunction with sewage treatment facilities.

It is common knowledge that the sewer systems of the State are being contaminated with toxic substances dumped into them by many business which use such substances. A recent study found that 20% of nearly 1,000 electroplating firms in California are discharging toxic substances into the sewers. The current regulatory systems to prevent such disposal practices are inadequate. The State Water Board decided only recently to seek funding for enforcement of sewage pretreatment standards. The

study cited above found that, for 45% of the electroplaters, government officials did not know whether the discharges from the firms were in compliance with the law.[12]

The Department has excluded sewage treatment ponds from its search for Superfund sites despite the evidence that such ponds may contain toxic wastes and pose hazards of groundwater contamination similar to those experienced with pesticide rinsewater ponds and other industrial evaporation ponds.

Pesticide rinsewater ponds are another category which, though not completely excluded form the ASP, were not adequately evaluated. These ponds, which contain residues of pesticides flushed from spray tanks, are estimated to number over 500 in central California alone.[13] These sites are potent sources of toxic groundwater contamination and have resulted in major incidents of contamination.[14] Very little private or State testing of these sites has been done. Since virtually all of them are unlined dirt pits, most if not all will require remedial cleanup if the pesticide residues which have leached into the ground are to be contained and removed. The status of these sites, the need for State Superfund cleanup and the cost to the State of these cleanup operations has not been considered by the DHS Superfund program.

The Department has stated that these pesticide ponds are the responsibility of the State Water Board, yet the Board has no Superfund program to cleanup the ponds. Furthermore, DHS and the Board are not cooperating to include the ponds within the cleanup

efforts of the Department.

The Department's projections of cost or numbers of State Superfund sites does not account for the additional State Superfund sites which will arise from currently operating disposal sites, including sanitary landfills; from underground storage tanks; from pesticide rinsewater ponds; or from oil field sumps. The basis for excluding these potential sources of Superfund sites may unfortunately be rooted in the staffing limitations of the Department's search for toxic dumps, and not in any solid assurances that such categories of sites are not potential sources of Superfund sites.

C. DHS has failed to adequately evaluate thousands of potential toxic dump sites listed by the Abandoned Site Project.

By 1983, the ASP had compiled a list of 25,337 sites which were suspected of containing hazardous wastes and needed further investigation. Despite the name of the search -- the Abandoned Site Project -- not all of the sites on the list were actually abandoned, or even inactive. The list was developed from listings of active companies likely to produce waste, tips from a variety of sources, regulatory agency records, aerial photography, and staff observations, as well as from old phone books and business registers.

After the list of potentially contaminated waste sites was compiled, the ASP began a period of site assessment. This work was essentially an elimination process aimed at discarding from the list all sites which did not represent a public health or environmental hazard. Eventually, all but approximately 3,500+ (some 14% of the total sites) sites were eliminated from further

study. (These locations are called "sites requiring further assessment"). An additional 1,300+ sites, above and beyond the 3,500+, were referred to various State and local agencies for enforcement action. (The Department has supplied the Commission with varying numbers of sites within these categories).

There were two means by which a potential toxic waste site could be eliminated from the ASP list. One was the receipt by DHS of a questionnaire completed by the owner of the site indicating that no hazardous wastes were present. The other basis for dismissing potential sites from the ASP list consisted of a "drive-by" inspection by student assistants who staffed the Project. These visual inspections did not entail actually entering the site. The "drive-bys" and the questionnaires comprised an admittedly cursory method of site assessment. Errors in the decisions based on these two methods of assessment are only caught through the random process of tips or incidental discovery of contamination.

The superficial nature of the Department's elimination process, however, leaves it unable to state with certainty that the 20,100+ sites struck from the list do not pose public health or environmental problems. One such site removed from the list - Palm Iron Works -- was later found to be seriously contaminated with lead, chromium and zinc. The site, located within view of the Capitol in downtown Sacramento, was eliminated from the initial list after receipt of a questionnaire completed by the owner of the property. It was only after a tip from an informant that the toxic contamination resulting from paint application and

disposal was found.

The concerns over the process by which over 20,100 potential toxic dumps were eliminated from further State investigation are overshadowed, however, by more immediate concerns over the process of following up on sites identified by the ASP as demanding further assessment or enforcement action.

FINDING #3: The Department Has No Orderly Program to Assess Sites.

Of the 5,000+ sites retained on the ASP list of suspected toxic dumps by the Department:

- approximately 3,500 have been classified as "requiring further assessment";
- approximately 1,300+ have been referred to various State and local agencies for enforcement action;
- 105 have been referred for ranking on the Superfund List.

Beneath these neat categories, however, is serious confusion over the ranking and schedule for further work on these sites.

A. DHS cannot fully account for its actions at the 105 sites referred for Superfund ranking by the ASP.

Of the 105 ASP sites referred to the Superfund Unit, only 42 have been listed on the Superfund List. The remaining 63 were rejected for various reasons, such as ownership of the site by the Federal government, or a site scored less than 1.0 on the Superfund scoring system. Those 63 sites, once thought to pose such a grave risk to health that they were the top sites of the 25,000 considered, are today listed in neither the "referred for enforcement" list nor in the "require further assessment" list. The Department has stated that the remaining 63 sites were

referred to the Regional Offices for follow-up investigations, however, no tracking system of subsequent actions at the sites is maintained by the Superfund program.

B. DHS tracking of actions taken on the 1300+ sites referred by the ASP for enforcement is virtually non-existent.

The Department's tracking of the actions taken by other agencies or by its own regional offices on the 1300+ sites on the "enforcement actions list" is so lax that it is impossible to determine the success of such enforcement. Sites on the ASP list were referred for enforcement when staff considered them likely toxic dumps and believed responsible parties could be compelled the Department's tracking of "enforcement sites".) Staff of the Department have stated that they anticipate that the major source from which future Superfund sites will be referred is the list of 1,300+ enforcement sites[15].

C. DHS plans are inadequate for testing the 3500+ sites identified by the Abandoned Site Project as requiring further testing.

Testimony by the Chief of the Program Management Section (which includes the Superfund Program) indicates that DHS will survey 900 of the 3500+ sites referred from the ASP in 1984-85 and that the 65 worst sites will be targeted for laboratory sampling for hazardous wastes. Of the 65, the Department anticipates that 80% will be ranked on the Superfund list. Thus out of the 3500+ sites, DHS estimates that approximately 200 will ultimately be ranked under Superfund. The concern has been raised that this means that funding limitations will define how many toxic waste sites will be found. If lab samples are limited to the 65

worst sites of the 900 it may well ensure that only 200 sites of the 3500+ sites will be listed.

The lack of follow up by the Regional Offices on sites referred for enforcement by the ASP, or referred for further action by the Superfund program, leaves hundreds of potential toxic dump sites in a kind of limbo. Also, the plan to sample only the 65 worst sites of the 900 to be "further assessed" this year appears inadequate to uncover the true number of toxic dumps out of the 3500+ sites referred for further assessment by the ASP.

FINDING #4: The Ranking System of the State Superfund is Unrealistically and Minutely Exact, and Results in Constant and Misleading Changes in Cleanup Priorities.

The Department has adopted in regulation a torturously definitive system of ranking sites on the Superfund list. Each site is ranked against all others, producing a scale from 1 to 93 (the number of sites on the list). This precision, exemplified by the determination of whether a site is 43 or 44 on the list of 93 sites, exceeds any honest reflection of what is actually known about these sites. The result of this ranking scale is that 64 of the 65 sites which have been ranked for more than one year have changed rank from year to year. (See appendices for comparative rankings). This produces confusion for residents near the Superfund Site and produces a constantly moving target for policy decisions reqarding cleanup expenditures.

The misleading, perhaps false, precision in ranking is compounded by problems with DHS's system of tracking sites recommended for or placed on the List. Four examples are helpful

in understanding these problems:

Example (1)

Pacific State Steel is a site which has been regarded by the ASP as a problem for several years, yet was not on the Superfund list until 1984. According to the ASP Chronology of Actions for this site, it was first inspected in 1980, and samples of soil from the sites were determined to be contaminated with toxic heavy metals in March of 1981. In June of the same year, it was referred to the Regional Water Quality Control Board and the Regional Office of the Division for enforcement actions. In August of 1981, a Site Summary was prepared in order to add the site to the Superfund list.

The summary indicated a potential for contamination of ground and surface water. It also indicated that, by the time of the preparation of the site summary, no cleanup plan or estimates of the costs had been developed by the owner of the site. Despite the evidence that this site was eligible for listing as a Superfund site in 1981, it was not ranked on the Superfund list until 1984. It is currently ranked #29 on the Superfund list.

Example (2)

The Trojan Powder Works in Contra Costa County was listed in 1982 as a priority site and assigned a rank of 53. In 1983 it was assigned a rank of 18. In 1984, it was removed from the list despite the fact that it had not been cleaned up.

The site was first tested in December of 1980, with high levels of heavy metals and sulfuric and nitric acid detected. In addition, uranium contamination was found. DHS documents

indicate a concern that the public could easily come in contact with the heavy metals at the site. Despite the fact that no cleanup plan has been accepted by the Department, no cleanup action has taken place at the site, and fencing has yet to be erected, it was dropped from the ranking in 1984. The Department's explanation for this is that the advisory concentration standards for heavy metal contamination have been raised recently, producing the situation of a highly ranked Superfund site (#18) one year being dropped entirely the next.

Example (3)

The White Rock Road Dump in Sacramento County was ranked #59 in 1982, not listed in 1983, but was again evaluated and ranked #72 in 1984. According to DHS documents, this site is an inactive solid waste disposal site which was operated by the County of Sacramento from 1958 to 1965.[16] Aerojet General identified the site as receiving TCE wastes from their operation in Rancho Cordova. The dump, covering 125 acres, also received other solvents, oils and possibly other industrial wastes.

In 1982, it received a score of 11.2; in 1983, it received no score; and, in 1984 it was scored at 5.55. When asked about this particular site, DHS staff indicated that no explanation could be be given as why the site had been removed from the list, and that the file containing the scores for that year could not be located. The 11.2 score received in 1982 as a result of the ranking system makes note of underground fires at the site, and potential for human contact with the hazardous wastes.

The 1984 ranking however, does not take these hazards into

account. When asked about this discrepancy, DHS staff explained,

> The difference is because data can be interpreted differently. There can be a difference of 10% to 15% based on the staff person's review of the documents as to how a site should be ranked.[17]

Example (4)

The first year's Superfund list included 9 sites which were dropped from the Superfund priority rankings in subsequent years. Yet, 7 of these 9 sites were not cleaned up. The Department has stated that the 7 sites all scored below 1.0 on the new ranking system.[18] No clear system exists for carefully re-evaluating or monitoring sites at one time considered so hazardous as to qualify for Superfund listing, but which are later determined to present no hazard. The reliability of such determinations is a question of legitimate concern to the community in which the site is located.

The examples above suggest a need for a simpler, more consistent ranking system, which is understandable to the communities and policymakers involved with the Superfund program, and which honestly reflects the questions and uncertainties which remain for many of the State's Superfund sites.

CHAPTER IV

THE DEPARTMENT HAS FAILED TO DEVELOP POLICIES TO PROTECT PUBLIC HEALTH AND GUIDE CLEANUP ACTIVITIES

SUMMARY OF MAJOR FINDINGS

1. The Department places inadequate emphasis on site characterization.

2. The Department has no policy for notifying residents about potential health hazards near toxic dump sites.

3. The Department has no policies to guide decisions on when and how to deal with site security problems at toxic dump sites.

4. The Department has no policies to guide decisions on when to evacuate residents before or during cleanup.

5. The Department has not developed policies and guidelines for determining the extent to which a site should be cleaned up.

6. The Department has failed to develop policies and procedures to force action by responsible parties and trigger Superfund expenditures.

Legislation establishing California's hazardous waste management programs and the Superfund cleanup program place protection of public health and the environment as the State's first priority.[1] With this strong mandate, good management dictates that Superfund staff must first prepare guidelines to serve as the foundation of the program's activities.

The need for clear policies and guidelines in our hazardous waste Superfund program is further magnified by the lack of tried and tested solutions for cleaning up dump sites. Remedial

activities at a new or unique dump site, for example, have the potential to cause serious damage to public health, and DHS must constantly refine its guidelines to insure effective protection of nearby residents. The Little Hoover Commission believes that this process of refinement and reassessment is only possible if policies and specific guidelines are articulated from the start. Also, the limited resources allocated to these programs further emphasizes the need for careful initial planning.

The purpose of this Chapter is to examine the State's policies and guidelines to protect public health during all phases of the Superfund cleanup process, and to determine if existing policies and guidelines are adequate to protect public health.

FINDING #1. THE STATE PLACES INADEQUATE EMPHASIS ON SITE CHARACTERIZATION.

Site characterization is the most important task facing the Department's Superfund staff in the protection of the public from injury and illness due to exposure to toxic wastes at dump sites. The effectiveness of all other public health protection measures hinges on the thoroughness and accuracy of site characterization. Cleanup plans, site security, evacuation plans and the kinds of information disseminated to neighboring communities are just a few of the activities that are dependent upon an accurate and complete site characterization.

In light of the importance of site characterization, the method by which sites are chosen for study becomes a key policy matter. The current process is triggered when a site is ranked

and placed on either the Federal or State Superfund list. From these lists the Site Mitigation Unit prepares a scope of work each year that is based on the amount of funds available for mitigation activities. The Department has not developed a set of criteria which it can apply uniformly in the process of selecting sites for characterization.[2]

Testifying before the Commission in Sacramento, Mr. Peter Weiner suggested that expenditures for site characterization are the most efficient use of the limited funds available to the State. He testified that site characterization can be instrumental in "leveraging" the much larger amounts of money that are needed for actually cleaning up dumpsites. At McColl, the Department spent considerable time negotiating with responsible parties to obtain an agreement to fund a characterization. A thorough knowledge of the site is indispensible in negotiating an equitable sharing of cleanup costs among responsible parties. Where there are responsible parties, the Department will be also speedily be able to specify the steps necessary to clean up the site. If the parties fail to act speedily, the State can then take legal action to recover the treble damages allowed under State law.

A. The Department Lacks Clear Policies on How to Conduct a Complete Site Characterization Study.

One of the major sources of exposure for residents living in the vicinity of toxic dump sites is from volatile chemicals that evaporate from the site and are carried into surrounding neighborhoods.[3] This can be especially serious during cleanup operations when excavation begins at the site, allowing the

volatile components in the dump to evaporate into the atmosphere. Airborne concentrations of toxics during such events can be high enough to cause severe discomfort to residents near the dump site and repeated exposures could result in long term health effects.

A carefully compiled site characterizaton plan can help avoid the release of toxic chemicals to the atmosphere. Department staff told Commission consultants that site characterization studies are based on guidance manuals prepared by the Environmental Protection Agency as well as site specific data.[4] The Department also conducts small scale excavation tests during which airborne toxic chemicals are monitored. While this may be adequate on very small sites, it would not suffice to protect the public at larger sites where there is a likelihood that a greater variety of toxic wastes have been deposited.

The Department's failure to compile a complete site characterization has resulted in residents being exposed to toxic fumes at some sites. For example, at the Del Amo site in Torrance, excavation of the site in late 1983 caused a release of toxic fumes. Neighbors complained of headaches, upset stomachs and skin irritations. At the Kellog Terrace site in Yorba Linda, the site excavation activities released large quantities of sulfur dioxide and measurable amounts of benzene.[5] The releases prompted 300 phone calls from residents downwind from the site. Complaints ranged from headaches to dizziness and nausea.

The most recent example of failure to fully characterize a site comes from Stringfellow Acid Pits in Riverside County. Investigations at this site began as far back as 1972 and

included some removal of toxic wastes in the late 1970's. Stringfellow is probably the most intensively studied toxic dump site in California. Yet, it was only recently discovered that wells on and near the site are contaminated with radioactivity about 45 times greater than the EPA standard for radioactivity in drinking water.[6]

FINDING #2. THE DEPARTMENT HAS NO CLEAR POLICY ON HOW AND WHEN TO NOTIFY RESIDENTS LIVING NEAR TOXIC DUMP SITES ABOUT POSSIBLE HEALTH HAZARDS ASSOCIATED WITH CHEMICALS IN THE DUMPS.

The best protection against illnesses caused by toxic substances is to avoid exposure whenever possible. This is especially true of residents living near toxic dump sites where sources of exposure are present 24 hours a day. The exposures need not be overt and can occur from contaminated dust, air contamination that may vary with changes in weather (particularly temperature), or contaminated drinking water.

In order to avoid such exposures, residents must have full and accurate knowledge of: (1) the fact that a toxic dump exists in their neighborhood; (2) exactly what chemicals exist in the dump; (3) what kinds of health impacts may occur if they are exposed; (4) and what the routes of exposure are most likely to be based on an thorough evaluation of the site.

Discussions with Department staff and events that have taken place at various toxic dump sites indicate that the Department has no clear policy on how and when to notify residents living near toxic dump sites of any of the basic information stated above. Department staff told Commission consultants that the Site Mitigation Unit relies on the Office of Public Information

and Participation (OPIP) to develop and disseminate information about each Superfund site.[7] For the reasons stated below, this procedure is inadequate:

- OPIP has been criticized by the Legislative Analyst for being extremely slow to develop Community Relations plans for Superfund sites.[8]
- Residents in communities near Superfund sites have been very critical of OPIP in regard to the frequency and usefulness of the information given to them about the potential health impacts at Superfund sites.[9]
- Residents at various Superfund sites told the Commission that acquiring information about potential health effects associated with the site was one of the most difficult aspects of the dealings with the Department.[10]

A. Failure to Notify Residents of Potential Hazards Associated with Toxic Dumps May Have Resulted in Unnecessary Exposures to Residents.

- Del Amo (Cadillac-Fairview)

In 1983, residents living directly adjacent to this site were unaware that the vacant lot bordering their backyards was an abandoned toxic dump site. They were first informed of the contamination when a Los Angeles Times reporter came to interview residents and asked how it felt living next to the eighth ranked Superfund site in the State.[11]

- McColl

Ms. Sheila Garber, a resident near the McColl site in Fullerton testified that she found out about the toxic wastes at the McColl dump site from a neighbor in 1980. Her children were sick and she wanted to know what was in the dump. The Department had not adequately informed the neighborhood.[12]

- Richmond

Ms. Gloria Jennings, a resident living near a dump site in Richmond, testified that the Department was evasive and disdainful of the dangers perceived by residents near the site. Ms. Jennings testified that the Department used a variety of tactics to keep information out of the hands of residents during their inquiries in late 1983.

- Stringfellow

Ms. Penny Newman, a resident of Glen Avon, a community near Stringfellow Acid Pits in Riverside County, criticized the Department for its reluctance to keep residents informed about potential health impacts from exposure to toxic chemicals stored at the site. She pointed out that this problem continues, despite some efforts by the Department to respond to criticisms residents living near these sites made at the Commission's November 1983 hearing regarding the lack of public information.[13]

FINDING #3. THE DEPARTMENT HAS NO POLICY TO GUIDE DECISIONS ON WHAT SECURITY MEASURES TO TAKE AT VARIOUS SUPERFUND SITES.

One of the most important measures that can be taken to prevent unnecessary exposure to toxic wastes stored in toxic dump sites is to secure them, as much as possible, from trespass by the general public. Warning signs and fences are passive means of preventing trespassing, but they provide an important measure of limiting access to the least dangerous sites. Other security measures such as posting guards or installing high-security fencing and alarm systems are necessary where there is a high probability of human contact with highly toxic materials.

At the present time the Department does not have a clear policy on how to deal with site security at known toxic dumpsites. Department staff stated that decisions on site security are made on a case by case basis, and that the potential for human contact was given the greatest consideration. A number of cases of security problems can be cited that existed before July, 1983. Although improvements have been made, problems have continued.

- Celtor Chemical, Hoopa, Humboldt County.

This site is an abandoned wood treatment plant where piles of toxic wastes containing heavy metals had been deposited near an access road leading to the Trinity River. Rains washed wastes onto the road and into a pasture. No diking or fencing was supplied to prevent trespass and contain wastes and several hundred square feet of vegetation was killed. Children have been observed riding their bicycles over waste piles. A warning sign, the only evidence of site security, was shot full of bullet holes.

- Del Amo, Torrance

Although this was the 8th ranked site in California in 1983, large gaps in the fence allowed easy access to the site. No warning signs were posted until this Commission conducted a public hearing in November 1983 and requested that signs be posted. Local residents were notified of the existence of site by a Los Angeles Times reporter who came to the community to interview neighbors about their experiences living next to a Superfund site.

- Purity Oil, Malaga (near Fresno)

This site was ranked #1 in 1983, and #9 in 1984. During the visit on March 15, 1984, the Commission members who walked on the site were required to wear protective clothing by DHS staff conducting the tour. Yet the Vice Chair of the Commission and staff observed evidence that children had recently played on the site, entering through holes in the fence. Furthermore, there were instances of sludge-like materials found outside the fenced area, and in neighboring residents' yards. No apparent efforts had been made to make the site secure from off-site migration of the hazardous wastes.

FINDING #4. THE DEPARTMENT HAS NO POLICY TO GUIDE DECISIONS ON WHEN TO EVACUATE RESIDENTS EITHER BEFORE OR DURING CLEANUP.

Testimony given by Dr. Beverly Paigen at the November 30, 1983 Commission hearing emphasized the importance of considering evacuation plans for community residents in the vicinity of toxic waste dumps:

> During the next 18 months while the [Love] Canal was being dug up, I monitored the outcome of pregnancies. Out of 21 pregnancies we had 5 normal babies. We had 3 miscarriages, 4 still births and 9 babies born with birth defects...

The Department has no policy on evacuation and has never considered evacuation at a Superfund site. Nor does the Department have a policy on developing emergency evacuation plans in the event of a large, unexpected release of toxic gasses that could not be easily stopped. Release of toxic gasses during excavation has occurred at some sites (Kellog Terrace and Del Amo) and each time, residents were exposed to toxic gasses

without warning. A well-planned and executed evacuation plan could have prevented exposure.

A related issue involves the care the Department takes to protect the health of workers at excavation sites, while it ignores health problems that may develop in a neighborhood that may only be as far away as the other side of a cyclone fence. Workers are given "moon suits" (highly protective suits with protective gloves, boots and gas masks) while residents can only look on and wonder about their own health. This does not build confidence in the health information that is disseminated to neighbors.

FINDING #5. DHS HAS FAILED TO DEVELOP POLICIES AND GUIDELINES FOR DETERMINING THE EXTENT TO WHICH A SITE SHOULD BE CLEANED UP.

The Department has chosen not to develop specific standards, such as concentration limits for certain toxic substances, to establish the extent of cleanup at all sites. Instead, DHS is using flexible, site specific standards to determine when clean up is completed. The Department prefers this course for it is an easy accomodation of "cost effective" alternatives; but questions have been raised over the long-term effectiveness of those cleanup operations which have been completed or are in progress.

The standard of removal of toxic substances from a dump site is the most important factor in determining the cost of clean up, and is therefore frequently the focus of controversy. At the Commission's hearing on November 30, 1983, the Manager of the Environmental Quality and Occupational Safety and Health

Committee of the California Manufacturers Association emphasized the problem with not having specific standards for cleanup operations:

> ...it is impossible to expect a corporation to sign off on an undetermined [cleanup] plan, to do an undetermined amount of cleaning, in an undetermined fashion.[14]

While some flexibility is necessary in responding to the individual nature of most dump sites, the use of these flexible standards results in the renewal of this controversy with every new site discovered. It is feared that the failure to develop consistent public health standards for the cleanup of toxic dump sites will result in individual site cleanup standards which are inappropriately influenced by the interests of the responsible parties. This result would undermine the current investment being made in the State Superfund program.

Testimony before the Commission indicated that the absence of specific cleanup standards has the effect of slowing down cleanup actions as State experts must craft standards for each new site. As pressure for a cleanup mounts, it translates into an opportunity for interested parties to influence individual cleanup decisions. As the delay builds, overworked staff are pressured to defer to the urgings of the most active interested party.

The failure to articulate specific standards of cleanup makes it difficult for the public, policymakers and industry to understand the goals and evaluate the effectiveness of the Superfund program. The essential question is: absent hard

standards for cleanup, is DHS staff devising adequate, long-term solutions to toxic contamination?

Cause for concern is found in the State's and EPA's frequent use of "permanent containment" as the basis of site mitigation. This usually takes the form of placing a cap on a site and establishing permanent groundwater pumping facilities. William Wallace, Director of Solid and Hazardous Waste Management for CH2M Hill, Inc., a major EPA hazardous waste contractor, stated before Congress:

> ... There is no such thing as permanent containment. As engineers, we can design facilities and engineer materials to last a long time. But they will not last forever, and will probably not last as long as necessary to contain the hazardous contaminants.
>
> It can be argued that permanent containment can be achieved if the site is monitored and provided with long term care. This approach sounds attractive, but it is not supported by history. One only has to look at the current repair of our roads, bridges and utilities to realize that we as a nation appear to be unable to secure the funds necessary to maintain our own infrastructure, let alone an inventory of hazardous waste sites.

The long-term alternative to "permanent containment" is removal. However, removal, in order to provide permanent protection against long-term health effects, must be linked to cleanup standards that are based on mitigating the chronic toxicity of all chemicals stored at the site.

FINDING #6. DHS HAS FAILED TO DEVELOP POLICIES AND PROCEDURES TO FORCE ACTION BY RESPONSIBLE PARTIES AND TRIGGER SUPERFUND EXPENDITURES.

The State Superfund law authorizes the Director of DHS to begin cleanup actions at a site **unless actions have been taken,**

or are being taken properly and in a timely fashion, by any responsible party. (Section 25355(b) of the Health and Safety Code). It is up to DHS to determine what is "timely and proper action" by responsible parties and what triggers the use of the Superfund.

The Commission heard witnesses express the belief that DHS has not been aggressively carrying out its obligation to define what is timely and proper action by responsible parties. This concern is reinforced by the fact that the Department has yet to establish any deadlines for timely action which triggered Superfund expenditures. Instead, according to DHS staff, DHS has used the listing of a site on the Superfund priority rankings as the means by which "pressure" is brought on the responsible party for action, often by the press and by residents of the community in which the site is located. According the the staff of the Abandoned Site Project's Hazardous Waste Lands Determination Unit, "The new sites are placed on the list in order to keep things moving." When asked by Commission consultants if this practice was based on political considerations, the staff person responded, "No, it's not political at all, but being placed on the list will at times bring a lot of pressure due to public pressure on the owner/operator."[15]

DHS's failure to set and enforce rigorous deadlines in direct correspondence with responsible parties creates a class of sites where inactive responsible parties effectively deny communities access to Superfund monies. Instead, the Department should use its authority, to initiate legal action to force responsible parties to begin to clean up. But the Department has sent only

10 legal notices to responsible parties informing them that they are being required to act.[16]

The Department must not rely on the force of public pressure alone to cause responsible parties to act. The Legislature has provided legal authority for such situations. The Department must develop policies and procedures to use these tools.

CHAPTER V

ORGANIZATIONAL AND MANAGEMENT PROBLEMS PRESENT A MAJOR OBSTACLE TO THE IDENTIFICATION AND CLEANUP OF CONTAMINATED SITES

SUMMARY OF MAJOR FINDINGS

1. The Superfund Program receives inadequate attention and support within the Department of Health Services.

2. There have been major delays and inefficiencies in hiring staff for the hazardous waste program.

3. The Department has failed to develop an effective process for awarding and monitoring Superfund contracts.

4. The Department has failed to develop procedures to track the status of contaminated sites.

5. The Office of Public Information and Participation has failed to provide important information to residents living near toxic dump sites.

6. There is inadequate coordination among State, Federal and local agencies in the cleanup of contaminated sites.

INTRODUCTION

Recent analyses by the Auditor General of California's program to control hazardous waste have concluded it is not adequate to to fully protect the public and to prevent the contamination of water supplies. In October of 1981, the Auditor General reported that the Department of Health Services had issued only 18 permits to the State's 1200 hazardous waste

facilities; had not effectively enforced hazardous waste control laws; and had not controlled the transportation of hazardous wastes. The Department prepared a detailed plan of correction to improve the effectiveness of the program.

Yet two years later the Auditor General concluded that:

> ... the Department of Health Services has made little progress in strengthening its hazardous waste management program since the Auditor General's October 1981 report.[1]

While the new audit detailed actions that the Department <u>had</u> taken to improve the program, it revealed that:

> ... the Department had not implemented performance goals based on realistic estimates of the amount of work it could accomplish. Further, the Department has not developed and implemented written procedures to guide all its activities, and has not developed workload standards to estimate staffing necessary to meet all its goals.[2]

Although many significant improvements have been made since January 1983 to correct long-standing deficiencies in permitting, enforcement and the development of regulations, the Commission found evidence that many of the organizational and management problems cited in previous reports persist. The Commission also found that after nearly three years, the Legislature, the Governor, industry representatives, health experts, public interest groups, and many others are still locked in debate on how best to resolve these problems. **The most fundamental question has yet to be answered: should the State's primary program to regulate and clean up hazardous waste be located within the Department of Health Services?**

Reorganization plans have been drafted, considered, and withdrawn; nevertheless, the debate continues. During the course of this study of the State Superfund Program, the Commission heard extensive testimony on the management problems within the Department of Health Services and the advantages and disadvantages of reorganizing the State's program for managing hazardous wastes and toxic substances.

This chapter provides a brief history of the reorganization issue and presents specific findings relating to the current management and organizational effectiveness of the State's program to clean up dump sites contaminated with toxic chemicals.

HISTORY OF REORGANIZATION: THE SEARCH FOR IMPROVED COORDINATION AND PROGRAM EFFECTIVENESS

In 1978 the Hazardous Materials Management Section was created within the Department of Health Services to implement the State's Hazardous Waste Control Law enacted six years earlier. The program received little attention during the first two years of its existence, and made no discernible progress in assessing California's hazardous waste problem, developing regulations, or permitting hazardous waste facilities.

In 1980, Governor Brown established a cabinet-level Toxic Substances Coordinating Council to develop policy recommendations, promote consistency in regulations, encourage cooperation between agencies, and coordinate research efforts. From 1980 to 1983 the Council coordinated the preparation of the budgets for all toxic substances control activities, initiated the preparation of a State Cancer Policy, and prepared the Administration's legislative agenda. During this period there

was rapid growth in many of the State's toxic substances control activities.

On May 13, 1981, Governor Brown submitted to this Commission his Reorganization Plan No. 2, 1981. The plan called for a new Department of Toxic Substances Control that would consolidate the regulatory activities of seven different departments. According to the Administration, this new department would bring research and regulatory functions together for greater efficiency.

The major organizational units of the new department were:

- Toxics Response Division to coordinate emergency response training and planning;
- Hazardous Waste Management Division to consolidate regulatory authority shared among the Water Board, Department of Health Services and the Solid Waste Management Board; and,
- Research Division to consolidate toxicological, epidemiological and laboratory services.

The proposal for the new department did not include pesticide control activities.

At a Commission hearing on June 11, 1981, there was considerable testimony both for and against the plan. Among the objections raised were:

- concerns that the loss of research staff within DHS would cripple ongoing health research in areas other than toxic substances;
- the failure of the proposed plan to address coordination problems caused by separate agencies regulating toxic pollution (other than hazardous waste) in air, water, food and workplace; and
- the plan's failure to address the major issues surrounding pesticide use.

The Administration eventually withdrew the proposal, and instead established a Toxic Substances Control Division

within the Department of Health Services. The new Division attempted to bring together regulatory staff, scientists and health professionals into one unit.

In April 1983, Governor Deukmejian abolished the Toxic Substances Coordinating Council and established a new cabinet level Hazardous Substances Task Force. The new Task Force was composed of the heads of agencies with responsibilities for regulating the use of hazardous materials. Its charge was to:

> ...identify and address issues relating to radioactive, toxic and other hazardous substances, and take overall responsibility for formulating and overseeing the implemention of a comprehensive program.[3]

In October, 1983, the Task Force published a report entitled "An Identification of Issues". The report drew no conclusions regarding the need for consolidation of these programs.

Six months following the change in administration, the Department decided to again reorganize the Toxic Substances Control Division by transferring the Hazardous Materials Laboratory and the Epidemiology Studies Section back to the Health Protection Division where they were located prior to 1981. The rationale for this latest reorganization was to shield the scientific personnel from the political questions that the regulators and inspectors faced daily, and to permit the Toxic Substances Control Division to take a more aggressive enforcement stance.

After three years of almost constant organizational fine tuning, the hazardous waste program has returned to an organizational structure that is nearly identical to the one in

place prior to 1981. Although the program is technically operated from a division rather than a section, many of the concerns that were raised at the Commission's hearings in 1981 are just as relevant today as they were three years ago.

Recently, the Legislative Analyst researched the budgets of various State programs regulating toxic substances. Finding numerous problems resulting from overlapping authority and poorly coordinated activities, the Analysts recommended several interim steps and presented arguments regarding reorganizing these programs:

> The advantages of establishing a separate Department of Hazardous Waste in the same agency as the SWRCB and the ARB are (1) the three major government units regulating hazardous waste would report to one agency secretary, thereby increasing cooperation and improving communications, (2) the numbers of layers of bureaucracy would be reduced, thereby speeding decisionmaking, (3) administrative staff would no longer be shared with other programs, and (4) administrative procedures would be tailored to the hazardous substances program's needs rather than those of other programs such as Medical or local assistance grants.
>
> The disadvantages of such a proposal are that (1) the program may be less sensitive to public health concerns, (2) administrative disruptions and delays often occur during major reorganizations, and (3) a new department would increase, rather than decrease, the number of agencies involved in hazardous substances control because DHS would continue to perform laboratory analyses and health effects studies. The Legislature needs more information before determining that reorganization is the best method of improving the performance of the State's hazardous substances control programs.[4]

The Commission agrees with the Analyst, and believes that major efforts must be made now to improve coordination and heighten the visibility and accountability of the Superfund

Program. However, it is not the purpose of this study to find a final solution to the larger problem of coordinating or consolidating all toxic-related activities in the State.

The remainder of this chapter is devoted to an analysis of critical organizational and management problems within DHS which have prevented California from developing an effective program to clean up contaminated sites.

FINDING #1. THE SUPERFUND PROGRAM RECEIVES INADEQUATE ATTENTION AND SUPPORT AS A RESULT OF ITS PRESENT PLACEMENT WITHIN THE DEPARTMENT OF HEALTH SERVICES.

The Commission found statements by both former Governor Brown and Governor Deukmejian that the management of hazardous wastes and the cleanup of toxic dump sites is one of California's most urgent priorities. Although both administrations have urged that the cleanup of dump sites be accelerated, the Commission found little evidence that Superfund was a high priority within the Department of Health Services.

Testimony presented at the Commission's three hearings and research by the Commission's consultants revealed that the Superfund program has been subjected to almost constant freezes on hiring and purchasing. In addition, the program has received little assistance from the Department in expediting contracts, filling vacant positions, developing special recruitment programs to hire technical staff, and purchasing specialized testing and protective equipment.

The Commission also found that the Superfund program enjoys little organizational status within the Department and is dwarfed by the enormous size of the Medi-Cal program. The Department's

annual budget is approximately $5.5 billion. Superfund expenditures represent less than 1/2 of one percent of the Department's total budget. Furthermore there are four times more employees in the Department Director's office than there are currently working on the cleanup of toxic dump sites.

The Commission also found that the Superfund Program (now called the Site Mitigation Unit) is operated as a unit within the the Program Management Section of the Toxic Substances Control Division. There are hundreds of other units within DHS competing for the attention of the Director for major policy decisions. All of these units depend on limited legal, budget, and personnel services provided through a centralized administrative support program.

Concerns about the placement of the Superfund Program within the Progam Management Section raise a very serious issue that was first expressed in 1981. At the Commission's first hearing on the proposal to create a new Department of Toxic Substances Control, Lester Breslow, Professor of Public Health at UCLA stated that:

> Efforts to control toxic substances...have been hindered by:
> - first, the submersion of the Hazardous Waste Management Section deep within the bureaucracy of the Department of Health Services;
> - second, by the preoccupation of the Department by other health issues; and
> - third, by extremely sluggish administrative support, particularly for personnel and contract actions. [5]

The Commission has concluded that Mr. Breslow's description of the problems encountered over three years ago are identical to the problems that have hindered efforts to develop an effective

program to clean up toxic dump sites.

FINDING #2. THERE HAVE BEEN MAJOR DELAYS AND INEFFICIENCIES IN HIRING STAFF.

The Superfund Program was established within the Department of Health Services at a time when the Department was having great difficulty managing its hazardous waste program. Although there were many reasons for the Department's inability to issue permits, promulgate regulations, and enforce hazardous waste laws, the absence of adequate technical staff and experienced managers created a most serious obstacle to developing an effective hazardous waste management program.

During a three year period, from 1980 to 1983, the authorized positions for the hazardous waste program grew by over 100% as the Department was given many new and complex responsibilities by the Legislature. Yet little was done during this time to recruit highly technical staff, establish new classifications, and bring in experienced managers. In July of 1983, an EPA evaluation concluded that California's hazardous waste program was poorly managed, weakly enforced, and inefficiently staffed.

One of the most serious and chronic personnel problems during this period of rapid growth was the Department's failure to fill vacant positions. From 1981 to 1983 the Department experienced 20 to 30 percent vacancy rates throughout the Toxic Substances Control Program. The problem became so serious that the Legislature adopted Supplemental Budget Language in June 1983 requesting the Department to assist the Division in maintaining

full staffing levels and requesting that hiring freezes not be imposed upon the Division beyond what was required to achieve budgeted salary savings.

On December 14, 1983 the Legislative Analyst testified before Subcommittee #1 of the Assembly Ways and Means Committee that "there had been major unjustified delays" in filling vacant and newly-established positions and that the Department had not complied with the supplemental language. According to the Analyst:

- the Division had been required to spend considerable time preparing freeze exemption requests for all vacant postions;
- almost all new or vacant positions had been left unfilled for four to six months; and
- the Department had allowed 30% of the positions in Permit, Surveillance and Enforcement Unit to remain vacant.[6]

The Superfund program, because it was new, was particularly hard hit by the constant imposition of hiring freezes. After spending staff time preparing freeze exemption requests, it often took several months before all of the necessary documents could be processed and approved.[7]

The impact of these delays have been serious. The November 1983 report by the Auditor General pointed to hiring problems as one of the principal reasons that the Department failed to spend almost one-third of all the Superfund money that was available in 1982-83. The Auditor General quoted an unidentified Department official as stating:

> Because of the hiring freeze, the Department experienced delays hiring needed Superfund staff; 12 of 17 key staff (70%) were not hired until the end of August 1982 (almost one year after the Superfund legislation was passed). Four of the remaining five staff were not hired until the end of

December 1982; and the fifth member was not hired until May 1983. Consequently, the Department did not have staff available to initiate as many contracts as planned.[8]

It was clear during the course of the Commission's study that there are also major problems and inefficiencies in hiring technical staff. On several different occasions, the Commission heard testimony regarding delays in accomplishing important tasks due to lack of staff, or lack of specific skills. The Chief of the Epidemiological Services Section (ESS), pointed to a difficulty in hiring scientists and technical specialists:

> ...the personnel system, which depends on establishing a list through examinations, simply doesn't work for this class of person. We need toxicologists. Now the list is two years old, and nobody is on it except people who can't get a job anywhere else. And this is like a tenured position; you want to hire someone who is really good.[9]

At the time of the Commission's January 27th hearing in Berkeley, for example, halfway through the 1983-84 budget year, 4 of 9 positions in ESS's Sacramento Office were vacant, including 2 toxicologist positions, and one for an epidemiologist. The Sacramento office of ESS provides major technical and scientific support for the Superfund Program.

At the same hearing, Dr. Beverly Paigen, who has done pioneering work in the field of the toxic effects of hazardous waste in community health, told of her experience in trying to secure a job with the Department of Health Services:

> They tried to hire me for that program, and what he (Dr. Neutra) says about the difficulty of hiring professionals is absolutely true.[10]

Dr. Paigen explained that first her application was rejected

by personnel analysts who were not familiar with toxicology. She also explained that the Department had scheduled a one-day examination on a day that she was scheduled to lecture at Harvard University. She was eliminated from consideration when she refused to cancel her long-standing commitment to Harvard.

The Chief of ESS explained that there are alternative procedures that could be used to hire technical specialists.[11] He indicated that the State of New York utilizes an alternative method. They interview staff for technical positions without complicated testing, and hire outside of the regular personnel process. However, these new staff people do not have civil service protection until they have passed a satisfactory review of their work after a year on the job.

In New Jersey, officials from the Hazardous Site Mitigation Administration in the State's Department of Environmental Protection are also able to hire outside of normal civil service procedures. According to the Administration's head, this has made an enormous difference in the length of time required to fully staff the New Jersey program, as well as the ability to choose qualified staff for specific tasks. Two years ago, their program had 30 people; in November of 1983, it had 60; and the numbers were expected to reach 100 in 1984.[12]

FINDING #3. THE DEPARTMENT OF HEALTH SERVICES HAS NOT DEVELOPED AN EFFECTIVE PROCESS FOR AWARDING AND MONITORING SUPERFUND CONTRACTS.

While the Department of Health Services has the lead responsibility to plan for cleaning up the State's toxic dump sites, the overwhelming portion of the actual cleanup work

itself will be carried out by contractors. This means that the Department's ability to prepare and administer effective contracts is critical to the success of the Superfund program. Yet almost three years after the Legislature passed the Superfund legislation on an emergency basis, the Department has not yet been able to develop an effective process for awarding and monitoring Superfund contracts. The Department's contracting process has been heavily criticized by the State Auditor General, the Legislature, community representatives and contractors for being unreasonably slow and ineffectual in achieving program goals.

The Department agrees that improvement is needed, but believes that the main problem lies with the State contracting process itself. Superfund administrators have stated that the State's contracting procedures are unduly burdensome for a program of the scope and complexity of Superfund cleanup, and that some exemptions from this process should be allowed for this program.[13] This position is contradicted by the Auditor General, who has conducted three analyses in the past year which included evaluations of the Superfund contracting process.[14] The Auditor General found that many inefficiencies existed within the Department's own contracting process, and identified a number of steps which could be taken to shorten the time required to issue contracts. While the Department has begun to take some of these steps, progress has been slow, and major improvements still are needed. This recent investigation identifies two general areas needing further improvements. They are outlined below.

A. The Department Has Failed to Issue Contracts in a Timely Manner.

During FY 1982-83 the Department failed to spend $3.17 million of $9.45 million allocated from the State Hazardous Substances Account (Superfund). While the Department had allocated $4.5 million for contract services, only $1.58 million (65% less than was allocated) was actually spent on contracts. According to a November, 1983 report by the Auditor General, the Department's failure to let contracts was due in part to problems in hiring staff and delays in securing matching Federal funds.[15] However, in testimony before the Commission, the former Chief of the Superfund Unit stated that a significant problem was that internal and external review procedures are so cumbersome that it takes approximately 200 days to process a contract.[16]

A more detailed analysis of the Department's Superfund contracting process was conducted by the Auditor General in January 1984 at the request of the Commission.[17] The Auditor General's analysis found that many of the delays stemmed from problems with the Department's own contract process. The Department averaged 81 days, compared with an average 35 day review period by the control agencies (Departments of Finance and General Services).

The Auditor General identified a number of problems within the Department and the Superfund Section which resulted in unnecessary delays in contracting. These included:

- confusion on the part of Department staff as to when contracts required review by the Departments of Finance and General Services;

- the Department's practice of conducting internal contract review sequentially, rather than exploring opportunities for concurrent review;
- the Department's failure to give Superfund contracts a high priority for review and processing;
- the lack of a monitoring system for Superfund contracts;
- the need for a contracts procedures manual.

At the January hearing held by the Commission in Berkeley, the Auditor General reported that the Department had made progress on establishing a monitoring system for its contracts, and was identifying steps in the contract process in order to determine how long each of those steps took.

B. The Department Lacks The Expertise And Experience Needed To Prepare And Monitor Complicated Clean-Up Contracts.

The cleanup of toxic dump sites could well represent some of the most complicated contract work the State has ever undertaken. The Department urgently needs knowledgeable, experienced staff who can prepare effective contracts and monitor contractor performance. To date, the Department has failed to put together the kind of "contracts team" it needs to improve the effectiveness of this program.

Currently, the Superfund staff includes two people who have the primary responsibility for preparing contract documents and advising staff on contract procedures. Although one of these individuals has been in State service for many years, a detailed analysis by legislative consultants of one contract he worked on raised serious questions about his lack of familiarity with State contracting procedures. In addition, the Superfund Unit's contract effort suffers from the lack of in-house legal advice.

Currently, all contract questions must be reviewed outside the Division by the Department's Office of Legal Affairs. This procedure slows down contract drafting and development.

The Stringfellow hauling contract illustrates these weakness. In 1982 the Department contracted with an experienced Southern California hauling firm to haul liquid wastes from the Stringfellow Acid Pits in Riverside County. When this contract expired in June 1983, the Department decided to re-bid the contract, using an Invitation for Bid (IFB) process for soliciting proposals, instead of the Request for Proposal (RFP) process used on the earlier contract. The primary difference between these two processes is that the IFB requires that the Department select the lowest bid that is responsive to the needs and conditions set forth in the IFB, while the RFP allows the Department to select the best overall (but not necessarily the cheapest) proposal.

The lowest bid received in response to the Stringfellow IFB was from Andrew Papac and Sons, a Southern California dirt hauling firm. The company was not registered to haul hazardous waste, and had no experience hauling or treating liquid hazardous waste. (The IFB had been amended to request bids on waste treatment as well as handling.) Papac's only previous experience with hazardous waste hauling was through a contract with Caltrans to haul contaminated soils. The Papac bid was so low that the Department believed it was below the actual cost of waste disposal. It also contained no information on how wastes would be treated.

At the time Papac was being considered by the Department for

the Stringfellow contract, Caltrans was extremely dissatisfied with his performance. (The agency ultimately cancelled its contract with Papac and filed a lawsuit to recover all monies expended. Caltrans contends that Papac had fraudulently acted to bid the contract on behalf of another firm.)

Although the Superfund engineering staff recommended that Papac's bid to haul and treat Stringfellow wastes be rejected on the basis that the firm was not qualified, they were contradicted by the Superfund Program's chief contracts officer. He argued that the company should receive the contract because the work was so straightforward that lack of experience would not be a problem. He also argued that the IFB **forced** the Department to hire the lowest bidder, regardless of the concerns expressed by staff. The Chief of the Division concurred with this judgement and recommended to the Director of the Department that Papac and Sons be awarded the contract. He based this recommendation on the assumption that Papac would receive his State hauler's registration before the contract was finalized; and that the IFB procedures **required** the Department to accept the lowest bid, **regardless** of the questions raised by staff about the firm's lack of experience and below-cost bid.

A review of the State Administrative Manual revealed that the decision to award the $1 million hauling contract to Papac and Sons was inconsistent with State procedures which require that State agencies select the lowest **responsive and responsible bid.** Papac's bid was not responsive since the company did not meet the requirements prescribed in the IFB.

Neither the contracts officer nor the Chief of the Division appeared to be aware of this provision in the State Administrative Manual, when interviewed by Consultants for a Legislative Committee.[18] Although the engineering staff had requested an opinion from a Departmental lawyer as to whether or not they were forced to contract with a company they believed was not qualified, neither the contracts officer nor the Division Chief waited for or initiated a legal inquiry on which to base their opinion.

Papac and Sons had difficulty meeting the terms of the contract almost from the first day they began work. Evidence soon came to light which showed that the firm may have been illegally storing and disposing of Stringfellow wastes. This meant that the money the Department was paying to clean up one dumpsite theoretically could have been spent to create problems at a new site. The Department was ultimately forced to cancel the contract and refer the case to the local District Attorney for investigation and prosecution of possible violations of hazardous waste laws.

Summary

Much of the work involved in evaluating and cleaning up California's Superfund sites will be carried out by contractors and responsible parties. The Department has done little to ensure that contracts will be developed and processed quickly, or that contract work will be closely monitored. Few of the recommendations made by the Auditor General have been acted upon by the Department. While a monitoring system has been developed,

these other suggestions have yet to be implemented:

- develop and maintain a contracting procedures manual for the Superfund program;
- identify steps in the contracting process that can be eliminated or performed concurrently;
- give Superfund Program contracts a priority during departmental review.[19]

FINDING #4. THE DEPARTMENT HAS FAILED TO DEVELOP PROCEDURES TO TRACK THE STATUS OF CONTAMINATED SITES.

Throughout the Commission's examination of the State Superfund program, various sources within DHS reported that there is little or no Departmental tracking of the more than 1300 sites identified by Abandoned Site Project (ASP) and referred for enforcement action. As a result, little progress is being made at many of the sites. In an interview with the Chief of the Abandoned Site Project and his immediate supervisor on April 13 of this year, both acknowledged that DHS had no system for tracking and following up on the hundreds of sites referred for enforcement action. However, assurances were offered that despite the absence of a tracking system, enforcement actions on these sites were proceeding. To confirm this, the Commission undertook an independent analysis of enforcement actions taken at all ASP sites referred for such action in Sacramento County.

A total of 17 Sacramento sites have been referred by ASP for enforcement action. All were referred in 1981. Of the 17, 15 were referred to the Sacramento Regional Office of DHS. The Commission checked the status of these 15 sites and found that:

- By April 19, 1984 (three years after their referral) only two of those sites had received additional inspections by the Regional Office.[20]

- Four others had been referred by the Regional Office to the Superfund Program for enforcement in conjunction with the Aerojet litigation. The Superfund Program has not collected samples or conducted inspections of the four sites.
- The Regional Office had no record of any action at the other 9 sites.

DHS records show that among the 17 sites in Sacramento County are several which represent significant health threats, including one site (Polytherm) contaminated with the carcinogen MOCA, and another site (Jackson Business Park) where PCB contamination was detected.

The two remaining Sacramento sites had been referred to the County, one to the County Health Department and the other to the County Public Works Department. The County Health Department staff told Commission consultants that they have no record of receiving the referral, and no file on the site. They stated that neither the County nor any other party they were aware of had done any work at the site. This story was repeated by the staff of the County Public Works Department, who stated that they also had no record of site referrals from the ASP.[21] When questioned on April 18, 1984, about the apparent lack of action on the ASP sites referred for enforcement, staff of the both the DHS Sacramento Regional Office and the State Office admitted that they were not aware of any active, aggressive program to examine the sites referred by ASP to the DHS Regional Offices.

Based on conversations with the staff of the Department, the Commission believes the experience encountered when tracking the status of contaminated sites in Sacramento County is typical of the situation in other areas of the State. DHS staff (see Chapter III) believe that many of these sites will eventually be

listed as Superfund priorities. By failing to take action on these sites early, the public will be unnecessarily exposed to toxic hazards, and contamination could spread. One example where this has occurred is the Firestone Tire and Rubber Plant in Salinas. Contaminants have slowly leaked from abandoned underground storage tanks, and now have contaminated drinking water supplies. This is one of the sites that had been referred to Regional Offices for enforcement action. Had timely actions been taken contamination from this site may well have been prevented from becoming more serious.

FINDING #5: THE OFFICE OF PUBLIC INFORMATION AND PARTICIPATION HAS NOT BEEN SUCCESSFUL IN PROVIDING EITHER INFORMATION OR PARTICIPATION OPPORTUNITIES TO COMMUNITIES AFFECTED BY TOXIC DUMP SITES.

Some of the strongest criticism the Commission heard during its three hearings was of the Department's failure to develop an effective program of communicating with residents living near toxic dump sites. Indeed, many of the residents testifying seem to have reached the conclusion that the Department more often than not views them as its enemies, and is extremely reluctant to trust them with information or allow them to participate in decisions about cleanup.[22]

The Toxic Substances Control Division maintains an Office of Public Information and Participation (OPIP) to inform and involve affected segments of the public in all the Department's toxics programs, including the Superfund program. The current budget for the program is $431,000 and 4.5 positions. No increase in staffing is proposed for FY 1984-85, although the budget is

proposed to increase to $462,000. The program has been fully staffed for only a few months.

According to the Chief of OPIP, the program goals are:

1. to impart information to and receive information from the public who reside near Superfund sites; from local agency representatives; and from elected officials; and

2. to seek the involvement of these groups in developing Superfund program policies.

The specific activities carried out by the unit are:

- developing Community Relations Plans at Superfund sites;
- conducting interviews and gathering information from local residents, agencies and elected officials;
- establishing site specific advisory committees;
- conducting public meetings so that the concerns of residents near sites can be incorporated into cleanup activities;
- developing broad-based educational programs on toxic wastes and the Superfund program; and
- addressing individual community needs, such as obtaining a Technical Advisor for the Stringfellow site.

According to testimony received by the Commission, few of these program goals are being met.

A. The Department's Public Information Office Has Done a Poor Job of Providing Information and Assistance to Communities Affected by Superfund Sites.

In most areas which the OPIP Chief has identified as its program activities, the Department's efforts to inform and involve the public have been inadequate. In other important community relations areas, OPIP takes no action at all.

Public Notification. Some of the most moving testimony the

Commissioners heard was presented by mothers who unknowingly allowed their children to be exposed to toxic contamination when they permitted them to play on the Del Amo (formerly Cadillac Fairview) site. This site was known by the Department to contain hazardous wastes; yet the Department took no steps to inform the community or to post the site. "We found out about it not from a public health agency, but from a Los Angeles Times reporter," stated one resident. She went on to say:

> We were not warned about the existence of the dump ... the Regional (DHS) Director asked why we were not complaining about it before, and you know, that's a vicious question. We found out about it in April, we began talking to each other about the illnesses we had, about the kids that were getting sick and how the closer to the dump, the worse it gets ...[23]

The Department provides information on these sites when it holds a press conference to announce the release of the annual "Report to the Legislature on the Superfund Priority Rankings". While the press is capable of reaching a large audience, generalized press releases do not provide important information and vital details specific to one community. The Department's failure to provide direct notification to potentially affected citizens deprives those citizens of the opportunity of obtaining practical safety instructions, such as directives to parents warning them to keep their children off the site. Nor does the Department's policy on notification allow the Department to benefit by obtaining vital information about the site from near-by residents, such as the need to monitor for releases that the community can sense, but which can't be detected from surveys of paperwork in from distant DHS offices. Despite strong criticism

from victims of toxic waste dumpsites, the Department does not now have plans to change its notification procedures.[24]

Informational and Educational Materials. The Department has done a poor job of developing informational materials which explain the problems at a particular site or even the Superfund program as a whole. Most residents have no idea who or where to call to obtain information about a site, or about the State's program to clean up toxic dump sites. The Department has never established nor published a telephone number people can call if they have questions about a site. If the Department does receive calls, OPIP has few informational materials to send them. Almost three years after the Superfund program was started, the Department still does not have a brochure explaining how the Superfund program is organized; the responsibilities of State and local regulatory agencies; or where residents can call for information or assistance. Instead, the Department provides callers with an EPA brochure on the Federal Superfund Program, a copy of the State Superfund legislation, or the Department's annual report to the Legislature.

Several residents testified about the difficulties they encountered when they tried to obtain information on their own about a site in their area. One woman told that Commission that she was treated "very coldly" by DHS staff when she went to a Regional office to look at records:

> We were looking over the files, and he took them from us, and he said, you know, we weren't allowed to look at them any longer, we had to give them back to him.[25]

This treatment strongly contrasts with policies in the California Public Records Act, which states "...access to information concerning the conduct of the people's business is a fundamental and necessary right of every person in this state." (Government Code, Section 6250.)

Public Meetings and Ongoing Advisory Committees. According to the staff of OPIP, the Department has had 26 "open" meetings with different communities regarding "on-site work at a dump".[26] On closer examination, however, many of these meetings were related to the State's permitting program, and in some cases the Department was not the lead agency or responsible for the meeting. In two instances (Operating Industries and Willco Dump) the "public meetings" referred to were actually legislative hearings on the failings of several State agencies involved in cleaning up the site. At two other sites, meetings were organized by the community, and the residents had insisted that the Department attend.

Commission staff discovered that, in fact, the Department had met with community members at only 13 of the 93 sites on the State Superfund list. The Department has held no meetings at several high ranking priority sites, including Selma Pressure Treating (4), Atlas Asbestos Mine (5), Coalinga Asbestos Mines (6), Coast Wood Preserving (7), Liquid Gold (8), Southern Pacific, Roseville (14) and Fairchild Camera and Instrument (17).[27] While several of the mining sites are in remote locations, they often affect drinking water supplies of downstream communities. At one site listed above, Fairchild Camera and Instrument, OPIP has held no community meetings to

discuss the progress of cleanup plans, even though the Department is conducting an epidemiological study of nearby residents.

The Department indicates that there are 8 advisory committees working with communities near sites. In two cases (McClellan and Celtor), DHS is a participant, rather than the organizer. One committee (Aerojet) does not include representatives from the concerned public. OPIP has no procedures or policies regarding how these advisory committees are formed, how members are appointed, what their goals are, or how the Department will respond to recomendations and concerns of these advisory committees.

Superfund and Enforcement Sites Where Public Meeting(s) Have Been Held[27]

Alviso
Aerojet **
Ascon Landfill
Cal Cap (abandoned and enforcement site)
Del Amo (formerly Cadillac Fairview)
Drew Sales (abandoned and enforcement site)
General Disposal (EPA emergency action)
Koppers, Oroville
Iron Mountain Mine
Major Salvage (emergency cleanup by responsible party
McClellan Air Force Base (Federally owned property)
McColl **
Mission Bay, San Diego (abandoned site)
Montrose Chemical (currently being ranked for NPL)
Operating Industries
Purity Oil Sales **
Stringfellow **
Sumner Chemical (enforcement site)
Talley Corporation (enforcement site)
United Heckathorn
Willco Dump (abandoned site)

** indicates a site where an advisory committee has been set up.

Mailing Lists and Community Contacts. The Department has done a poor job of seeking out and maintaining contacts with

individuals and organizations affected by or interested in working on solutions to toxic dump sites. One reason for this is that OPIP has not done an adequate job of developing mailing lists of people who live near Superfund sites. OPIP relies heavily on lists provided by the Department's mass mailing unit. Subsequent to the Commission's request that the Department develop a plan for publicizing the Victim's Compensation Program, the Chief of OPIP identified the mailing lists the Department is using. Of the 25 lists provided, only one pertained specifically to citzens affected by hazardous wastes. Several were lists of environmental activists provided by public interest groups; several were lists of labor unions; and the rest were lists of local health and public safety agencies.

OPIP has also had difficulties developing contacts in communities where the Superfund sites are located. At one Commission hearing, Commission staff pointed out to the Chief of OPIP that one of the organizations testifying earlier was not included on the Department's mailing list. The OPIP Chief responded,

> Yes, but I'm not sure you know, always, how you contact these groups. I mean, I was totally unaware of this group, they wouldn't be in the phone book, how would you suggest we do that?[28]

Contacts living in communities near Superfund sites can sometimes be provided by other neighborhood groups concerned about sites in other communities. Legislators and local elected officials can frequently aid in compiling better lists.

Community Relations Plans. According to the Legislative

Analyst, the Department did not comply with 1983-84 budget control language which requires that community relations plans be prepared for each State-funded Superfund site (also a requirement of AB 860). The Department has completed and begun implementation of community relations plans for only four sites: Stringfellow, McColl, Purity and Capri. It is now preparing a "generic" community relations plan which could be used at any site with modifications to address issues specific to that site.

The Department has sought little input from community organizations in developing these plans. Because the Department has had little experience in implementing community relations plans, it is too soon to analyze their effectiveness.

B. The Department Has Failed to Fulfill Its Statutory Responsibilities to Inform Victims as to How They Can Receive Compensation for Injuries Stemming From Exposure to Hazardous Materials.

None of the residents testifying at Commission hearings had received information from the State about provisions of the State Superfund to compensate victims for injuries resulting from the release of hazardous materials. In his November 1983 report on the State's hazardous waste program the Auditor General found that no victims' compensation claims had been made by injured persons. The Commission has concluded that this situation occurred because the Department had not made a serious effort to notify potential victims. At the time of the Commission's first hearing (November 30, 1983), the Department's only effort to publicize this program had been a mailing to approximately

60,000 doctors around the State advising them about the program. However, since the letter failed to identify the locations of sites where releases had occurred, doctors could not determine when a hazardous waste site may have been responsible for an injury.

At the request of the Commission, the Department did develop a draft brochure by the time of the second hearing (January 27, 1984), and a plan to notify the public about the program. However, the plan calls for the Department to prepare a mailing list to be used by the State Board of Control (responsible for program administration) to publicize the program. The Department's mailing list has already been criticized for its inadequacies, including its failure to include some community groups living near sites. These errors will require correction if the compensation program is be effective in reaching victims of hazardous materials releases.

C. OPIP Staff Is Inexperienced And Lacks the Expertise Necessary to Fulfill Program Goals.

A major reason for the failures of the OPIP program is that the program is not staffed by individuals with public information and community relations expertise, nor with a background in hazardous materials or toxic substances. Both the current and previous Chiefs of the unit were drafted from administrative positions elsewhere in the Department of Health Services. While both have displayed dedication to State service, and appear to be sincere about promoting the public's welfare, neither has had the training and experience required to make this program function effectively.

Summary

Many of the weaknesses of the OPIP program, including its inability to meet its own goals, stem from that fact that the program management has failed to think through and define the most fundamental elements of a successful community relations program. As stated by one witness experienced in community relations, developing a successful program is challenging but there is nothing mystical about it. This witness outlined a number of simple, common sense actions that OPIP should undertake in order to improve its efforts. These included:

- a formal assessment of what has worked and what has not worked;
- working with individuals with experience in community outreach and education to provide suggestions;
- offering training and technical assistance to the public to ensure quality participation on their part;
- developing a mechanism for evaluating the effectiveness of community relations efforts.[29]

FINDING #6. THERE IS INADEQUATE COORDINATION AMONG THE STATE, FEDERAL AND LOCAL AGENCIES INVOLVED IN CLEANUP ACTIVITIES.

The cleanup of a contaminated site requires coordination among a number of Federal, State and local agencies, each with a specific legal responsibility and a special area of expertise. A major cleanup project will often involve several, if not all, of the following agencies:

- Environmental Protection Agency
- Department of Health Services
- Regional Water Quality Control Board
- Department of Justice
- Attorney General's Office
- County Health Department.

Unfortunately, California has failed to sort out the jurisdictional responsibilities of these various agencies and to develop procedures to effectively coordinate the resources that are available to clean up sites contaminated with toxic chemicals. As a result, California's cleanup program lacks:

- an integrated strategy for the identification, assessment and cleanup of sites;
- a clear indication of priorities;
- a clear division of responsibilities; and finally
- accountability.

A. The State Lacks Procedures for Determining the Lead Agency for Site Clean-Up.

For the 93 sites on the State Superfund List, lead agency responsibilities are divided among 11 separate organizations, including the Environmental Protection Agency, the Department of Health Services, and nine Regional Water Quality Control Boards. At some sites, such as Aerojet, it is not really clear which agency has lead responsibility. In other cases there doesn't appear to be **any** lead agency. The Commission's consultants met with various staff within the Department of Health Services to determine how lead agencies are selected for a specific cleanup project. They learned that lead agencies are not "selected", but rather the agency which first discovers the problem or has the resources to conduct the earliest investigation generally ends up with the lead responsibility.

The Commission has serious concerns about this ad hoc method of managing cleanup projects. Specifically,

- What happens when none of the agencies have the resources to adequately respond to the problem?

- What happens when the Regional Water Board has assumed lead responsiblity and the most serious problem turns out to be the release of toxic air contaminants? The Board is not likely to discover the problem and has no jurisdiction to do anything about it.

- Is the responsibility of the lead agency to mitigate the problem for which it has primary responsibility, or to ensure that the site is completely cleaned up?

- Can the Regional Boards deal effectively with health concerns?

During its meetings and discussions with DHS staff, the Commission was unable to find any guidelines, policy documents, or memoranda outlining the responsibilites of the lead agency. In addition, the Commission was startled to learn that the Site Mitigation Unit within the Department of Health Services views their primary responsibility to be the expenditure of State Superfund monies, not the ultimate cleanup of all the sites on their Superfund list.

The policy of the Site Mitigation Unit is to work only on those sites where it has allocated funds. There are only six staff within the Unit, working on some 13 sites. In the 1984-85 budget year, these sites are: Aerojet, Stringfellow, Iron Mountain Mine, Purity Oil, Alviso, San Fernando Valley, San Gabriel Valley, McColl, Operating Industries, Del Norte Pesticide Storage, Koppers (Oroville), Celtor, Jibboom, Chatham, Del Amo. Given the lack of policies designating a lead agency, and lack of procedures to track actions at these sites, it is certain that most of the State's 93 Superfund sites will receive little attention this year.

B. There Is Inadequate Coordination Between the Department of Health Services and the State Water Resources Control Board.

There is enormous overlap in the statutory responsibilities of the Department of Health Services and the State Water Resources Control Board. Both agencies regulate the disposal of hazardous wastes and share responsibility for preventing the contamination of water supplies. Although the two agencies have executed Memoranda of Understanding and Interagency Agreements to improve coordination, these documents have done little to solve problems relating to the enforcement of hazardous waste regulations and the cleanup of contaminated sites. For example:

- Many hazardous waste facilities were not inspected for compliance with Federal groundwater monitoring requirements because of confusion over which agency was responsible for conducting the inspections.

- The Department of Health Services routinely refers sites discovered through the Abandoned Site Project to the nine Regional Boards for further investigation if the Department suspects there may be a potential threat to water quality. Yet during a recent budget hearing of the State Senate, the Executive Director of the State Board stated that the Regional Boards did not need any additional positions to investigate abandoned sites because this was the Department of Health Services' responsibility.

- In 1983, the Department filed legal charges against several wood treatment firms that were negotiating with the Regional Boards to clean up contamination on a voluntary basis. The Boards were unaware of the Department's intentions.

The limited value of MOUs and interagency agreements as a means of improving coordination among State agencies was discussed in a recent draft report by the Governor's Hazardous Substance Task Force. The report stated:

> ...too often these documents are allowed to get out of date; commitment to the agreement diminishes with time.

as they are liable under CERCLA. And more importantly, there is no justification for differing standards and scopes of liability under State and Federal law.

B. Failure to Adopt Federal Standards of Strict, Joint and Several Liability Delays Site Cleanups.

The divergent standards and scopes of liability, for which Deputy Attorney General Robinson could find no justification, occurs because California statutes appear to limit strict liability to acts occurring after January 1, 1982. The State's statutes also make no provision for joint and several liability.

California Health and Safety Code Section 25366(a) states that the act does not impose:

> ... any new liability associated with acts that occurred on or before January 1, 1982, if the acts were not in violation of existing State and Federal laws, or regulations, at the time they occurred.

This section may be interpreted to be read in conjunction with the strict liability provisions of CERCLA, in effect on January 1, 1982, to impose strict liability for prior acts. Because CERCLA first imposed strict liability for release of hazardous substances, Section 25366(a) does not impose "any new liability." Additionally, an argument can be made that liability would attach to those actions occurring before January 1, 1982, which would have been actionable under tort law.

Despite these various possible interpretations, strict liability under California law for current hazardous conditions resulting from pre-1982 activity is a legal bramble-bush. A likely outcome of a joint suit by the Federal government and the State of California to recover costs of cleaning up an abandoned hazardous waste site, made hazardous by activities occurring

to clean up toxic dumps with Superfund monies. The County has expressed concerns that State Superfund monies are effectively unavailable to them for remedial work at toxic dump sites they discover. The experience of the San Diego program is that they have discovered contaminated sites in the course of their inspections, and they anticipate that they will encounter a total of 10 to 12 neglected sites.

The concerns of San Diego are highlighted by the County's experience after their discovery of the Brown Field toxic dump site. The site, formerly a facility used by a hazardous waste hauler, was sampled by the County at a local laboratory and found to be contaminated with cyanide and acid wastes. Because of the condition of the site, (unfenced and unposted, located near homes and businesses, and possessing the potential of creating a cloud of lethal cyanide gas if the wastes were mixed), the County asked the State to take emergency action under the Superfund Program.

The State declined to take action at Brown Field, saying it needed more information on the composition of the wastes. The County chose to act by writing the responsible parties, spending local monies on further site assessement and contacting the EPA for assistance with the clean up. Eventually the Federal government funded the cleanup at a cost of $500,000.

While the problem at Brown Field was cleaned up by the County, the Commission feels that the unresponsiveness of the State to the County's problem is sufficient to raise concerns about future cleanup of sites discovered by the County.[31]

(3) the absence of a provision for joint and several liability. (CERCLA has been interpreted to provide such liability by the Environmental Protection Agency and at least six Federal district courts.)

This chapter discusses these legal and regulatory problems and how they contribute to delays in recovering monies from responsible parties.

Finding #1: California Statutes Establishing the Standard and Scope of Liability for Site Cleanup Are Inconsistent With Federal Law and Weak By Comparison.

California law falls short of the provisions in Federal law by failing to define who shall be liable for damages. Additionally, the law fails to adopt the more comprehensive Federal view on strict, joint, and several liability.

A. California Law is Ambiguous On the Question of Who is a "Liable Person.

Federal law describes four categories of responsible parties within the broad scope of its liability provisions: (1) present owners and operators of facilities; (2) owners and operators at the time of any prior disposal of a hazardous substance; (3) anyone who arranged for disposal at, or transportation of hazardous substances to, a facility owned by someone else; and, (4) anyone who accepted a hazardous substance for transportation.

By contrast, California law is ambiguous on the question of who is a "liable person." California Health and Safety Code Sections refer to "liable person or persons," but provide no definition. There is an incorporation of the Federal statutory definitions by reference, in California Health and Safety Code

Summary

Unless the Superfund Program begins to more adequately use the resources represented by these other levels of government, action will depend on limited resources, and many problem sites will fall through the cracks. The costs of cleaning them up will only increase as contamination spreads, and the potential danger to the public is unacceptable.

CHAPTER SUMMARY

Despite improvements in the Department's performance made since January of 1983, organizational and management deficiencies continue to plague the State's toxics control programs. These weaknesses, we have found, extend to the Superfund program.

Reorganizing the overall toxics program could improve the efforts of the Superfund program, through increased visibility and accountability to policy makers, and through improved coordination. But there are unresolved questions regarding the agency where the program should reside, and what constitutes the most efficient reorganization scheme. Until these questions regarding the extent and character of reorganization are resolved, interim measures aimed at solving the major problems surrounding accountability, visibility and coordination must be instituted.

On the other hand, we have found numerous areas where problems can be addressed without the need for reorganization. They include inadequate attention by Departmental decisionmakers; delays and inefficiencies in hiring; poor and inadequate

CHAPTER VII

EXISTING LEGAL AND REGULATORY TOOLS HAVE NOT BEEN EFFECTIVE TO PAY FOR THE CLEANUP OF SITES

SUMMARY OF MAJOR FINDINGS

1. California statutes establishing the standard and scope of liability for site cleanup are inconsistent with Federal law and weak by comparison.

2. If adjudication of responsible parties is going to be an effective tool for recovering monies on a timely basis, then the State must change the judicial procedure.

INTRODUCTION

From the public's perspective, the most frustrating and inexplicable aspect of hazardous waste management is the time required to clean up a dumpsite after a public health hazard or environmental risk has been identified.

The deliberate speed with which cleanup activities proceed can be measured by reference to early Superfund program goals. When the first Superfund list was prepared in 1982, the Department of Health Services intended to initiate remedial action at the 15 sites which received the highest rankings. Of those 15 sites, 1 has been cleaned up while only 8 have had site characterizations performed; 6 have yet to have a site characterization completed.

CHAPTER VI

CALIFORNIA HAS COMMITTED INSUFFICIENT RESOURCES TO CARRY OUT AN EFFECTIVE CLEANUP PROGRAM

SUMMARY OF MAJOR FINDINGS

1. The State and Federal Superfunds are seriously underfunded.

2. The Department of Health Services and the State Water Resources Control Board have failed to allocate adequate staff resources to clean up contaminated sites.

3. The Attorney General's Office is inadequately staffed to undertake the civil prosecutions which DHS intends to initiate under the Superfund Program.

A recent California poll revealed that 59% of the public are extremely concerned about toxic waste. In fact, toxic waste was ranked as one of the top three concerns along with crime and education.

There are good reasons for this high level of public concern. Over 4 million Californians are drinking water that has been contaminated by toxic chemicals -- chemicals which leak from old dump sites, active industrial impoundments, and faulty underground storage tanks. And new sources of contamination are discovered nearly every day.[1] The hazardous waste problem is growing in ways that defy comprehension and rational explanation.

one staff person per site may even be low, given the heavy workload required by a site like Aerojet. If one further assumes that the Department should be addressing all of sites on the present list, one staff person per site would require a total of 93 staff. (These estimates are only intended to illustrate the point that the Superfund Unit is seriously understaffed.) The Department also faces a challenge of attracting highly qualified technical specialists in the fields of hydrology, geology, civil and chemical engineering, as well as strong managerial talent.

Finding #3. The Attorney General's Office is Inadequately Staffed to Undertake the Civil Prosecutions Which DHS Intends to Initiate Under the Superfund Program.

According to testimony presented by a representative of the Attorney General's Office, the Attorney General requested that the Governor include in his 1984-85 Proposed Budget an additional 15 positions for toxic substance litigation in the AG's Office. The Governor denied this request for personnel needed to pursue, among other things, reimbursement by responsible parties for Superfund expenditures. In his testimony, the representative of the AG stated,

> The Attorney General fully supports what the Department of Health Services is doing in regards to the enforcement program; but, nevertheless, it is somewhat inconsistent to say you're going to pursue a stronger enforcement program and yet the Attorney General's Office requests attorney positions to prosecute cases and we don't get the money or the positions to do it.[15]

In its investigation, the Commission found that the State has yet to successfully sue a responsible party for reimbursement of State Superfund monies spent in the cleanup of the party's

up program. If the level of staff support and financial resources currently allocated to Superfund is any measure of the importance of this program within State government, we are in serious trouble. Consider the following:

- The California Board of Cosmetology has more staff than the Department of Health Services' Site Mitigation Unit and all of the positions authorized for site cleanup in the Governor's proposed budget for the nine Regional Water Boards.

- The annual budget for the State's Museum of Science and Industry is $1 million larger than the amount of money available for State Superfund contracts. The Museum has four times as many staff.

- In 1983-84 the State spent almost three times as much money on off-road vehicle recreation as was authorized for Superfund cleanup contracts. The Department of Parks and Recreation has three times as many staff planning, acquiring, developing, and managing off-road vehicle recreation areas than the Department of Health Services and the nine Regional Boards have to clean up hundreds of sites contaminated with toxic chemicals.

COMPARISON OF RESOURCES

Program	Authorized Positions	1983-84 Budget
Superfund	30	$10.0 million
Board of Cosmetology	46	2.3 million
Off-road Vehicle Recreation	96	16.0 million
Museum of Science and Industry	143	4.9 million

By any objective measure, one must conclude that California is not prepared to tackle one of the most serious health and environmental problems of the decade.

sites, then economic pressures will encourage companies to find alternatives to dumping hazardous wastes in the ground.

There are other ways to provide additional funds for cleanup that do not place the cost on the general taxpayer. The Legislature could increase the amount of tax collected annually by the State Superfund. The general obligation bond could also be amended to become a revenue bond supported by contributions from the State Superfund, the Federal Superfund, and by recoveries from responsible parties.

FINDING #2. DHS AND THE STATE WATER RESOURCES CONTROL BOARD HAVE FAILED TO ALLOCATE ADEQUATE STAFF RESOURCES TO THE CLEANUP OF CONTAMINATED SITES.

The cleanup of a toxic dump site involves many complex and time-consuming tasks and requires technical, legal and managerial expertise. The Deputy Director in charge of the toxics cleanup program testified that site cleanup was the most difficult of all the responsibilities of the Toxic Substances Control Division.[11] The Governor's Hazardous Substance Task Force has also acknowledged the complexity of cleaning up a contaminated site. Each site will require in-depth technical evaluation to determine which cleanup method is most appropriate. Consideration must be given to the possibility of contaminating a much larger area during excavation; care must be taken when hauling large volumes of waste long distances, often through residential areas. Excavation at the sites often increases emissions and creates dangerous air contamination levels. Some options at Superfund sites could result in the need for long-term operation and maintenance.[12]

3. There is no way to estimate the proportion of the total cleanup cost that will be paid for, or reimbursed by, responsible parties. The State has yet to collect any funds from responsible parties; however, the Department testified that they expect to collect funds in the future.

4. It is difficult to predict how much money will be available from the Federal Superfund. Between 1980 and 1983 the State received only $2.5 million from EPA.[5] However, the State might receive as much as $190 to $360 million if the Federal Superfund is re-authorized at the $11.2 billion level proposed by Congressman Florio.[6]

The Legislative Analyst recently estimated that the cost of cleaning up 200 sites would range from $820 million to as much as $2.6 billion dollars.[7] The Commission believes that 200 sites represents a very conservative estimate of the total number of sites that will eventually appear on the Superfund list. Nevertheless, using the Legislative Analyst's estimate, it is clear that the State Superfund will need to be increased. The Analyst estimates that the revenue gap representing the difference between total costs of cleanup and the portion paid by the Federal Superfund and responsible parties will range from $90 million to $970 million.[8]

At the Commission's second hearing, the Administration outlined a proposal for a $300 million general obligation bond to augment the funds that would be available to clean up toxic dump sites. In response to concerns about how the principal and interest would be repaid, the Deputy Director of DHS stated:

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At the Commission's second hearing, the Administration outlined a proposal for a $300 million general obligation bond to augment the funds that would be available to clean up toxic dump sites. In response to concerns about how the principal and interest would be repaid, the Deputy Director of DHS stated:

sites, then economic pressures will encourage companies to find alternatives to dumping hazardous wastes in the ground.

There are other ways to provide additional funds for cleanup that do not place the cost on the general taxpayer. The Legislature could increase the amount of tax collected annually by the State Superfund. The general obligation bond could also be amended to become a revenue bond supported by contributions from the State Superfund, the Federal Superfund, and by recoveries from responsible parties.

FINDING #2. DHS AND THE STATE WATER RESOURCES CONTROL BOARD HAVE FAILED TO ALLOCATE ADEQUATE STAFF RESOURCES TO THE CLEANUP OF CONTAMINATED SITES.

The cleanup of a toxic dump site involves many complex and time-consuming tasks and requires technical, legal and managerial expertise. The Deputy Director in charge of the toxics cleanup program testified that site cleanup was the most difficult of all the responsibilities of the Toxic Substances Control Division.[11] The Governor's Hazardous Substance Task Force has also acknowledged the complexity of cleaning up a contaminated site. Each site will require in-depth technical evaluation to determine which cleanup method is most appropriate. Consideration must be given to the possibility of contaminating a much larger area during excavation; care must be taken when hauling large volumes of waste long distances, often through residential areas. Excavation at the sites often increases emissions and creates dangerous air contamination levels. Some options at Superfund sites could result in the need for long-term operation and maintenance.[12]

up program. If the level of staff support and financial resources currently allocated to Superfund is any measure of the importance of this program within State government, we are in serious trouble. Consider the following:

- The California Board of Cosmetology has more staff than the Department of Health Services' Site Mitigation Unit and all of the positions authorized for site cleanup in the Governor's proposed budget for the nine Regional Water Boards.

- The annual budget for the State's Museum of Science and Industry is $1 million larger than the amount of money available for State Superfund contracts. The Museum has four times as many staff.

- In 1983-84 the State spent almost three times as much money on off-road vehicle recreation as was authorized for Superfund cleanup contracts. The Department of Parks and Recreation has three times as many staff planning, acquiring, developing, and managing off-road vehicle recreation areas than the Department of Health Services and the nine Regional Boards have to clean up hundreds of sites contaminated with toxic chemicals.

COMPARISON OF RESOURCES

Program	Authorized Positions	1983-84 Budget
Superfund	30	$10.0 million
Board of Cosmetology	46	2.3 million
Off-road Vehicle Recreation	96	16.0 million
Museum of Science and Industry	143	4.9 million

By any objective measure, one must conclude that California is not prepared to tackle one of the most serious health and environmental problems of the decade.

one staff person per site may even be low, given the heavy workload required by a site like Aerojet. If one further assumes that the Department should be addressing all of sites on the present list, one staff person per site would require a total of 93 staff. (These estimates are only intended to illustrate the point that the Superfund Unit is seriously understaffed.) The Department also faces a challenge of attracting highly qualified technical specialists in the fields of hydrology, geology, civil and chemical engineering, as well as strong managerial talent.

Finding #3. The Attorney General's Office is Inadequately Staffed to Undertake the Civil Prosecutions Which DHS Intends to Initiate Under the Superfund Program.

According to testimony presented by a representative of the Attorney General's Office, the Attorney General requested that the Governor include in his 1984-85 Proposed Budget an additional 15 positions for toxic substance litigation in the AG's Office. The Governor denied this request for personnel needed to pursue, among other things, reimbursement by responsible parties for Superfund expenditures. In his testimony, the representative of the AG stated,

> The Attorney General fully supports what the Department of Health Services is doing in regards to the enforcement program; but, nevertheless, it is somewhat inconsistent to say you're going to pursue a stronger enforcement program and yet the Attorney General's Office requests attorney positions to prosecute cases and we don't get the money or the positions to do it.[15]

In its investigation, the Commission found that the State has yet to successfully sue a responsible party for reimbursement of State Superfund monies spent in the cleanup of the party's

CHAPTER VI

CALIFORNIA HAS COMMITTED INSUFFICIENT RESOURCES TO CARRY OUT AN EFFECTIVE CLEANUP PROGRAM

SUMMARY OF MAJOR FINDINGS

1. The State and Federal Superfunds are seriously underfunded.

2. The Department of Health Services and the State Water Resources Control Board have failed to allocate adequate staff resources to clean up contaminated sites.

3. The Attorney General's Office is inadequately staffed to undertake the civil prosecutions which DHS intends to initiate under the Superfund Program.

A recent California poll revealed that 59% of the public are extremely concerned about toxic waste. In fact, toxic waste was ranked as one of the top three concerns along with crime and education.

There are good reasons for this high level of public concern. Over 4 million Californians are drinking water that has been contaminated by toxic chemicals -- chemicals which leak from old dump sites, active industrial impoundments, and faulty underground storage tanks. And new sources of contamination are discovered nearly every day.[1] The hazardous waste problem is growing in ways that defy comprehension and rational explanation.

CHAPTER VII

EXISTING LEGAL AND REGULATORY TOOLS HAVE NOT BEEN EFFECTIVE TO PAY FOR THE CLEANUP OF SITES

SUMMARY OF MAJOR FINDINGS

1. California statutes establishing the standard and scope of liability for site cleanup are inconsistent with Federal law and weak by comparison.

2. If adjudication of responsible parties is going to be an effective tool for recovering monies on a timely basis, then the State must change the judicial procedure.

INTRODUCTION

From the public's perspective, the most frustrating and inexplicable aspect of hazardous waste management is the time required to clean up a dumpsite after a public health hazard or environmental risk has been identified.

The deliberate speed with which cleanup activities proceed can be measured by reference to early Superfund program goals. When the first Superfund list was prepared in 1982, the Department of Health Services intended to initiate remedial action at the 15 sites which received the highest rankings. Of those 15 sites, 1 has been cleaned up while only 8 have had site characterizations performed; 6 have yet to have a site characterization completed.

Summary

Unless the Superfund Program begins to more adequately use the resources represented by these other levels of government, action will depend on limited resources, and many problem sites will fall through the cracks. The costs of cleaning them up will only increase as contamination spreads, and the potential danger to the public is unacceptable.

CHAPTER SUMMARY

Despite improvements in the Department's performance made since January of 1983, organizational and management deficiencies continue to plague the State's toxics control programs. These weaknesses, we have found, extend to the Superfund program.

Reorganizing the overall toxics program could improve the efforts of the Superfund program, through increased visibility and accountability to policy makers, and through improved coordination. But there are unresolved questions regarding the agency where the program should reside, and what constitutes the most efficient reorganization scheme. Until these questions regarding the extent and character of reorganization are resolved, interim measures aimed at solving the major problems surrounding accountability, visibility and coordination must be instituted.

On the other hand, we have found numerous areas where problems can be addressed without the need for reorganization. They include inadequate attention by Departmental decisionmakers; delays and inefficiencies in hiring; poor and inadequate

(3) the absence of a provision for joint and several liability. (CERCLA has been interpreted to provide such liability by the Environmental Protection Agency and at least six Federal district courts.)

This chapter discusses these legal and regulatory problems and how they contribute to delays in recovering monies from responsible parties.

Finding #1: California Statutes Establishing the Standard and Scope of Liability for Site Cleanup Are Inconsistent With Federal Law and Weak By Comparison.

California law falls short of the provisions in Federal law by failing to define who shall be liable for damages. Additionally, the law fails to adopt the more comprehensive Federal view on strict, joint, and several liability.

A. California Law is Ambiguous On the Question of Who is a "Liable Person.

Federal law describes four categories of responsible parties within the broad scope of its liability provisions: (1) present owners and operators of facilities; (2) owners and operators at the time of any prior disposal of a hazardous substance; (3) anyone who arranged for disposal at, or transportation of hazardous substances to, a facility owned by someone else; and, (4) anyone who accepted a hazardous substance for transportation.

By contrast, California law is ambiguous on the question of who is a "liable person." California Health and Safety Code Sections refer to "liable person or persons," but provide no definition. There is an incorporation of the Federal statutory definitions by reference, in California Health and Safety Code

to clean up toxic dumps with Superfund monies. The County has expressed concerns that State Superfund monies are effectively unavailable to them for remedial work at toxic dump sites they discover. The experience of the San Diego program is that they have discovered contaminated sites in the course of their inspections, and they anticipate that they will encounter a total of 10 to 12 neglected sites.

The concerns of San Diego are highlighted by the County's experience after their discovery of the Brown Field toxic dump site. The site, formerly a facility used by a hazardous waste hauler, was sampled by the County at a local laboratory and found to be contaminated with cyanide and acid wastes. Because of the condition of the site, (unfenced and unposted, located near homes and businesses, and possessing the potential of creating a cloud of lethal cyanide gas if the wastes were mixed), the County asked the State to take emergency action under the Superfund Program.

The State declined to take action at Brown Field, saying it needed more information on the composition of the wastes. The County chose to act by writing the responsible parties, spending local monies on further site assessement and contacting the EPA for assistance with the clean up. Eventually the Federal government funded the cleanup at a cost of $500,000.

While the problem at Brown Field was cleaned up by the County, the Commission feels that the unresponsiveness of the State to the County's problem is sufficient to raise concerns about future cleanup of sites discovered by the County.[31]

as they are liable under CERCLA. And more importantly, there is no justification for differing standards and scopes of liability under State and Federal law.

B. Failure to Adopt Federal Standards of Strict, Joint and Several Liability Delays Site Cleanups.

The divergent standards and scopes of liability, for which Deputy Attorney General Robinson could find no justification, occurs because California statutes appear to limit strict liability to acts occurring after January 1, 1982. The State's statutes also make no provision for joint and several liability.

California Health and Safety Code Section 25366(a) states that the act does not impose:

> ... any new liability associated with acts that occurred on or before January 1, 1982, if the acts were not in violation of existing State and Federal laws, or regulations, at the time they occurred.

This section may be interpreted to be read in conjunction with the strict liability provisions of CERCLA, in effect on January 1, 1982, to impose strict liability for prior acts. Because CERCLA first imposed strict liability for release of hazardous substances, Section 25366(a) does not impose "any new liability." Additionally, an argument can be made that liability would attach to those actions occurring before January 1, 1982, which would have been actionable under tort law.

Despite these various possible interpretations, strict liability under California law for current hazardous conditions resulting from pre-1982 activity is a legal bramble-bush. A likely outcome of a joint suit by the Federal government and the State of California to recover costs of cleaning up an abandoned hazardous waste site, made hazardous by activities occurring

B. There Is Inadequate Coordination Between the Department of Health Services and the State Water Resources Control Board.

There is enormous overlap in the statutory responsibilities of the Department of Health Services and the State Water Resources Control Board. Both agencies regulate the disposal of hazardous wastes and share responsibility for preventing the contamination of water supplies. Although the two agencies have executed Memoranda of Understanding and Interagency Agreements to improve coordination, these documents have done little to solve problems relating to the enforcement of hazardous waste regulations and the cleanup of contaminated sites. For example:

- Many hazardous waste facilities were not inspected for compliance with Federal groundwater monitoring requirements because of confusion over which agency was responsible for conducting the inspections.

- The Department of Health Services routinely refers sites discovered through the Abandoned Site Project to the nine Regional Boards for further investigation if the Department suspects there may be a potential threat to water quality. Yet during a recent budget hearing of the State Senate, the Executive Director of the State Board stated that the Regional Boards did not need any additional positions to investigate abandoned sites because this was the Department of Health Services' responsibility.

- In 1983, the Department filed legal charges against several wood treatment firms that were negotiating with the Regional Boards to clean up contamination on a voluntary basis. The Boards were unaware of the Department's intentions.

The limited value of MOUs and interagency agreements as a means of improving coordination among State agencies was discussed in a recent draft report by the Governor's Hazardous Substance Task Force. The report stated:

> ...too often these documents are allowed to get out of date; commitment to the agreement diminishes with time.

Robinson went on to state that where such proof is not possible, damages shall be proportioned "to the extent practicable, according to equitable principles."

In some cases where easily identifiable wastes have been disposed of in easily measurable quantities (drums or barrels), the requirement to apportion is less onerous and time consuming than if indiscriminate bulk disposal had occurred. But in many other cases, the passage of years has obscured the composition of each contributing waste, and groundwater contamination is not easily traceable to any single contaminant. In other cases, such as where one chemical has catalyzed another, allocation of costs in accordance with any single disposer's actions is exceedingly difficult and endlessly debatable. With scores of defendants involved in some cases, one can only imagine the time required to equitably allocate damages so that cleanup can begin, or so the Superfund can be replenished for the next State-funded cleanup.

Finding #2: If Adjudication of Responsible Parties is Going to Be an Effective Tool for Recovering Monies on a Timely Basis, Then the State Must Change the Judicial Procedure.

The requirement that damages be apportioned among responsible parties places considerations of equity among tortfeasors before consideration of public health, water quality, and environmental protection. This statutory provision protracts litigation after the questions of "who is liable for cleanup" and "how much is cleanup going to cost" have been answered; consequently, cleanup is delayed further. Along with other factors, including the chronic institutional problem of congested court calendars, these statutory impediments to judicial relief

are chilling influences on the decision to sue. Consequently, the State needs to develop aternative methods for assessing damages to ensure the process is expedited to the extent possible.

The relative weakness of California's statutory law on hazardous waste-related liability increases the importance -- and the difficulty -- of the negotiation/settlement process. If responsible parties can be persuaded to acknowledge their liability during settlement negotiations, cleanup can proceed directly, rather than depending upon the outcome of a complex trial which drains agency resources and, even after responsibility is established, invites lengthy arguments from all parties on the question of how much each responsible party should be obligated to contribute to remedial work.

For their part, responsible parties may choose to settle a Superfund case. In the view of the Environmental Protection Agency, defendants will frequently express a desire to settle for reasons of their own; and given the normal delays and resource demands of litigation, and the public interest in achieving cleanup of these sites in the most expeditious fashion, it will be appropriate to consider settlement of the government's case at many of these sites. At the same time, those factors which make litigation a less favored option for the State -- and the anxious and concerned public -- must serve to strengthen the bargaining position of the responsible parties in the negotiation process.

Currently, the absence of adequate public funds critically weakens the State's negotiating position. Responsible parties

may feel they have little to lose by stretching out the negotiations and deferring any out-of-pocket costs as long as possible, because they know the State cannot afford to proceed on its own and subsequently seek reimbursement. Given the duration of the negotiations on California's most notorious cases, and the four to six months required for the Department of Health Services to commence negotiations, such a strategy makes sense from a purely financial standpoint. For example, after more than a year of negotiations with the responsible parties at Stringfellow, the Department finally concluded no settlement was possible and initiated litigation. Considering the time value of money and the cost of site remediation in these well publicized cases, the time spent negotiating has a positive economic significance for responsible parties.

State negotiators may pursue a negotiated settlement beyond the point of usefulness because the alternatives (litigation, or administrative orders to cleanup) offers little or no chance of quick action. There is no statutory or regulatory timetable that establishes guidelines, or attempts to define acceptable progress for negotiations undertaken by the Department and the Attorney General. According to the Department, "...each site has its own unique set of circumstances and unique list of responsible parties with which to negotiate. Settlement negotiations will have to occur on a site-by-site basis..." As the Department indicated to the Commission, "The Department would rather continue negotiations with a willing responsible party, than enter into a lengthy resource-intensive litigation process that may take years, and may not rule in favor of the Department." In

addition, the lack of acceptable alternatives for the State probably makes nominally unsatisfactory offers by responsible parties worth considering: the State would like to come away with something.

By contrast, EPA has established a policy on "pre-litigation negotiations" which establishes a minimum opening offer by the responsible parties which must be tendered before negotiations will be considered at all, and further provides that "...negotiations between the government and the RP's should normally not extend for more than 60 days. Exceptions can be considered in complex cases where there is no threat of seriously delaying cleanup action."

CHAPTER VIII

CALIFORNIA'S EXISTING REGULATORY PROGRAM IS NOT ADEQUATE FOR PREVENTING THE CREATION OF NEW SUPERFUND SITES

SUMMARY OF MAJOR FINDINGS

1. There are major deficiencies in State and Federal regulations.

2. Most hazardous waste facilities have not received permits.

3. Many hazardous waste facilities have not been routinely inspected.

4. There is widespread non-compliance with hazardous waste regulations.

5. Most hazardous wastes continue to be dumped in surface waters, sewers, and land disposal facilities.

6. The use of improved waste management technologies will help prevent the creation of new Superfund sites.

7. California's hazardous waste program does not place adequate emphasis on the reduction of wastes and on the use of alternative waste management technologies.

8. The costs of cleaning up contaminated hazardous waste sites vastly exceed the costs of preventing the contamination.

INTRODUCTION

> **"We are the most highly industrialized society in the world. Yet no system has been institutionalized for the proper disposal of our hazardous wastes. More effort has gone into the regulation of restaurants and taxicabs than into establishing a safe system for waste disposal."**
>
> **John McGuire**
> **Regional Administrator, EPA, 1981**

It has been nearly a decade since Congress passed legislation to control hazardous wastes. Nevertheless, as recently as 1981, the Environmental Protection Agency estimated that 90% of toxic substances were still disposed of improperly and unsafely.

The implications of the EPA estimate are enormous. While California struggles to identify and clean up sites caused by decades of mismanagement and careless handling of industrial wastes, there is overwhelming evidence that many of our current disposal sites may soon become new Superfund sites.

Because of the complexity, extraordinary costs, and health risks associated with cleaning up toxic dump sites, the Commission undertook a careful examination of California's program for preventing the creation of new Superfund sites. A major portion of the Commission's final hearing was devoted to prevention strategies. In addition, staff reviewed the State's current efforts to:

- inspect and permit existing disposal facilities;
- enforce hazardous waste laws and regulations; and

- restrict the use of land disposal techniques in favor of safer waste management technologies such as recycling, treatment and incineration.

The Commission also identified major loopholes in State and Federal regulations and assessed the overall effectiveness of California's current hazardous waste regulatory program.

This chapter describes the findings of the Commission's investigation and outlines the importance of alternative waste management technologies in preventing the creation of new Superfund sites.

FINDING #1. THERE ARE MAJOR DEFICIENCIES IN STATE AND FEDERAL REGULATIONS.

Since the late 1970's there have been growing concerns about the continued use of the land for the disposal of highly toxic wastes. In February of 1981 the EPA formally acknowledged that all land disposal facilities are expected to leak. In the introduction to proposed regulations governing the operation of land disposal facilities, the EPA stated:

> The essence of the problem faced in the regulation of the land disposal of hazardous waste is the inevitable long-term potential for the wastes or their constituents to leak out of the facility... Unfortunately, at the present time, it is not technologically and institutionally possible to contain wastes and constituents for the long periods of time that may be necessary to allow adequate degradation to be achieved.[1]

Yet when the EPA issued its final regulations for new and existing land disposal facilities in July 1982 it was widely criticized for failing to address many of the serious problems relating to the land disposal of hazardous wastes. Several of the witnesses who testified during the Commission's final hearing

discussed in detail the loopholes and weaknesses in both State and Federal regulations.

Richard Fortuna, Executive Director of the Hazardous Waste Treatment Council, testified that:

> The (RCRA) program has failed to meaningfully regulate or restrict the practice that is the leading cause of this Nation's hazardous waste problem -- land disposal. As a result, the Nation has little to show in the way of a preventive hazardous waste program than it did at the time of RCRA's initial passage (sic).[2]

Information provided by the Council and other sources revealed the following weaknesses in the existing Federal regulations:

- 92% of the companies that produce hazardous wastes are exempt on the basis of being "small generators". Companies generating less than one ton of hazardous waste per month are not subject to RCRA requirements. One result of this exemption is that wastes from many small generators are disposed at municipal landfills.

- Certain types of facilities and specific waste management practices are categorically exempt from RCRA. For instance, EPA has not yet defined the term "recycled waste" and has failed to develop regulations governing the operation of recycling facilities. Commonly recycled wastes include industrial solvents and other highly toxic substances. In addition, generators who burn their own hazardous wastes to generate energy are also exempt from RCRA requirements; although this practice, like any form of incineration, should be closely monitored and controlled to minimize toxic air emissions.

- Current land disposal regulations do not require that liners be installed at existing facilities even if they are located above a source of drinking water. This exemption, which allows existing facilities to operate in a manner that EPA does not consider to be adequate for new facilities, is one of the most direct links between the deficiencies of the RCRA regulations and the creation of future contaminated sites. Many existing Superfund sites have contaminated groundwater largely because of the lack of a liner.

- Many toxic substances (including the majority of carcinogens identified by EPA's Carcinogen Assessment Group) are not even listed or identified as hazardous wastes under Federal regulations. Chronic toxicity, in addition to physical characteristics such as ignitability and reactivity, should be a major criteria for determining which wastes are hazardous.

- The RCRA regulations do not consider relative chronic toxicity in determining wastes that should be restricted from land disposal. With the exception of PCB's (polychlorinated biphenyls) which can be disposed only at particular landfills, the Federal program does little to restrict disposal based on properties such as persistence (time period for which the waste remains hazardous following disposal), bioaccumulation (the degree to which the waste can accumulate in animal and plant tissue) and human toxicity.

- The RCRA regulations do not require corrective action for groundwater contamination which extends beyond the fenceline of the regulated facility. Although contaminated groundwater 'plumes' do not respect legal boundaries, the RCRA regulations provide no mechanism to ensure that funds are available to clean up wastes that have migrated beyond the site boundary.

- The RCRA regulations rely almost exclusively on groundwater monitoring to detect leakage and prevent contamination. Groundwater monitoring does not detect contamination <u>before</u> it occurs and therefore plays no role in prevention. Reliance on this technique almost guarantees that corrective action will not be taken until groundwater is already contaminated. In addition, groundwater monitoring is not a fully perfected technique. The range of statistical uncertainty can make it difficult to rapidly detect low levels of contamination.

Testimony was also provided on serious weaknesses and loopholes in California's regulatory program by Michael Belliveau, Research Associate for Citizens for A Better Environment (CBE), and David Roe, Senior Attorney for the Environmental Defense Fund (EDF). EDF pointed out that according to the National Research Council, 500 hundred years is a realistic period of concern for wastes deposited in land disposal facilities.[3] Yet State and Federal regulations require monitoring and corrective action for only thirty years following

the closure of a facility.

Perhaps ideally these facilities should be monitored for 500 years. In practice there must be a greater focus on prevention. In the absence of a stronger regulatory focus on preventing contamination through restriction of land disposal practices, new Superfund sites will continue to be created. In recent testimony before Congress, a senior associate with the Congressional Office of Technology Assessment stated that, "Concern for the future indicates that land disposal be limited to inert low hazard wastes . . . and to facilities where groundwater is not threatened."[4]

CBE identified many specific deficiencies in existing and proposed State regulations, including:

- limited requirements for the installation of liners and leachate collection systems at existing facilities;
- inadequate liner requirements for new facilities;
- inadequate liability coverage;
- inadequate monitoring for leakage; and
- inadequate attention to reducing the volume of waste at the point of generation.[5]

Testimony on the weaknesses of the Federal regulatory program was also recently confirmed by the Office of Technology Assessment (OTA) for the U.S. Congress. In April of this year, OTA completed a report entitled, Groundwater Protection Standards for Hazardous Waste Land Disposal Facilities: Will They Prevent More Superfund Sites? OTA concluded:

> ...where groundwater is at risk, RCRA groundwater protection standards are not likely to prevent land

> disposal sites from becoming uncontrolled sites that will require cleanup under Superfund. The problems with the RCRA groundwater protection standards are so numerous and so serious that the standards cannot compensate for what has been found to be ineffective and unproven land disposal technology.[6]

OTA pointed out that many people view RCRA as the program which will prevent present and future hazardous waste sites from becoming Superfund sites. Yet in reviewing the 80,000-word preamble to the final RCRA regulations, OTA couldn't find a single reference to the concept that the standards are intended to prevent the creation of new Superfund sites.[7]

FINDING #2. MOST HAZARDOUS WASTE FACILITIES HAVE NOT RECEIVED PERMITS.

The Resource Conservation and Recovery Act requires that every person owning or operating a hazardous waste facility must obtain a permit. Because of the large number of operating facilities that were affected by the passage of the legislation, Congress and the EPA allowed every facility that was in operation on or before November 19, 1980 to continue operating under "interim status" until a final permit could be issued.

Interim status regulations merely require facilities to notify EPA if they treat, store or dispose of hazardous waste and to follow certain minimal management and recordkeeping procedures. The actual practice of land disposal is left largely unaffected by interim status provisions. In contrast, issuance of a final permit requires that detailed hydrogeologic studies be conducted to determine the ability of the site to safely contain hazardous wastes.

Today, seven years after the passage of RCRA, and eleven years since the enactment of the California Hazardous Waste Control Law, over 90% of all hazardous waste facilities continue to operate under interim status. Despite the clear intent of Congress that interim status documents be rapidly replaced by final permits, the Department of Health Services placed a low priority on permitting activities until January, 1983, when it was faced with the potential loss of Federal funds.

Major improvements have been made in the permitting program during the last 18 months. The Department prepared a detailed procedures manual for issuing permits and doubled the number of staff working on the permit program. The Department has now issued over 70 permits to facilities which store and treat hazardous wastes in tanks. Yet little progress has been made in permitting land disposal facilities -- the facilities which represent the greatest risk of contamination and that show up most frequently on the Superfund list.

The role of the permitting program in preventing the creation of new Superfund sites has been emphasized on several occasions by the Auditor General. In 1981 the Office of the Auditor General found that issuing permits to hazardous waste facilities:

- increases the Department's regulatory effectiveness;
- plays an important role in ensuring that facilities conform to the Department's standards; and
- enhances the Department's ability to enforce compliance with hazardous waste control laws.[8]

In testimony presented at the Commission's first hearing, Auditor General Tom Hayes stated:

> If you don't control the source of the waste, and that is the intent behind permitting these institutions, it's difficult to control the source of your hazardous waste problem. It's as simple as that. There is no guarantee that you are not creating sites that you will be considering in future years for cleanup.[9]

Assemblyman Richard Katz, Chair of the Assembly Policy Managment Committee, also testified about serious problems that the Assembly Office of Research (AOR) had discovered in the permitting program. On March 29, 1984, Assemblyman Katz presented the Commission with the findings of a new AOR report on toxic waste disposal. He testified that half of all hazardous wastes in California are disposed of in pits, ponds, and lagoons, and that these facilities have been responsible for the contamination at 10 of the State's top 15 Superfund sites.[10] Yet despite the enormous risks these facilities presented to groundwater, the majority have never applied for permits. AOR staff testified that less than 5% of the toxic pits registered with the State have been issued permits by the Department of Health Services.[11]

The Department only recently started work on the most difficult and important permits: those it will issue for California's hazardous waste disposal facilities. It will be at least five years before the Department completes this permitting work. During this time it is probable that some of these facilities will be discovered to be leaking and may have to be added to the Superfund list.

There is already evidence that it is possible for a facility to move directly from the list of legally operating facilities to the Superfund list. On January 28, 1983 the Department of Health Services requested Operating Industries, a Class II-I landfill in Monterey Park, to submit a RCRA permit application and Operations Plan. Instead of submitting a permit application, Operating Industries indicated an intention to close the facility. Prior to approving the closure plan and revoking their authorization to accept hazardous wastes, the Department discovered that the facility was leaking. In January 1984, the site appeared on the State Superfund list. It is currently ranked #19 and the Department plans to spend $250,000 next year for site characterization.

The Operating Industries example demonstrates that a hazardous waste site can change from a legally operating disposal site to one of the highest-ranking Superfund sites within just one year.

FINDING #3. MANY HAZARDOUS WASTE FACILITIES HAVE NOT BEEN ROUTINELY INSPECTED.

In September 1983 the U.S. General Accounting Office (GAO) released a report titled, Inspection, Enforcement and Permitting Activities at Hazardous Waste Facilities. According to the GAO only 45% of the facilities sampled in four states had ever been inspected. California had the worst record of the four states. Based on data collected in July 1983, the GAO reported that California had inspected only 18% of all the State's hazardous waste facilities and had conducted inspections at less than half of the major disposal facilities.[12]

According to GAO, the reason for this poor inspection record was confusion over which agency was responsible for conducting the inspections. The Department of Health Services had conducted only a few inspections because they claimed that the State Water Resources Control Board had jurisdiction over groundwater quality. The Board refused to conduct the inspections until DHS prepared an interagency agreement with the Board and funded the inspection program.

The Department of Health Services currently has only 14 field staff to conduct inspections at an estimated 2000 hazardous waste facilities.[13] Yet in May 1983 the Chief of the Toxic Substances Control Division assured the Legislature that the Division had adequate staff and did not need additional inspectors.[14] Subsequent analyses by the Legislative Analyst and the Department revealed that the Department could not even inspect all the major treatment and storage facilities once every two years with the current level of staffing.

The Department recently requested 20 additional inspectors in the 1984-85 budget. This level of staffing will still only allow one inspection per year at facilities which use unlined pits to treat and store millions of gallons of hazardous wastes. Several of the Regional Water Quality Control Boards have indicated that these types of facilities should be inspected at least six times each year since there is a significant potential for groundwater contamination.[15]

The Auditor General also found that in many cases the Department has not adequately followed up after its inspections

to ensure that violations were corrected. The Auditor General found that the Department had not taken follow up actions at 45% of the facilities which had been determined to be in violation of hazardous waste regulations.[16]

The Department is currently attempting to eliminate the large backlog of enforcement cases. Until this backlog is eliminated and additional staff are available for routine inspections, inspection frequencies will probably be inadequate to ensure full compliance with hazardous waste regulations.

The Auditor General also found that the Regional Water Quality Control Boards do not have adequate inspection programs to prevent groundwater contamination. Fifteen percent of 98 facilities reviewed by the Auditor General had not been inspected for more than five years. Half of these facilities had not been inspected in over 10 years. In addition, none of the Boards visited by the Auditor General had a formal system to schedule inspections of permitted facilities. For those facilities whch had been inspected, none of the Regional Boards had a formal system to determine whether violations discovered during inspections were ever resolved.[17]

The Auditor General concluded that the extensive contamination problem that has occurred at Aerojet could have been detected and stopped far earlier had the Regional Board conducted more frequent inspections and promptly reviewed self-monitoring reports.[18]

FINDING #4. THERE IS WIDESPREAD NONCOMPLIANCE WITH HAZARDOUS WASTE REGULATIONS.

Several recent studies have shown that most hazardous waste facilities are not in compliance with State and Federal hazardous waste regulations. EPA, the General Accounting Office, the Assembly Office of Research, and the California Auditor General have all reported extensive noncompliance with requirements for groundwater monitoring.

Although groundwater contamination is an extremely serious potential threat to human health and the environment resulting from hazardous waste disposal, the GAO found in reviewing several state's programs, that 78% of hazardous waste facilities were not in compliance with Federal regulations.[19] GAO could not determine the extent of non-compliance in California because so few inspections had been conducted. However, preliminary data indicated that at least 40% of California facilities had not complied with Federal requirements for groundwater monitoring.[20]

In April 1984, the Auditor General also found major compliance problems with the Water Board's waste discharge permits. The Regional Boards issue waste discharge permits to any facility that discharges wastes that may adversely affect water quality. The requirements set forth in the permit specify the type, quality, and quantity of waste that can be discharged and often requires the submission of self-monitoring reports to ensure compliance. Based on a 1984 review of 75 waste discharge orders, which require self-monitoring reports, the Auditor General found that over 50% of the companies were not regularly complying with this requirement.[21]

The failure of industry to monitor for groundwater contamination and report the results of this monitoring represents a major violation of hazardous waste regulations. As a result, it is impossible to evaluate the security of hazardous waste facilities and take responsible and timely actions to prevent the creation of new Superfund sites.

Major groundwater contamination has already occurred at many facilities which treat, store and dispose of hazardous wastes. Aerojet General, Occidental Chemical in Lathrop, and McClellan Air Force Base are all facilities that exemplify the logical result of placing toxic wastes in unlined pits, and either the groundwater is not carefully monitored, or the monitoring results are not carefully reviewed by the companies and the regulatory agencies. In each of these instances extensive soil and groundwater contamination had occurred prior to cessation of waste disposal. As a result the expense of cleaning up each site will be many millions more than it would have been if contamination been detected earlier.

FINDING #5. MOST HAZARDOUS WASTES CONTINUE TO BE DUMPED IN SURFACE WATERS, SEWERS AND LAND DISPOSAL FACILITIES.

In August 1982 the Department of Health Services prepared a report on hazardous waste generation in California. The Department estimated that California industries generated approximately 44 million tons of hazardous waste each year. Of this total the Department estimated that:

- 19.8 million tons were discharged directly to sewers;
- 6.8 million tons were discharged to surface waters;

- 5.7 million tons were disposed of in landfills, surface impoundments, injection wells and landfarms; and
- 12.7 million tons were handled in a manner that was unknown to the Department.[22]

According to the estimates developed by the Department, only 199,000 tons of hazardous waste were recycled and 191,000 tons were incinerated. The Congressional Office of Technology Assessment (OTA) has concluded that although recycling, treatment and incineration technologies are feasible, the current regulatory system:

- does not directly encourage consideration of alternative, safer, and more permanent solutions posed by hazardous wastes; and
- presents indirect disincentives for treatment alternatives.[23]

In the absence of direct disincentives, such as regulatory restrictions of land disposal and strong enforcement of the industrial pretreatment standards, disposal of untreated or minimally treated waste to sewers, surface waters and surface impoundments (toxic ponds) will always represent least-cost waste management options. When the costs of eventual cleanup are considered, along with the immediate cost to the generator, waste reduction and treatment techniques become economically feasible. The present regulatory system focuses on minimizing the front-end costs. Yet OTA estimates that cleaning up a contaminated site and compensating victims costs from 10 to 100 times as much as taking the proper initial steps to prevent contamination.[24]

Despite the serious problems that have resulted from the disposal of hazardous wastes into the land, land disposal continues to be one of the principal methods of managing

hazardous wastes. A recent study by the Assembly Office of Research (AOR) found that over 23 million tons of hazardous waste are placed each year for storage, treatment or disposal in surface impoundments throughout California.[25] AOR concluded that these facilities represent a serious threat to groundwater. The AOR study found that 72% of the facilities with impoundments discharge hazardous wastes directly into unlined pits, where hazardous substances are readily absorbed by the soil and can flow into underground water supplies.[26]

FINDING #6. THE USE OF IMPROVED WASTE MANAGEMENT TECHNOLOGIES WILL HELP PREVENT THE CREATION OF NEW SUPERFUND SITES.

All treatment and disposal options for hazardous wastes pose some degree of risk to public health and the environment. Yet technologies that do not rely on placing wastes in or on the land inevitably pose a lesser and more easily controlled threat to public health and the environment. Decades of uncontrolled land disposal practices and uncertainty about the long-term security of new state-of-the-art landfills and surface impoundments have forced industry and government officials to seriously consider the expanded use of reduction, treatment and destruction technologies. Increasingly, industry has come to agree with the EPA's statement that: "...the regulation of hazardous waste land disposal must proceed from the assumption that migration of hazardous waste...will inevitably occur."[27] Dow Chemical, for instance, now incinerates a large proportion of their wastes.[28]

The following hierarchy of techniques is now widely accepted as the optimal strategy for managing hazardous wastes[29]:

1. WASTE REDUCTION: The ideal solution is to reduce wastes at

the source of generation by modifying industrial processes to eliminate or reduce the production of hazardous by-products.

2. WASTE RECYCLING: Recycling (reusing waste materials) and resource recovery (extracting valuable materials from a waste stream) offer significant opportunities for reducing dependence on land disposal. The rising costs of raw materials, particularly petrochemical products, are expected to result in increased use of recycling techniques. California already has several dozen facilities that recycle waste solvents for resale to the original user.[30]

3. PHYSICAL, CHEMICAL, AND BIOLOGICAL TREATMENT: Many treatment processes have been developed that render material completely innocuous, reduce toxicity, or substantially reduce the volume of material requiring disposal.

4. INCINERATION: Many organic materials that cannot be effectively reduced, recycled or treated can be incinerated. With proper safeguards to control toxic emissions, high temperature incineration represents a clean and safe method of destroying hazardous wastes.

5. SOLIDIFICATION/STABILIZATION OF RESIDUALS BEFORE LANDFILL: The last step in the optimal management strategy for hazardous wastes entails the use of encapsulation techniques to "solidify" wastes and make them less permeable, and thus less likely to migrate out of a land disposal facility.

A 1981 report by the Governor's Office of Appropriate Technology (OAT) concluded that over 75% of all the hazardous

wastes disposed of in California could be safely recycled, treated or destroyed using proven technologies.[31] OAT found that advanced waste management technologies were already in use in Denmark, West Germany, the Netherlands, and Japan, and that land disposal had been curtailed or eliminated in these countries. Denmark, for instance, has banned the land disposal of untreated hazardous wastes and instead relies on a large comprehensive waste management facility and a system of regional collection centers. Most of the country's waste is recycled or treated and the bulk of waste that continues to be land disposed are residues from treatment and incineration.[32]

The OAT report found that although treatment techniques are frequently more expensive than land disposal, the added cost of waste management resulting from California's land disposal restriction program for generators currently disposing of wastes at offsite landfills represents less than one percent of profits for of most of these California firms.[33] The report also estimated that the increased total cost, in 1981 dollars, of improved waste management, while as high as $20 to $30 million annually, would be distributed between several thousand California businesses with gross annual sales of over $30 billion.[34]

It is difficult to generalize about waste treatment costs. Costs depend on the waste type, the concentration of hazardous constituents in the waste and the type of technology (of the dozens available). The Congressional Office of Technology Assessment found in 1981 that land disposal costs vary nationally from $5 to $240 per ton; treatment costs range from $21 to $791

per ton; and incineration costs vary from $13 to $791 per ton.[35] For both treatment and incineration the upper end of the cost range represents a relatively small volume of highly contaminated and toxic wastes. Average 1981 costs for treatment of most wastestreams, for instance, are approximately $50 to $150 per ton. Solidification and stabilization of wastes prior to land disposal costs an average of $110 per ton.[36]

In the past several years additional studies have documented the risks associated with land disposal as well as the technical and economic feasibility of alternative waste management technologies:

- A 1983 study by the National Academy of Sciences found that methods now exist to treat every waste that is currently being generated.[37]

- The Draft Hazardous Waste Management Plan prepared by California's Hazardous Waste Management Council in January of this year states:

> Recognizing the long-term health, environmental and economic risks of hazardous waste land disposal, the Hazardous Waste Management Council believes that as a goal, hazardous waste should not be permanently disposed to land, or emitted into the air, without being processed by a favorable alternative technology consistent with practical economic considerations.[38]

Based on testimony presented to the Commission and abundant literature on the problems inherent in the land disposal of hazardous wastes, the Commission belives that source reduction and alternative waste treatment technologies must become the primary method of waste management if California is to halt the creation of new Superfund sites.

FINDING #7. CALIFORNIA'S HAZARDOUS WASTE PROGRAM DOES NOT PLACE ADEQUATE EMPHASIS ON THE REDUCTION OF HAZARDOUS WASTES AND ON THE USE OF ALTERNATIVE WASTE MANAGEMENT TECHNOLOGIES.

California adopted a policy in 1981 (Executive Order B-8881) to reduce dependence on land disposal facilities and to encourage the construction of alternative waste management facilities. Yet testimony presented to the Commission and staff research revealed that during the last 18 months the Department of Health Services has not developed an aggressive program to increase the development and use of technologies which can safely reduce, recycle, treat, or destroy hazardous wastes.

Representatives from environmental organizations testified that California's hazardous waste program is fundamentally misdirected and that our current regulatory program is designed to fail. Several witnesses pointed to the absence of policies and programs to promote improved waste management practices.

David Roe, Senior Attorney for the Environmental Defense Fund, stated:

> Obviously, the top priority of any management program should be to slow the stream of new hazardous wastes as much as possible, to keep the past from repeating itself. This means a primary emphasis on reducing the problem at its source, minimizing the creation of hazardous waste in the first place as well as minimizing the volume and toxicity of what goes into the ground. Yet California's program, dutifully following the RCRA model, ignores this strategy almost completely ... Despite some occasional lip service to the contrary, California is committing itself to a strategy that is guaranteed to fail, and avoiding the only appropriate long-term approach to the problem of hazardous wastes."[39]

Michael Belliveau, Research Associate for Citizens for a Better Environment, testified that California must "take bold

steps to reshape current practices for managing hazardous wastes and hazardous materials."[40] According to Belliveau the existing regulatory program does little more than channel hazardous wastes toward known repositories, repositories that have yet to be subjected to rigorous permitting requirements and may already be leaking. This misguided emphasis on regulating disposal is fraught with loopholes and in direct contrast to the many opportunities for reducing the volume and hazard of wastes at the source.

Concerns about the Department's lack of emphasis on source reduction, recycling and alternative waste managment technologies were confirmed by testimony presented by the Chief of the Toxic Substances Control Division.[41] A principal function of the Division's Alternative Technology Program is to implement the existing restriction regulations, and to develop and implement further restrictions. The program is also responsible for encouraging wider use of recycling technology for promoting the exchange of wastes that can be reused.

In response to the Commission's request for testimony on what the Department is currently doing to prevent the creation of new Superfund sites, the Chief of the Division devoted almost half of his presentation to describing a very limited recycling effort that resulted in 10,000 tons of waste being recycled. Since the Department estimates that California industries dispose of about 10 million tons of hazardous waste each year, the Department's recycling program affects less than one-tenth of one percent of the wastes that are currently being disposed of.

His testimony did not discuss any activities related to reducing wastes at the source of generation or any plans to expand the list of wastes which are to be restricted from land disposal facilities. The Department also failed to provide any specific information on what, if anything, it plans to do to encourage greater use of waste reduction, recycling and treatment technologies.

The Chief of the Division was unable to respond to Commissioner Walker's question about the number of staff that were assigned to the Alternative Technology Program. However, an analysis of the budget shows that this program was reduced by 6 positions and $266,000 in 1983-84 and has been slated for further reductions in 1984-85.[42]

The Department's testimony demonstrates that the Department's efforts to prevent future Superfund sites are focused almost exclusively on encouraging the recycling of one one-thousandth of the State's wastestream. Other steps, such as expanded land disposal restrictions could divert far larger volumes of waste from land disposal.

FINDING #8. THE COSTS OF CLEANING UP CONTAMINATED HAZARDOUS WASTE SITES VASTLY EXCEED THE COSTS OF PREVENTING SITE CONTAMINATION.

A 1983 report by the Congressional Office of Technology Assessment (OTA), found that the cost of managing hazardous waste in the United States is currently costing between $4 billion and $5 billion each year.[43] Regulations recently adopted by California's State Water Resources Control Board will inevitably result in even higher management costs for California industries

which store hazardous wastes in new surface impoundments. These regulations require that new surface impoundments be lined, have systems to collect leachate and control runoff, and monitor for contamination of groundwater and the unsaturated zone beneath the impoundment.

According to cost estimates prepared for the California Legislature's Assembly Office of Research (AOR), constructing a surface impoundment of average size (about 1 acre) cost approximately $45,000 before California's new regulatory program went into effect. The same impoundment, built to comply with these new State requirements, could cost approximately $530,000 -- almost 12 times more. Annual operating costs will also increase, but much less sharply, from approximately $80,000 (primarily for maintenance and sludge removal) to $98,000 (approximately 23%).[44]

While these increased costs are significant, these figures are only meaningful when compared to the costs of cleaning up sites that have contaminated the soil and groundwater. For example, EPA estimates that the average cost of disposing of hazardous waste in full compliance with new Federal landfill regulations is about $90 per metric ton. However, the cost of cleaning up improperly dumped wastes EPA estimates at $2000 per metric ton.[45]

In another comparison, OTA estimated that the cost of using alternatives to land disposal such as treatment, recycling, and waste reduction techniques which will prevent future contamination could increase industry's waste disposal expenses as much as 50 to 100 percent. But the costs of cleaning up a toxic dump or pond which is leaking wastes and compensating

victims, could cost **10 to 100 times** the additional expense of providing for safer handling methods today.[46]

One example of the costs that result from improper disposal is the experience with the Love Canal in New York State. It is estimated that if the wastes placed in this site years ago had been managed under today's standards it would have cost the site operators approximately $2 million (1979 dollars). This figure contrasts sharply with the $36 million for remedial action which had been spent by 1980, and the more than $100 million full cleanup is expected to cost. In addition, approximately $2 billion in lawsuits have been filed by persons claiming damages.[47]

These figures make compelling arguments for increasing the State's emphasis on waste reduction and the use of alternative waste management technologies as a means of preventing site contamination.

CHAPTER IX.

RECOMMENDATIONS

SUMMARY OF MAJOR RECOMMENDATIONS

1. The Governor and the Legislature should create an Office of Superfund Management within the Governor's Office to:
   - immediately accelerate the cleanup of hazardous waste sites; and
   - centralize authority, establish accountability, and improve coordination while major reorganization proposals are considered.

2. The Governor and the Legislature should immediately double the size of the State Superfund.

3. The Director of the Department of Health Services should immediately create a special management team to implement improvements in the current Superfund program and administrative support.

4. The Legislature should enact new legal procedures to accelerate the collection of funds from responsible parties.

5. The Legislature should require that all existing hazardous waste facilities meet the requirements and standards for new facilities.

6. The Legislature should require the Department of Health Services to develop regulations prohibiting the land disposal of hazardous wastes which present serious risks to human health and the environment.

INTRODUCTION

In tracing the history of the Superfund Program, the Commission discovered that high media visibility and public concern do not necessarily result in a program receiving special treatment or priority attention within State government. In fact, the Commission found that a very convincing argument could be made that the Superfund Program has never been given a fair opportunity to succeed. From the day the Superfund Program was created it continually confronted unnecessary and insurmountable obstacles to success. For three years the program was underfunded, understaffed, and subjected to freezes on hiring, contracting and purchasing. The program was also forced to compete for management attention and adminstrative support within one of the largest and most cumbersome bureaucracies in State government.

The limited progress that has been made in identifying and cleaning up hazardous waste sites has been a source of extreme frustration and disappointment. As a result, the Department has been widely criticized and under constant pressure from residents and the Legislature to evaluate known dump sites, complete health studies and accelerate cleanup activities. While this outside pressure has sometimes exacerbated the Department's management problems, it has also led to many incremental improvements. Some of these improvements were made in response to issues raised during the Commission's three hearings.

While the Department's past efforts to correct deficiencies and willingness to make further improvements is to be commended,

the Commission believes that there is a serious danger in placing too much emphasis on "fine-tuning" specific elements of the Superfund program. Many of the problems documented by the Commission are related to major organizational conflicts; the failure of the State to commit needed resources; and serious management deficiencies linked to the placement of the program within the Department of Health Services. Many of these problems are well beyond the control of the Department and can only be corrected through major reforms.

The six broad recommendations presented in this chapter respond to the most serious problems identified by the Commission. Although most of these recommendations will require legislation, there are many management improvements and procedural efficiencies that can be pursued immediately.

The Commission believes that the implementation of these six recommendations will result in immediate improvements and lead to the development of an effective program to clean up California's toxic dump sites.

RECOMMENDATION #1. THE GOVERNOR AND THE LEGISLATURE SHOULD CREATE AN OFFICE OF SUPERFUND MANAGEMENT WITHIN THE GOVERNOR'S OFFICE TO:

- **IMMEDIATELY ACCELERATE THE CLEANUP OF HAZARDOUS WASTE SITES; AND**
- **CENTRALIZE AUTHORITY, ESTABLISH ACCOUNTABILITY, AND IMPROVE COORDINATION WHILE MAJOR REORGANIZATION PROPOSALS ARE CONSIDERED.**

Since 1981, the Commission has been concerned about the location of the Hazardous Waste Management Program within the Department of Health Services. The Commission's previous hearings on on the proposal to create a new Department of Toxic

Substances Control revealed that:

- The Department had been unable to devote the attention and resources needed to develop an effective hazardous waste program.
- There was a need for improved coordination among the State agencies responsible for the management of hazardous wastes.
- The program had been hindered by sluggish administrative support, particularly in personnel and contracts.

Attempts by the Department to reorganize internally and to streamline certain support activities have been largely unsuccessful. Efforts to improve coordination with other State agencies, particularly the State Water Resources Control Board, have also failed to resolve serious problems that have led to confusion and inaction by both agencies.

The Commission strongly urges that a special Superfund Management Office be created within the Governor's Office to plan, organize and supervise the work of the State agencies which are responsible for cleaning up toxic dump sites. This Office would be responsible for overseeing the following activities:

1. Developing a multi-year plan to guide the identification, assessment and cleanup of toxic dump sites, and to assess the financial and staff resources needed to carry out an effective cleanup program.

2. Supervising the completion of the Abandoned Site Project.

3. Coordinating the evaluation of all sites identified as potential hazardous waste sites.

4. Revising the ranking system for hazardous waste sites and setting priorities for the allocation of resources.

5. Issuing a complete list of all the sites in California which are contaminated with toxic substances and will require cleanup.

6. Establishing strategies for using available Superfund monies as efficiently as possible. One strategy should be to use funds for early and complete characterization of sites, and then developing tough schedules for responsible party negotiations and cleanup work. This would ensure that Superfund monies can be immediately spent by the State if responsible parties fail to take action.

7. Coordinating the approval of cleanup plans by the Department of Health Services, the State Water Resources Control Board, and the Air Resources Board.

8. Designating lead agencies for all cleanup projects, and coordinating the activities of State agencies involved in the cleanup.

9. Coordinating the development of policies to guide clean-up decisions and to protect public health.

10. Coordinating the preparation of a strategy to strengthen the laws and regulations needed to prevent the creation of new Superfund sites.

The Office of Superfund Management will provide an opportunity to centralize authority, establish accountability, and improve coordination among State agencies. However, the Commission believes that this can only be accomplished if the Director of the Office reports to the Governor and is given broad administrative authority.

The Commission recommends that the Superfund Management Office be established for a two-year period as an interim strategy to improve the effectiveness of the program. During this time serious consideration should be given to major and permanent reorganization of the State's toxics programs.

The Commission considered several different options for organizational reform before deciding on the creation of a "Superfund Czar" located within the Governor's Office. These options are discussed below:

Superfund Management Board: The State of New York has established a Superfund Management Board for the purpose of developing a strategy for resolving the shortfall in the New York State Superfund. Although the State defines the role of the Board very narrowly, the Commission considered the creation of a Board to fulfill many of the functions previously listed for the Superfund Management Office. Although a Board would offer greater opportunities for public involvement, the Commission decided a Board would be complicated to establish on an interim basis and would not be particularly well suited for the day-to-day coordination responsibilities.

Department of Hazardous Wastes: Several witnesses who appeared before the Commission supported the creation of a new Department of Hazardous Waste Management. Proponents argued that the hazardous waste program would function more efficiently and effectively if it was separated from competing Medi-Cal functions. Although the Commission was generally supportive of the concept of a new department, the scope of this study was too

limited to make such a recommendation. A more detailed analysis of the State's entire toxic substance control program is required before recommending the creation of a new Department.

Expanded Role for the Hazardous Substances Task Force: The Legislative Analyst recommended an expansion of the role of the existing Hazardous Substances Task Force. The Analyst argued that the statutory creation of the Task Force would strengthen efforts initiated by the Governor, while improving legislative involvement in setting priorities for hazardous substances control programs. The functions of the Task Force would be to:

- review existing statutes and organizational structure;
- review budget requests and develop a coordinated budget for the control of toxic substances; and
- develop a comprehensive State plan for the control of toxic substances.

The Commission strongly supports a strong and expanded role for the Governor's Task Force. However, the Commission concluded that the Analyst's recommendations were directed more towards the problems of regulating toxic substances than of the delays in cleaning up hazardous waste sites. The Commission also concluded that a task force made up of agency secretaries and department directors would not be able to devote the time and attention needed to oversee the Superfund Program.

RECOMMENDATION #2. CALIFORNIA SHOULD IMMEDIATELY DOUBLE THE RESOURCES AVAILABLE TO CLEAN UP TOXIC DUMPS.

The Commission concluded that both State and Federal Superfunds are inadequate to clean up sites which are known to be contaminated with hazardous wastes. Although it is currently

impossible to estimate the total amount of the revenue shortfall, the Commission believes that California may need at least $400 to $500 million in State revenues during the next 10 years.

This amount could be reduced if:

1. The Federal Superfund is authorized at a rate significantly higher than the current fund; or

2. The State improves the legal mechanisms used to increase the amount of monies recovered from responsible parties.

In the Governor's Budget for 1984-85, the Administration proposed a $300 million general obligation bond to provide "up-front" funding for contracts to clean up those sites which have been identified as posing the most serious threat to public health and the environment. The Administration predicted that the full cost of the bond issue would be repaid from the State Superfund, federal funds, and collections from responsible parties. However, in a recent analysis of AB 3181, which authorizes the issuance of a $300 million cleanup bond, the Legislative Analyst concluded that a 30-year, $300 million bond which is backed by the full faith and credit of the State would:

- result in total costs of $826 million for repayment of the bond principal and interest; and
- require the General Fund to support a major portion of the debt service.

The Analyst estimated that the Department of Health Services would collect only $251-$497 million from all revenue sources, leaving a General Fund obligation of $329-$575 million.

The Commission is extremely concerned that the creation of a general obligation bond may create a large and unfair burden on

the general taxpayer. It has long been the policy of the Congress and the California Legislature to require that cleanup activities be financed primarily or entirely by the companies or industries which are responsible for the contamination. Congress limits the taxpayer's share of the Federal Superfund to 12.5%, and the California Legislature structured the State Superfund to be paid entirely by industry.

The Commission has concluded that California does not have adequate information upon which to develop long-term financing arrangements to increase the amount of money available for cleaning up contaminated sites. Precipitous adoption of a $300 million bond act, with its accompanying commitment to a long-term public debt which may be as high as $575 million, will severely limit future financing options. In the absence of sufficient information it is difficult to justify locking the State into a course that could make it extremely difficult to raise additional funds if the $300 million bond is inadequate to complete the cleanup of California's toxic dump sites. More information is needed on:

- the number of sites which will require cleanup and the costs of cleanup;
- the potential for California to receive increased revenues from the Federal Superfund; and
- the potential for increasing revenues from responsible parties.

Furthermore, the Commission has concluded that many organizational and management changes must occur if any additional funds are to be used effectively. During the past two years the Department has been unable to spend the entire $10

million appropriated by the Legislature and has encountered enormous difficulties in awarding and monitoring a small number of cleanup contracts.

Therefore, the Commission recommends:

A. The Legislature should pass urgency legislation doubling the amount of the Superfund Program from $10 million to $20 million per year.

B. The Legislature and the Administration should determine the percentage of cleanup cost activities that should be borne by the general taxpayer prior to developing any long-term financing program for Superfund.

C. The Legislature should memorialize Congress to:
- **increase the amount of the Federal Superfund to a level not less than $1.8 billion per year for each of the next five years; and,**
- **require EPA to award a portion of the Superfund revenues to states under a block grant formula that considers the number of sites in each state.**

D. The Administration should double the authorized staff positions for site characterization and cleanup within the Department of Health Services, the State Water Resources Control Board, and each of the Regional Water Quality Control Boards. In addition, the Administration should approve additional resources for the Attorney General's Office to pursue civil and criminal actions to clean up these sites.

These recommendations represent a constructive interim step toward resolving the resource shortfall within the Superfund program. They are designed to help the Legislature and Administration plan and carefully manage the growth of the Superfund program while avoiding many of the problems that have plagued the program in the past.

RECOMMENDATION #3. THE DIRECTOR OF THE DEPARTMENT OF HEALTH SERVICES SHOULD CREATE A SPECIAL TASK FORCE TO RESOLVE SERIOUS MANAGEMENT AND ADMINISTRATIVE PROBLEMS.

Many of the problems discussed in this report are the result of bureaucratic delays, inefficiencies, inadequate legal and administrative support, and the failure to develop effective

administrative procedures. The Commission believes that many of these problems can be resolved by creating a special task force or management team within the Department. These efforts are not dependent on any major organizational reforms and should begin immediately.

The Commission recommends that the Department immediately create a Superfund Management Task Force to consider and follow up on the following recommendations:

1. **The Department should immediately assess staffing needs (clerical, professional, technical) to determine the number and type of staff that will be needed to carry out an expanded program.** The Department needs to develop detailed job descriptions and workload standards to help determine how many and what type of staff are needed to manage cleanup projects ranging from simple projects like Llano Barrels to complex projects like Aerojet and Stringfellow.

2. **The Department should develop guidelines on when and how to conduct site characterizations.** Site characterization is the most critical step in determining the risks a site represents to human health and provides the basis for later decisions on cleanup. The Department needs detailed guidelines to ensure that complete site characterizations are performed at the earliest possible date.

3. **The Department should prepare a comprehensive staff training and development program for new and existing staff.** Most of the staff hired by the Department of Health Services have little previous experience in managing cleanup projects. The Department should design an in-service and continuing education program to help staff develop the expertise needed to manage complex cleanup projects.

4. **The Department should assemble a specialized team to prepare and monitor Superfund contracts.** The team should include staff who have extensive experience with State public works contracts and at least one full-time attorney. The new team should streamline contracting procedures in the Superfund program, including development of standing contracts for such common and repeated services as posting and fencing of contaminated sites.

5. The Department should re-evaluate the job requirements and the qualifications of key management staff to ensure that managers have been appropriately placed. The Department should place greater emphasis on directly relevant experience in determining if current managers are placed in appropriate positions.

6. The Department should create an Advisory Committee to assist the Office of Public Information and Participation in developing a more effective program. The Advisory Committee should include residents living near toxic dumpsites, individuals experienced in community organizing and the health effects of toxic chemical exposure.

7. The Department should develop specific policies to guide decisions on when to construct fences, when and how to notify residents of potential health hazards, when to evacuate residents, and when to supply alternative sources of water. These policies should be developed with the assistance of the Advisory Committee described above and in consultation with Legislative policy committees.

8. The Department should develop a computerized data management system to track the status of all abandoned sites. The tracking system should consolidate all the various lists now used by the Department of Health Services and the Regional Water Quality Control Boards. The system should show which agency has lead responsiblity, the schedule for cleanup and the status of the site.

9. The Department should prepare regulations revising the ranking system for Superfund sites. The new regulations should create a system which is less susceptible to constant change, and should categorize sites as follows:

Priority One: Sites which represent an immediate threat to human health or have a high potential to contaminate groundwater.

Priority Two: Sites which represent a less immediate threat to human health or to the environment.

Priority Three: Sites which will require cleanup, but present a limited threat to human health or the environment.

10. The Department should develop a special recruitment program to attract highly qualified candidates into the State's Superfund Program. The Department should actively recruit from all major colleges and universities which offer academic programs in hazardous waste management, and should encourage applications from professionals with experience in private industry.

RECOMMENDATION #4. THE LEGISLATURE SHOULD AMEND STATE LAW TO CONFORM TO FEDERAL LAW AND SHOULD CONSIDER ADOPTING PROCEDURES TO ACCELERATE THE COLLECTION OF FUNDS FROM RESPONSIBLE PARTIES.

Although we have discussed increased funding and judicial reforms as alternative means of speeding cleanup, neither should be viewed as an exclusive and solely satisfying remedy. Even if the Superfund were amply funded to support a full scale assault by the State on the most hazardous waste sites, the pace of Superfund litigation would have to be accelerated to insure that money for the next phase of site remediation will be available. Without the financial resources made available to the State by court-imposed reimbursement, even the most extravagant levels of funding would soon be exhausted.

First, the Commission recommends that the Legislature adopt statutory changes in the definition of responsible parties, and in California's standards and provisions of strict liability to conform to Federal law. Not only would such changes eliminate much of the ambiguity which currently exists in California law, but they would greatly facilitate the coordination and efficiency of joint governmental remediation and enforcement activities. They would also permit California courts to consider the growing body of Federal case law on these often-litigated issues. All of this would accelerate the pace of litigation.

Second, the Commission recommends either of two options be taken by the Legislature to expedite the judicial process. The first option is Legislative amendment of current statutes regarding joint and several liability so that they would conform with Federal law. The second option is Legislative adoption of

a bifurcated litigation procedure for Superfund cases. The initial phase of the trial would be exclusively concerned with determining, as a matter of fact, the amount of damages being sought and the identities of the responsible parties. Damages would be based upon the cost of site remediation as determined by the site characterizations performed by the Department. Using disposal records, billing records, manifests, contaminant analyses, and other information sources presented by the Department, the court could establish, to the satisfaction of criteria to be set forth in the proposed statute, who the liable parties are.

In the second phase of the bifurcated trial, within a specified number of days, the trial judge would determine, for the purpose of assessing damages, the amount of the total cleanup costs to be borne by each of the liable parties. The apportionment would be made on the basis of the approximate quantities of waste which can be attributed to each party on the basis of the existing evidence, and the relative hazards of the waste to public health and the environment. Some degree of judicial license would be anticipated, and provided for, in the statute.

Subsequently, after the monies had been paid by the parties to accomplish the cleanup, or reimburse Superfund for its next publicly funded cleanup, a full trial would be held to readjudicate apportionment with greater particularity, or to establish the liability of a previously unidentified party, or to determine the proper contribution of the Superfund to the cleanup costs where there are insolvent liable parties. In short, the

fine-tuning of a Superfund enforcement action for damages, which ordinarily can delay a cleanup, could take place after determinations of liability were made, approximate apportionment of costs was allocated, and cleanup was underway.

Similar to joint and several liability, this procedural change would make cleanup monies available immediately upon the determination of liability and the identification of some liable party, or parties, with an ability to pay. Unlike joint and several liability, the court would not have the authority to assign the responsibility for site remediation to the defendant with the "deep pocket". This judicial procedure is unconventional. Conventional approaches to litigation, likely to require four to five years to reach a conclusion, may not meet the challenge of Superfund cleanups.

RECOMMENDATION #5. THE LEGISLATURE SHOULD REQUIRE THAT ALL EXISTING HAZARDOUS WASTE DISPOSAL FACILITIES MEET THE REQUIREMENTS AND STANDARDS FOR NEW FACILITIES NO LATER THAN 1988.

Both State and Federal regulations for hazardous waste facilities differentiate between requirements for new and existing facilities. Existing facilities are "grandfathered" into the regulatory system and have been allowed to operate under "interim status." Although these facilities will eventually be granted full permits, they will be allowed to operate under conditions that the regulatory agencies have determined are inadequate for new facilities.

The major concession granted the operators of existing landfills and surface impoundments is an exemption from the requirement that all land disposal facilities should have at

least a single liner, and in many cases a double liner, in order to prevent waste migration into soil and groundwater.

By allowing these existing facilities to continue to operate in a manner that presents a clear threat to the purity of groundwater, it is almost certain that new contaminated sites will continue to be added to the Superfund list for decades to come.

The Legislature should close this regulatory loophole by requiring that new and existing facilities be treated equally. Although there will be significant costs associated with bringing these facilities into compliance with new regulations, the Commission believes that these costs are reasonable when compared to the enormous costs of cleaning up a leaking hazardous waste site.

RECOMMENDATION #6. THE LEGISLATURE SHOULD REQUIRE THE DEPARTMENT OF HEALTH SERVICES TO DEVELOP REGULATIONS PROHIBITING THE LAND DISPOSAL OF ALL HAZARDOUS WASTES WHICH PRESENT SERIOUS POTENTIAL RISKS TO HUMAN HEALTH AND THE ENVIRONMENT.

In December 1982 the Department of Health Services adopted regulations restricting certain highly toxic wastes from land disposal. These wastes were to be phased out of land disposal facilities between 1983 and 1985 as alternative waste treatment capacity became available.

To date, the wastes that have been prohibited from land disposal represent only about 15% of the total volume of wastes currently going to land disposal. Yet there are many other types of waste that should be prohibited from land disposal due to the extreme risks they represent to human health and the environment.

Since the Department has made no effort to extend the existing land disposal restrictions, the Legislature should require the Department to prohibit from land disposal all wastes which present serious potential risks to human health and the environment.

FOOTNOTES

and

APPENDICES

FOOTNOTES

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APPENDIX I

PRIORITY RANKING OF CALIFORNIA SUPERFUND SITES
(State/Federal Remedial Action Contract Expenditures)

NAME	1984	1983	1982	COUNTY
	(thousands of dollars - state/federal)			
Aerojet+	1 (100/)	2 (500)	3	Sacramento
Stringfellow+	2 (/3,000)	11 (100/6,300)	4 (373/)	Riverside
Iron Mountain Mine+	3 (100/200)	15 (200/)	5	Shasta
Selma Pressure Treating+	4	8	15	Fresno
Atlas Asbestos Mine+	5	-	-	Fresno
Coalinga Asbestos Mine+ (same as Arroyo Pasejaro)	6	24	-	Fresno
Coast Wood Preserving+	7	7 (100/)	10	Mendocino
Liquid Gold+	8	5	16	Contra Costa
Purity Oil Sales+	9 (40/4,000)	1 (90/700)	14	Fresno
Alviso	10 (600/250)	-	-	Santa Clara
San Fernando Valley- North Hollywood Area	11 (250/1,500)	-	-	Los Angeles
San Gabriel Ground Water Basin Area 1+	12 (150/1,500)	13* (100/1,000)	-	Los Angeles
San Gabriel Ground Water Basin Area 2+	13	13*	-	Los Angeles
Southern Pacific, Roseville	14 (100/)	3	-	Sacramento
McColl+	15 (400/11,100)	10 (2,900/3,400)	1 (653/)	Orange
Operating Industries	16	-	-	Los Angeles

	(250/)			
Fairchild Camera and Instrument	17	-	-	Santa Clara
Del Norte County Pesticide Storage+	18 (250/250)	- (150/)	-	Del Norte
MGM Brakes+	19	9	7	Sonoma
Koppers (Oroville)+	20 (200/)	26	11	Butte
IBM	21	-	-	Santa Clara
Celtor Chemical Works+	22 (36/)	14 (37)	21	Humboldt
San Fernando Valley - Crystal Springs Area	23	-	-	Los Angeles
San Fernando Valley - Glorietta Area	24	-	-	Los Angeles
San Fernando Valley - Pollock Area	25	-	-	Los Angeles
San Gabriel Ground Water Basin Area 3+	26	13*	-	Los Angeles
San Gabriel Ground Water Basin Area 4+	27	13*	-	Los Angeles
Westinghouse, Sunnyvale	28	19	13	Santa Clara
Pacific States Steel	29	-	-	Alameda
Wickes Forest Products	30	20	52	Solano
Chevron Chemical/Ortho	31	35	-	Contra Costa
Valley Wood Preserving	32	31		Stanislaus
Clorox Company	33	37	51	Alameda
Apache Services	34	30	42	San Diego
Southern Pacific, Sacto Locomotive Works	35	40	12	Sacramento
Hoopa Veneer	36	22	18	Humboldt
Commercial Electroplater	37	-	-	Fresno
Church and Fruit Junkyard	38	-	-	Fresno

Gardena Sumps	39	23	57	Los Angeles
Brea Agricultural Services	40	-	-	San Joaquin
Cal Pacific Lumber	41	43	33	Humboldt
Capri Pumping	42	12 (1,015/)	48 (345/)	Los Angeles
Leviathan Mine	43	41	49	Alpine
Lyle Van Patten Paints	44	17	17	Los Angeles
Metropolitan Circuits	45	-	-	Orange
Jibboom Junkyard+	46 (150/)	4 (25/)	24 (8/)	Sacramento
Los Banos Airport	47	-	-	Merced
H.S. Mann Metals Waste	48	-	-	Fresno
Chatham Brothers	49 (100/)	16 (20/)	-	San Diego
El Capitan	50	34	29	San Diego
Hazel Avenue Ponds	51	46	35	Sacramento
Metten and Gebhardt	52	32	23	San Diego
Manville Corporation	53	47	-	Los Angeles
Cal Compact Landfill	54	48	-	Los Angeles
Hercules Properties	55	27	-	Contra Costa
Point Isabel	56	39	45	Contra Costa
Sulfur Bank Mine	57	-	-	Lake
Zoecon Corporation/ Chipman Chemical	58	50	6	San Mateo
Levin Richmond Terminal/ United Heckathorn	59	38	38	Contra Costa
Benham and Johnson	60	-	-	Kern
Balakala Mine	61	29	22	Shasta

Chemical and Pigment Company	62	51	39	Contra Costa
Mammoth Mine	63	28	41	Shasta
TCL Corporation	64	49	36	Los Angeles
Eagle Field Airport	65	-	-	Fresno
Point Pinole (Bethlehem Steel)	66	45	37	Contra Costa
Lyco Chemical	67	-	-	Kern
ASARCO	68	21	8	Contra Costa
Cooper Chemical	69	54	-	Contra Costa
Sun Chemical Corp.	70	53	43	San Mateo
Merced Municipal Airport	71	-	-	Merced
White Rock Road Dump	72	-	59	Sacramento
Walker Mine	73	44	58	Plumas
Pine Logging Camp	74	-	-	Fresno
Southern Pacific	75	-	-	Santa Clara
Del Amo Blvd. (formerly Cadillac Fairview)	76 (500/)	6 (450/)	9	Los Angeles
Ascon Landfill	77	-	-	Orange
Burma Castrol/ Bray Oil	78	-	-	Contra Costa
Almaden Quicksilver County Park	79	-	-	Santa Clara
Centex Properties	80	33	54	Contra Costa
FMC Newark	81	52	19	Alameda
Auburn Sanitary Landfill	82	-	-	Placer
Westinghouse (Emeryville)	83	56	20	Alameda
Wildberg Bros./ Healy Tibbett	84	42	27	San Mateo
Plessey Micro Sciences	85	-	46	Santa Clara

Beacon Oil	86	-	-	Kings
PG&E - Martin Service Center	87	57	56	San Mateo
PG&E - Shell Oil	88	25	2	Contra Costa
Consolidated Iron and Metal	89	-	-	San Francisco
Electro Coatings Inc.	90	59	40	Alameda
Koppers Chemical, LA	91	60	25	Los Angeles
Leslie Salt	92	55	47	Alameda
FMC Richmond	93	58	34	Contra Costa
Trojan Powder Works	-	18	53	Alameda
ABEX	-	-	26	Los Angeles
General Electric	-	-	28	Alameda
Valimet	-	-	30	San Joaquin
Stauffer (Contra Costa)	-	-	31	Contra Costa
Holaco	-	-	32	Ventura
Llano Barrels	-	36	44 (211/)	Los Angeles
Hirshdale Dump	-	-	50	Nevada
Macy's Flying Service	-	-	55	Siskiyou
Stauffer (Los Angeles)	-	-	60	Los Angeles

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* This site was split into 4 areas for more precise characterization. It is suspected that the San Gabriel Groundwater Basin may have been contaminated by several discrete sources.

APPENDIX II

Abandoned Site Search Project

Counties Survey Completed or Expected to Be Completed by January 1985	Counties Survey Begun But Not Expected to Be Completed by January 1985	Counties Not Surveyed
Alameda	Imperial	Alpine
Butte	Los Angeles	Amador
Contra Costa	Riverside	Calaveras
Fresno	San Benito	Colusa
Humboldt	San Bernardino	Del Norte
Kern	San Diego	El Dorado
Kings		Glenn
Merced		Inyo
Monterey		Lake
Orange		Lassen
Placer		Madera
Sacramento		Marin
San Francisco		Mariposa
San Joaquin		Mendocino
San Luis Obispo		Modoc
San Mateo		Mono
Santa Clara		Napa
Solano		Nevada
Stanislaus		Plumas
Sutter		Santa Barbara
Tulare		Santa Cruz
Yolo		Shasta
Yuba		Sierra
Ventura		Siskiyou
		Sonoma
		Tehama
		Trinity
		Tuolumne

Source:

Abandoned Site Project,
Toxic Substances Control Division
Department of Health Services
4/84