

GAO

Report to the Chairman, Subcommittee
on Transportation and Related
Agencies, Committee on
Appropriations, House of
Representatives

September 1991

COAST GUARD

Coordination and
Planning for National
Oil Spill Response



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Resources, Community, and
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The Honorable William Lehman
Chairman, Subcommittee on
Transportation and Related Agencies
Committee on Appropriations
House of Representatives

Dear Mr. Chairman:

While most oil spills are relatively small (fewer than 10,000 gallons), the potential for a catastrophic spill always exists. The March 1989 Exxon Valdez spill of 11 million gallons of oil highlighted deficiencies in the nation's preparedness to contain and recover spilled oil. The passage of the Oil Pollution Act of 1990 (OPA) (P.L. 101-380) represents a major effort by the Congress to address these deficiencies and clarify the roles and responsibilities of the private sector and the federal government in preventing, preparing for, and responding to oil spills.

This report responds to your September 11, 1990, request that we provide information on the Coast Guard's activities and capabilities for ensuring that spilled oil is contained and recovered. Specifically, as agreed, we examined (1) the Coast Guard's efforts to coordinate with the private sector and others, including federal and state agencies, its plans to purchase oil spill response equipment to avoid unnecessary and wasteful duplication and (2) the new responsibilities OPA places on the private sector and the Coast Guard and if these responsibilities call for a shift in emphasis in Coast Guard oil spill response activities.¹

Results in Brief

The Coast Guard is developing its equipment plans, for the most part, without preparing and using information on equipment currently owned by private contractors, regional cooperatives, and other federal agencies and also without considering the specific equipment purchase and placement plans of these organizations. Coast Guard officials told us that they have a general knowledge of the available private sector resources and are able to rely on the expertise and professional judgment of Coast Guard personnel in developing the agency's equipment plans. Preparing

¹OPA places many duties on the President that, by delegation, are expected to be assigned to the Coast Guard. Therefore, we will refer to these duties as if OPA had placed the responsibility directly on the Coast Guard.

and using an inventory of existing oil spill response equipment in developing its own equipment purchase and placement plans and coordinating its plans with those of other private and public sector organizations could help the Coast Guard avoid unnecessary and wasteful duplication.

The new responsibilities OPA places on both the private sector and the Coast Guard allow a shift in emphasis in the Coast Guard's spill-related activities. Under OPA, the Coast Guard is responsible for ensuring that the private sector develops the capability and constant readiness to contain and remove spills of all sizes. As the Coast Guard confirms that industry is developing the capabilities mandated by OPA to clean up its own spills, the agency can pursue a strategy under which it would gradually reduce its inventory of equipment for containing and removing private sector spills and focus on industry's compliance with its mandated responsibilities.

In recognizing its responsibilities under OPA, industry is planning to spend nearly \$1 billion to acquire state-of-the-art response equipment, facilities, and trained personnel. Coast Guard program officials are concerned that industry's investments in response capabilities may not prove sufficient to provide the protection against worst-case spills that they believe is needed. However, OPA gives the Coast Guard the authority to ensure that industry develops whatever response capabilities the agency deems essential.

Background

OPA contains several provisions aimed at improving, over time, the nation's ability to contain and recover spilled oil. Before OPA, the Coast Guard lacked explicit authority to require owners and operators of tank vessels to have plans for responding to oil spills. Even if such contingency plans existed, the agency lacked authority to assess whether the equipment and personnel cited in the plans would be readily available and adequate to respond effectively to spills.

OPA gives the Coast Guard explicit authority to require that owners and operators of oil-related facilities and vessels (including foreign vessels) operating in the coastal area have plans for containing and removing spills ranging up to a worst-case spill (for a vessel, the loss of its entire cargo in adverse weather). The plans must identify and ensure the availability of the specialized equipment and trained personnel needed to respond to a spill of such magnitude. To ensure the validity of the capabilities cited in the plans, the Coast Guard is required to periodically

inspect the equipment and conduct unannounced drills. OPA specifies that without a federally approved response plan, a vessel or facility may not handle, store, or transport oil after February 18, 1993, except under limited conditions.

While spillers are now clearly responsible for having the capability to adequately respond to spills of their own making, the Coast Guard's Captains of the Port are designated as federal on-scene coordinators (OSC) responsible for ensuring that spill responses are, in fact, adequate. OPA significantly broadens OSCs' authority for managing responses. Prior to its enactment, the OSC could only direct a response when the spiller's response was deemed inadequate. Now, OPA provides OSCs with discretion to direct the response to any spill and mandates that OSCs direct the response to spills that pose or may pose a substantial threat to public health or welfare. (See app. I for additional details of OPA's provisions.)

Recognizing OPA's clear assignment to private industry of responsibility for containing and removing its own spills, petroleum producers, processors, and shippers have joined together to establish the Marine Spill Response Corporation (MSRC). MSRC is intended to serve as the primary vehicle for satisfying OPA's requirement that the private sector has the facilities, equipment, and personnel necessary to protect against spills. It is generally expected that the vessel and facility contingency plans and the implementing regulations required by OPA will cite contractual arrangements with MSRC as the primary means of response in the event of a spill. (See app. II for information regarding MSRC's planned response capabilities.)

Coast Guard's Plans to Buy Response Equipment Risk Duplicating Private Sector Investments

The national spill response capability that OPA calls for may take a number of years to develop. The Congress thus provided for continued use of Coast Guard equipment to assist in containing and removing privately spilled oil. To fulfill its role, the Coast Guard will expand its spill response operations and purchase and position spill response equipment at selected locations around the country (see app. III). At the same time, however, the Congress, in the conference report accompanying OPA, signaled its intention that agency plans for acquiring and placing equipment be closely coordinated with those of private sector organizations and others to ensure an optimally effective national investment in response capabilities and avoid unnecessary and wasteful duplication.

As a method of complying with the instruction to avoid duplication, OPA directs the Coast Guard to compile and review a comprehensive inventory of all available response equipment. This information is vital to informed decision-making regarding Coast Guard equipment purchases and placement. According to Coast Guard officials, because of other priorities related to OPA's implementation, the agency plans to complete work on a comprehensive inventory in fiscal year 1993—after it has obligated funds for new equipment. For the most part, such information is relatively easy to obtain through the local and regional contacts of Coast Guard personnel and through the informal network of private and public response organizations. Information of this type has already been partially collected and compiled by assorted state and local governmental entities, various private response organizations, and some local Coast Guard units. Coast Guard headquarters officials told us that the agency's collective knowledge of what exists in the way of spill response equipment and where it is located was informally factored into the Coast Guard's plans for purchasing and positioning equipment.

The Coast Guard's plans to acquire and position response equipment are at an advanced stage of development. Out of \$21 million in multiyear funds appropriated by the Congress in fiscal year 1991 (available for fiscal years 1991-95), the agency plans to spend, by the end of fiscal year 1992, approximately \$7 million to establish a third strike team and approximately \$14 million to purchase and position standardized packages of response equipment at selected locations across the country. The agency is also planning to spend \$7 million it has requested for fiscal year 1992 to replace equipment for removing spilled oil from the water. The Coast Guard expects to receive bids for new equipment in the near future and to begin taking delivery in January 1992.

Industry's plans to acquire equipment are also well advanced. MSRC plans to spend approximately \$900 million by February 1993 (when it expects to be fully operational) to acquire state-of-the-art response equipment, facilities, and trained personnel. As a result of this investment, MSRC is expected to have by far the largest response capability in the nation, many times the Coast Guard's relatively modest capability (existing as well as planned). Several prominent regional response cooperatives are also undertaking or planning major new investments totaling \$78 million to increase their equipment inventories (see app. II).

Concerning coordination with MSRC, Coast Guard officials told us that the corporation's plans for purchasing equipment were not sufficiently developed for the agency to use them in its own planning and decision-

making. Coast Guard officials regularly communicated with MSRC officials and obtained lists of planned equipment purchases; however, they found these lists to be too tentative and lacking in specifics (such as equipment brand names) to be given much credence. MSRC officials, on the other hand, told us that their organization's equipment plans, now quite firm, were, in fact, 90 percent complete in early 1990 and available for review at that time. For example, MSRC identified the amount and types of containment booms and response vessels it would place at specific locations around the country.

Coast Guard officials acknowledged that the agency's plans to acquire and position response equipment were based on a combination of professional judgment and general knowledge of what is already available rather than a specific inventory of existing equipment and planned purchases. They told us that they were motivated by a desire to move quickly to make more equipment available. However, because the Coast Guard's plans for purchasing and positioning equipment did not factor in all available information on the private sector's current and planned capabilities, the agency risks duplicating the private sector's capabilities and thus not complying with the guidance and intention expressed in the conference report accompanying OPA.

Private Sector's Responsibilities Under OPA Call for a Shift in Emphasis in Coast Guard's Spill Response

Under OPA, the Coast Guard's paramount responsibility in spill response is to ensure that the private sector develops the capability and constant state of readiness to respond to spills of all sizes. The principal mechanism for achieving this is OPA's requirement that owners and operators of oil-related vessels and facilities prepare and submit for federal approval contingency plans for responding to spills. This requirement gives the federal government, for the first time, the authority to specify in regulations the capabilities (e.g., in terms of equipment, trained personnel, and response times) that must be available to deal effectively with even worst-case spills. Without a federally approved contingency plan, operators of oil tank vessels and related facilities are effectively barred from engaging in their business within the United States and its territorial waters. OPA also directs the Coast Guard to periodically inspect vessel response equipment to ensure that it is properly maintained and operational and to conduct unannounced drills to test and verify the effectiveness of the capabilities cited in the response plans.

Coast Guard officials stated that to comply with OPA's mandates, industry is expected, by 1993, to acquire a very substantial capability to contain and recover spilled oil. However, these officials told us they

prefer to wait until sometime in the future, perhaps 3 to 5 years from now, to consider whether some adjustment of the Coast Guard's role is appropriate. They agree that MSRC's plans to invest approximately \$900 million during the next few years to acquire state-of-the-art equipment, facilities, and trained personnel will represent a quantum jump in national oil spill response capabilities. However, they believe an even greater investment may be necessary to ensure an ability to respond effectively to worst-case spills.

Coast Guard officials told us that from the standpoint of public perception and confidence, also, it is important for the agency to continue maintaining and operating equipment for responding to private sector spills. This is probably an accurate assessment for the short run. However, as the Coast Guard sees evidence that the private sector is developing the capability to respond adequately to commercial spills, the agency will be able to gradually reduce its own equipment inventory. The Coast Guard would retain an important role by performing many critical tasks, such as providing expert advice and support to the OSC in actual spill responses, reviewing and approving industry's response plans, testing and evaluating private sector response equipment, and conducting simulated responses and surprise drills to gauge industry spill response capabilities.

In OPA the Congress has given the Coast Guard the authority and the means to ensure that industry will develop and implement whatever capabilities are deemed essential to protect the nation against catastrophic spills. The Coast Guard has the authority to test and validate the capabilities cited in the contingency response plans and to make the right to engage in the business of transporting and storing oil conditional on the approval of these plans. This authority provides the agency with the leverage it needs to ensure that industry fulfills its obligations to contain and remove the oil spills it creates. While Coast Guard officials acknowledged the broad grant of authority made by OPA, they told us that, in reality, the economic burden of regulation may be considered to be too great, and, as a result, the agency may not be able to compel industry to make additional costly investments in spill response capabilities.

Conclusions

During the period of transition to full industry compliance with OPA's requirements, the Coast Guard needs to ensure that in all of its response-related activities it is making the most efficient use of scarce budgetary resources and the most effective contribution to overall

national spill response capabilities. The Coast Guard can do this by preparing and using a comprehensive inventory of existing oil spill containment and removal equipment, as called for by OPA, and by coordinating its equipment purchase and placement plans with those of other private and public sector response organizations. Currently, lacking comprehensive information on equipment already in place and without full knowledge and evaluation of the equipment purchase plans of others, the Coast Guard cannot provide assurance that it is complying with congressional guidance aimed at avoiding unnecessary and wasteful duplication. A comprehensive inventory of spill response resources would provide much of the information that would permit the Coast Guard to make informed decisions in this area and comply with congressional guidance and intention. Additionally, such information would help Coast Guard managers to ensure the most efficient use of scarce budgetary resources and the most effective contribution to overall national spill response capabilities.

OPA places on industry, for the first time, clear responsibility for developing the capability to contain and remove the oil spills it creates. For the first time, also, OPA gives the Coast Guard the authority and means to ensure that industry takes the steps necessary to fulfill its obligations. Implicit in OPA's assignment of responsibilities is the notion that once industry has put in place the response capabilities mandated—evaluated and certified as adequate by the Coast Guard—there will be a reduced need for the agency to maintain and operate equipment of its own to contain and remove private sector spills.

Recommendation

To help ensure that the Coast Guard avoids unnecessary duplication in the purchase and placement of response equipment, we recommend that the Secretary of Transportation direct the Commandant of the Coast Guard to place a high priority on establishing a comprehensive inventory of existing private and public sector response resources. The Commandant should also be directed to develop a policy requiring program officials to (1) use this information in determining future response equipment purchase plans and (2) closely coordinate the agency's equipment purchase plans with those of all major private and public sector response organizations.

Agency Comments

As requested, we did not obtain official agency comments on a draft of this report. However, we discussed the contents of the report with Coast Guard officials who provided some suggestions for clarification. Their

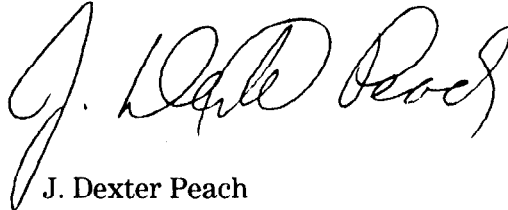
comments have been incorporated in the report where appropriate. While these officials generally agreed with our statements of fact and our interpretation of OPA's provisions, they were not in full agreement with our conclusions.

Our review was conducted between September 1990 and July 1991 in accordance with generally accepted government auditing standards. Additional details on our scope and methodology are contained in appendix IV.

We are sending copies of this report to the Secretary of Transportation, the Commandant of the Coast Guard, and other interested parties and will make copies available to others upon request.

This work was performed under the direction of Kenneth M. Mead, Director of Transportation Issues, who can be reached at (202) 275-1000. Major contributors to this report are listed in appendix V.

Sincerely yours,



J. Dexter Peach
Assistant Comptroller General

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Abbreviations

GAO	General Accounting Office
MSRC	Marine Spill Response Corporation
OPA	Oil Pollution Act of 1990
OSC	federal on-scene coordinator

Background

The risk of oil spills is very real since more than half a billion gallons of oil are transported in the United States daily. The risk is also evidenced by the fact that the nation has averaged nearly 9,000 spills annually for the past 10 years. Although the great majority of these spills were relatively small (under 10,000 gallons), large spills do occur. For example, in March 1989 the Exxon Valdez spilled 11 million gallons of oil into Prince William Sound, Alaska. Just 15 months later, another major spill occurred when the Mega Borg released over 4 million gallons of oil into the Gulf of Mexico.

Preventing oil spills is the best way to protect the environment. When a spill occurs, it is nearly impossible to keep oil from washing ashore and damaging the environment because containing and recovering spilled oil is extremely difficult. According to the Coast Guard, the average recovery that currently can be expected in the event of a spill is 10 percent to 15 percent of the oil, and even that degree of success will depend on such factors as weather and sea conditions, the type of oil spilled, and the time required to get specialized equipment and trained and experienced personnel to the scene of the spill. Furthermore, spill response technology has not changed much since the 1970s, in part, because federal funding for research and development has been greatly reduced. According to a 1990 report, the ability to contain and recover spilled oil is not much better than it was 20 years ago.¹ Even though our current ability to clean up spilled oil is limited, however, public opinion and the need to protect public welfare and the environment dictate that every reasonable measure be taken to minimize the threat posed by such spills.

The Exxon Valdez spill clearly revealed weaknesses in the nation's ability to prevent oil spills and to respond quickly and effectively to mitigate threats to public health and the environment when they occur. It galvanized a broad spectrum of public opinion and persuaded the Congress to enact a comprehensive package of environmental policy proposals that had been pending for 14 years. The Oil Pollution Act of 1990 (OPA) (P. L. 101-380), signed into law in August 1990, represents a major legislative attempt to address the threats posed by oil spills and enhances the nation's overall capability to both prevent spills and respond effectively when they occur.

¹Oil Spill Contingency Planning: National Status, prepared by the National Response Team (Oct. 1990). The National Response Team is a group of 15 federal agencies that collectively plan for environmental accidents. A Coast Guard representative serves as Vice Chair of the Team.

OPA clarifies the roles and responsibilities of the private sector and the federal government in preventing and acting to contain and recover spilled oil and provides various mechanisms designed to ensure that these roles and responsibilities will be carried out. Consisting of nine separate titles, OPA addresses a wide range of issues, including prevention, response, liability and compensation, and research and development. Its provisions affect vessels, offshore oil rigs, onshore terminals, and other onshore² and offshore businesses that transport, handle, or store oil and other petroleum products.

Title IV of OPA focuses on ensuring that the nation is prepared for and capable of responding to all oil spills. The keystone of this title is the requirement that owners and/or operators of oil-related vessels and facilities develop and maintain response plans that designate the equipment and personnel that will be used to contain and recover, to the maximum extent practicable, even a worst-case spill. For a vessel, OPA defines a worst-case spill as the release of the vessel's entire cargo in adverse weather conditions. A worst-case spill for a facility is the largest foreseeable release in adverse weather conditions. As a result of this requirement, all owners/operators will have to demonstrate that they either possess or have under contract the equipment and trained personnel necessary to respond to a spill of this magnitude. OPA requires the Coast Guard to issue regulations prescribing the requirements for response plans by August 18, 1992. Six months later, the vast majority of oil-related facilities, pipelines, and vessels operating in the coastal area must have a Coast Guard-approved response plan in order to continue handling, storing, and/or transporting oil, except under certain limited conditions.³ These plans are to be updated periodically and submitted for reapproval if they are changed significantly.

Requiring response plans, however, is not enough to ensure that industry has the equipment and personnel necessary to respond to large oil spills. Therefore, OPA directs the Coast Guard to conduct unannounced drills involving the deployment of personnel and equipment. These drills may include participation by federal, state, and local agencies; owners and operators of vessels and facilities; and groups in the private sector, such as oil spill cleanup contractors and regional

²The provisions affect only those onshore terminals and businesses that could reasonably be expected to spill oil into the water.

³A vessel or facility could operate for up to 2 years without an approved plan, provided that the plan had been submitted to the appropriate federal agency and the owner or operator certifies that the equipment and trained personnel necessary to respond to a worst-case spill are available through contractual or other arrangements.

response cooperatives. Furthermore, the act directs the Coast Guard to periodically inspect containment booms, skimmers, vessels, and other major equipment intended for use in responding to oil spills and issue regulations requiring tanker vessels to have on board the best removal equipment that is technologically and economically feasible and compatible with the vessel's safe operation.

OPA also substantially increases the dollar amount of the civil penalties that can be assessed against a spiller for failing to comply with the act's provisions. Prior to OPA, the Coast Guard could assess a civil penalty of up to \$5,000 against a spiller, but OPA allows for a maximum penalty of either \$25,000 per day or up to \$1,000 per barrel of oil spilled. OPA also establishes civil penalties of up to \$25,000 per day for such violations as failure to prepare response plans and failure to carry required response equipment on board tankers. Additionally, any person who, without sufficient cause, fails to carry out a removal action or fails to comply with an order concerning removal actions is also subject to a civil penalty that may be as high as \$25,000 per day or a sum 3 times the costs incurred by the Oil Spill Liability Trust Fund, established by the Omnibus Budget Reconciliation Act of 1986, as a result of such failure.

Oil Spill Response Resources

A major part of the nation's capability to respond to oil spills is found in the private sector, which has long been considered the first line of defense in fighting spills. Local contractors and regional response cooperatives are hired by a spiller to contain and recover the spilled oil. While a complete list of cleanup cooperatives and contractors has not been compiled, the Office of Technology Assessment estimates that there are over 90 cooperatives in the United States. Most of the cooperatives are organized to respond to spills in protected harbors, sheltered waters, and inland areas, but nine of the nation's largest cooperatives have the capability to respond to spills in open waters.

When the spiller or those hired by the spiller do not adequately respond to a spill or when the spiller is unknown, the OSC will use federal funds to hire cooperatives or contractors to contain and clean up the spill. If these organizations' resources are either insufficient or unavailable, the OSC may look to the existing response resources of the federal government, which include those of the Department of Defense.

The March 1989 Exxon Valdez disaster, however, revealed that even with the addition of the public sector's resources, the nation was ill-prepared to respond to the kinds of catastrophic oil spills that are possible with today's supertankers. In a June 1989 report, the American Petroleum Institute concluded that the oil industry had neither the equipment nor the personnel in place and ready to deal with spills of the size of the Exxon Valdez spill. The Institute recommended that a national organization be created to respond with the necessary equipment and trained personnel to large spills in the open water. As a result of this recommendation and OPA's requirements for response plans, the private sector plans to spend almost \$1 billion over the next several years to increase its capability to respond to spills. A substantial portion of this money will be spent by MSRC.

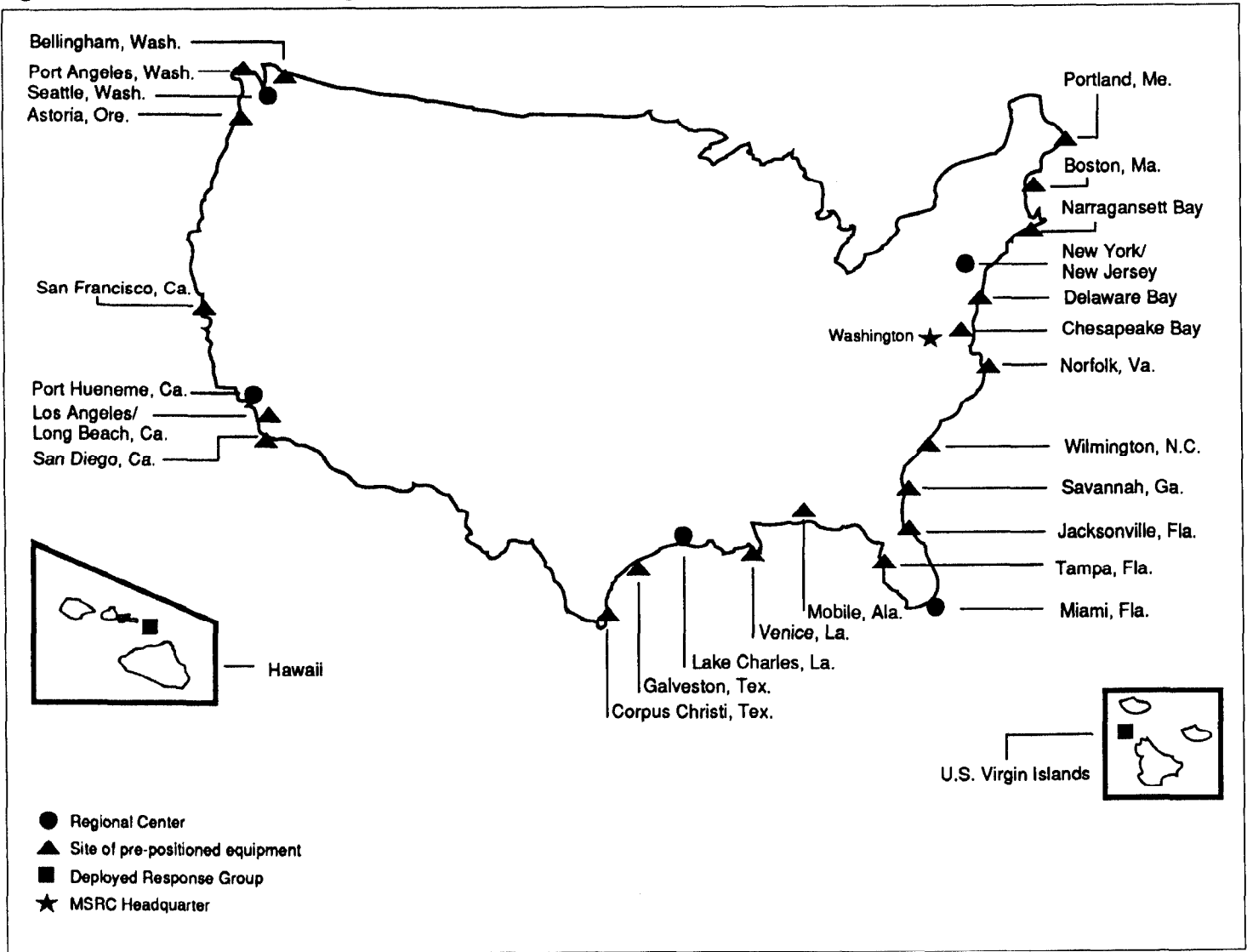
Marine Spill Response Corporation

Established in 1989, MSRC is an attempt by the oil industry to create a national organization that is capable of responding to large spills in the open water. Funding for MSRC is provided by a separate trade association called the Marine Preservation Association whose membership is comprised of owners and operators of oil-related vessels and facilities. Association members will pay dues based on the amount of oil they handle in the U.S. coastal zone. However, the Association will have no management involvement with MSRC. The funding provided by the Association is to cover MSRC's annual operating, capital, and research and development costs, while the cost to MSRC of cleaning up spills will be

paid by the spiller. MSRC's plans require that each of its five regional centers be able to respond to a spill roughly of the magnitude of the Exxon Valdez spill, estimated at 11 million gallons. For larger spills, MSRC intends to bring in equipment and personnel from one or more of its other regional centers. Also, it foresees using existing clean up contractors and response cooperatives, as needed, to provide additional equipment and personnel.

Currently, MSRC is buying response equipment that will be strategically located at 22 major ports within the five regions. When fully operational in February 1993, MSRC expects to have the largest single inventory of response equipment in the nation. To achieve this objective, MSRC plans to spend approximately \$900 million to acquire the necessary equipment, facilities, and personnel. The locations of the regional centers and response equipment are shown in figure II.1.

Figure II.1: Locations of MSRC's Regional Centers and Response Equipment

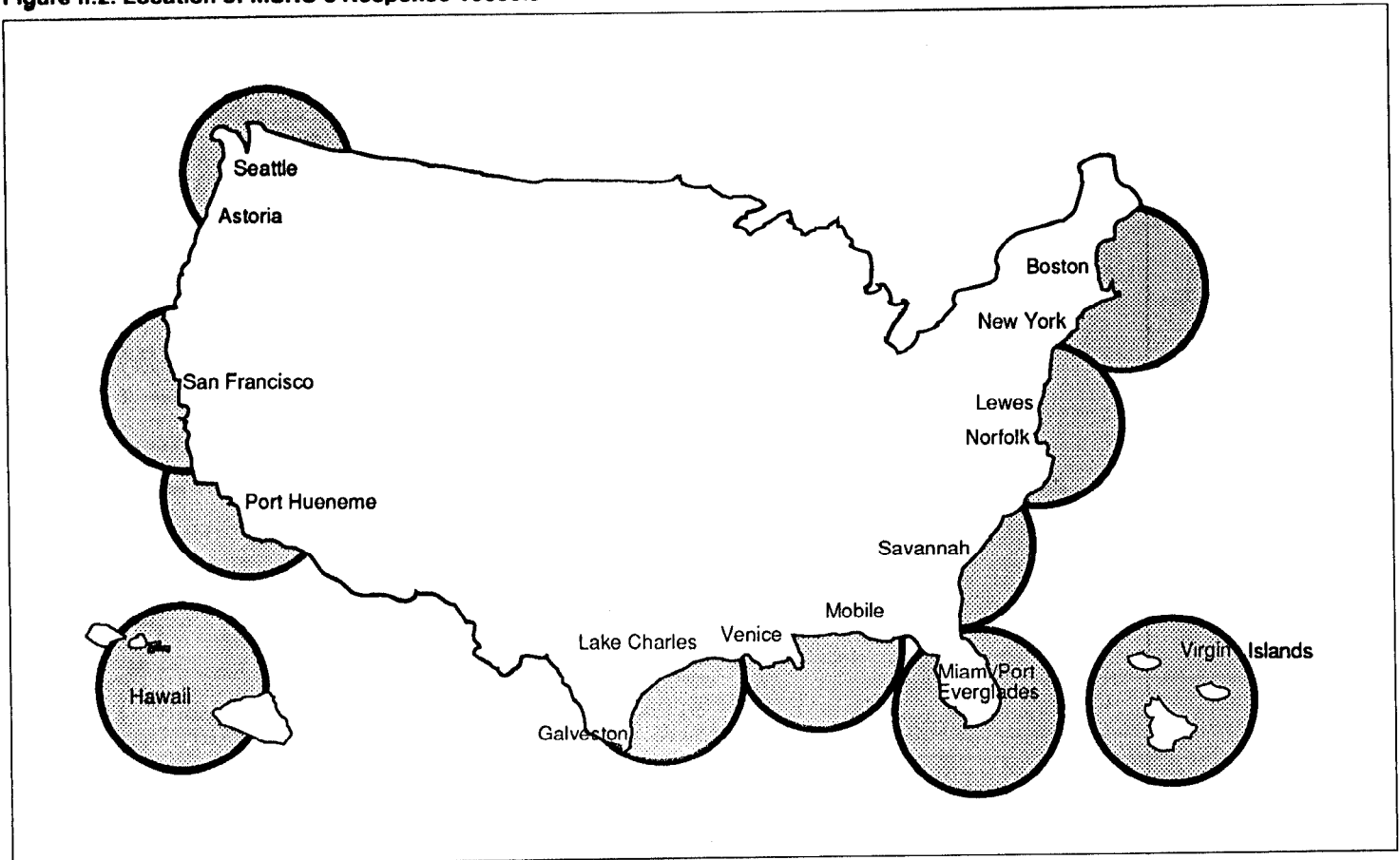


Source: MSRC

Of the approximately \$900 million MSRC plans to spend, \$400 million is to acquire response equipment, including vessels, barges, booms, skimmers, and rubber bladders for temporarily storing recovered oil. Sixteen response vessels will consume a large percentage of MSRC's equipment budget and comprise a major portion of its response capabilities. These vessels are intended to provide round-the-clock coverage for the five regional response centers and enable them to respond promptly to spills

within a 264-mile radius of where the vessels are based. Each vessel will have the capacity to store 168,000 gallons of recovered oil onboard. Figure II.2 shows the planned locations and areas of coverage for the vessels.

Figure II.2: Location of MSRC's Response Vessels



Source: MSRC

Response Cooperatives

During our review, we talked with the managers of the nation's nine largest response cooperatives that have open water response capabilities.¹ We were informed that these cooperatives plan to spend a total of \$78 million during 1990 and 1991 to buy additional equipment.

¹The nine cooperatives were Alyeska Pipeline Service Company, in Prince William Sound, Alaska; Cook Inlet Spill Prevention and Response, Inc., in Kenai, Alaska; Clean Coastal Waters, in Long Beach, California; Clean Seas in Carpinteria, California; Clean Bay in Concord, California; Clean Sound in Edmonds, Washington; Clean Gulf in New Orleans, Louisiana; Clean Islands Council, in Honolulu, Hawaii; and Delaware Bay and River Cooperative, in Lewes, Delaware.

As a result of these purchases, the cooperatives' response capabilities will increase substantially. For example, one of the managers stated that his cooperative is currently capable of responding to spills of between 42,000 and 210,000 gallons of oil. Once its new equipment arrives, the cooperative will be capable of responding to spills of between 420,000 and 840,000 gallons.² Another manager told us that his cooperative will be capable of responding to spills of up to 7 million gallons after its new equipment is delivered.

Federal Resources Owned by the Department of Defense

Within the Department of Defense, both the Department of the Navy's Supervisor of Salvage and the Department of the Army's Corps of Engineers have resources that can be, and are, used to respond to private sector spills. The Supervisor of Salvage owns a large amount of specialized equipment for containing and recovering spilled oil. The Corps of Engineers also has equipment that can be used to recover spilled oil, although the primary use of the equipment is to dredge navigation channels.

Although the primary purpose of the Supervisor of Salvage's response equipment and personnel under contract is to respond to oil spills from Navy ships and facilities, the equipment and personnel may be used to respond to private sector spills. In fact, such use is encouraged by Supervisor of Salvage officials because the federal government considers this equipment a national asset. An interagency agreement between the Navy and the Coast Guard makes the Supervisor of Salvage's equipment and personnel available to respond to commercial spills as long as the response does not hinder the Navy in responding to its own spills. Between fiscal years 1988 and 1990, the Navy's equipment was used to respond to 11 commercial oil spills. The impact of the Supervisor of Salvage's involvement in responding to such spills can be significant. For example, its equipment and personnel are credited with retrieving 50 percent of the oil recovered in the aftermath of the Exxon Valdez spill. The Supervisor of Salvage also provided a substantial amount of federally owned equipment (seven skimming vessels in comparison to two skimming barriers provided by the Coast Guard) to assist in responding to the American Trader spill that occurred in February 1990.

²The sizes of spills are expressed as ranges because actual response capabilities can be affected by a number of variables such as weather, sea conditions, type of oil spilled, and logistics.

According to the Office of Technology Assessment's 1990 study of response technologies, the Navy's Supervisor of Salvage has the nation's only significant stock of response equipment that is tested and maintained for fighting large offshore spills.³ The Supervisor of Salvage also has the largest inventory of federally owned oil spill response and salvage equipment, valued at approximately \$200 million. The inventory includes 24 skimming systems, 13 boom systems, 18 oil storage bladders, and 21 submersible pumping systems. The major part of the equipment is located in Williamsburg, Virginia, and Stockton, California.

Recently, the Corps of Engineers' equipment has also been used to respond to an oil spill. During the Exxon Valdez spill, two of the Corps' dredges were used for the first time to recover oil from the water. As a result of this experience, OPA directed the Secretary of the Army to conduct a study, to be completed by August 1991, to assess the potential use of dredges for responding to future spills.⁴ The Corps is also working with the Coast Guard to develop a memorandum of understanding that would make the dredges available to respond to spills.

³Coping With an Oiled Sea: An Analysis of Oil Spill Response Technologies, U.S. Congress, Office of Technology Assessment Pub. No. OTA-EP-0-63 (Washington, D.C.: U.S. Government Printing Office, Mar. 1990).

⁴The Corps owns 4 dredges and has under contract another 15 that have storage and pumping capacities.

Coast Guard Strike Teams

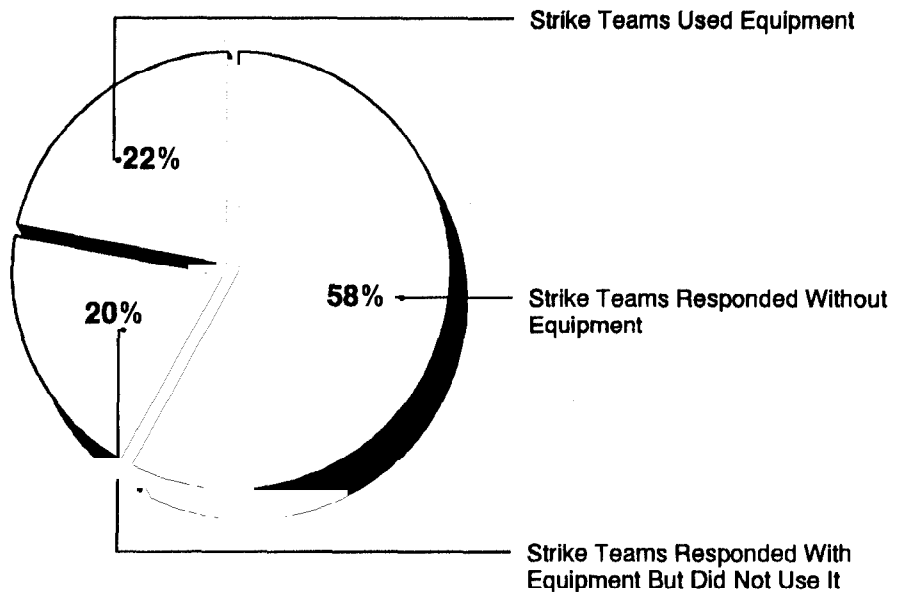
Federal policy (both before OPA's enactment and now) requires an OSC directing the response to a spill to look to private contractors and cooperatives to provide the equipment and personnel needed to respond. When the private sector's resources are not readily available or need to be augmented, the OSC may request the assistance of the Coast Guard's strike teams.

The Coast Guard established three strike teams—the Atlantic, Gulf, and Pacific area strike teams—in 1973. As a result of budget constraints, the Atlantic and Gulf area strike teams were consolidated in 1987. At present, the Atlantic Area Strike Team, with a staff of 37, is based in Mobile, Alabama, and the Pacific Area Strike Team, with a staff of 28, is based in Novato, California. The primary mission of the strike teams is to support the OSC during a spill response. The strike teams can provide specialized response equipment; advice and guidance; support for communications; and support for monitoring operations, documenting clean up and other costs, and coordinating logistics related to the spill response.

While the Coast Guard's 48 local marine safety offices have some equipment with which to respond to spills in protected waters, the strike teams have all of the agency's specialized equipment designed for responding to spills in open waters. The teams' equipment falls into two functional categories: (1) equipment to recover oil from the water's surface and (2) equipment to pump oil from stricken vessels or storage tanks before it has had a chance to spill into the water.

The strike teams have been directly involved in responding to a small number of the nearly 9,000 spills that occur annually. Moreover, when the teams have responded to spills, they typically have not done so with equipment. Between fiscal years 1988 and 1990, OSCs requested the strike teams' assistance in a total of 106 spills. The strike teams used their equipment in 23 of the 106 responses (or 22 percent) (see fig. III.1). The majority of the requests were for personnel to either provide advice or monitor the private sector's response.

Figure III.1: Strike Teams' Use of Equipment During Fiscal Years 1988-90



Strike Team's Quarterly Activities Reports

The strike teams used their equipment in 19 of the 23 incidents to pump oil out of a stricken vessel or a storage tank. For two of the four remaining incidents, the teams used equipment to recover spilled oil, and for the last two incidents to recover and pump oil. The strike teams' equipment was used in most of the incidents (17 incidents) along with the private sector's and/or other federal agencies' equipment.

In five of six incidents for which strike team personnel used their equipment without the assistance of the private sector's or another federal agency's equipment, the teams used their equipment to either pump oil out of the fuel tanks of fishing vessels or an oil storage tank. The strike teams' equipment was used because it was on the scene of the incident before the OSC requested any private sector equipment and because the quantities of fuel involved were small and the strike teams viewed the incidents as a training opportunity. In the sixth incident, the strike team's equipment was used to pump oil out of a cargo hold of a stricken tanker because a private contractor having the necessary type of pumping equipment was not readily available. For none of the 23 incidents did the strike teams use their equipment to recover spilled oil without contractors and/or other federal agencies also participating in the cleanup.

**Appendix III
Coast Guard Strike Teams**

Besides supporting Coast Guard OSCs, the strike teams have several other responsibilities. These responsibilities include supporting the Environmental Protection Agency's OSCs during spills of hazardous substances, providing training to personnel at local Coast Guard marine safety offices, participating in regional and local exercises simulating spill responses, and maintaining their equipment in a "ready response" state. Table III.1 breaks down the teams' work activities for fiscal years 1988-90.

Table III.1: Strike Teams' Work Activities During Fiscal Years 1988-90

Activity	Fiscal year					
	1988		1989		1990	
	Staff days	Percent	Staff days	Percent	Staff days	Percent
Response to incidents						
Oil spills	918	5.4	4,464	25.1	3,188	19.4
Hazardous substance spills	2,475	14.6	2,625	14.7	1,800	11.0
Others	10	0.1 ^a	7	0.1 ^a	7	0.1 ^a
Administrative support from strike team facility	487	2.9	674	3.8	1,267	7.7
Telephone consultations with OSCs	90	0.5	48	0.3	66	0.4
Training of strike team personnel	2,426	14.3	1,939	10.9	2,110	12.9
Training/presentations by the strike teams	725	4.3	382	2.1	620	3.8
Planning and liaison	706	4.2	624	3.5	663	4.0
Research and development	207	1.2	73	0.4	85	0.5
Maintenance						
Equipment	2,162	12.8	1,545	8.7	1,866	11.4
Facility	1,925	11.4	1,338	7.5	1,216	7.4
Medical monitoring and physical fitness	794	4.7	619	3.5	759	4.6
Administration	3,995	23.6	3,451	19.4	2,758	16.8
Total	16,920	100.0	17,789	100.0	16,405	100.0

^aLess than 0.1 percent.

Source: Atlantic and Pacific area strike teams' Quarterly Activities Reports.

As table III.1 shows, the four activities to which the strike teams devoted the greatest number of staff days during the past 3 fiscal years were, in order (1) response to incidents, (2) administration, (3) maintenance, and (4) training of strike team personnel. However, it is important to note that the responses to incidents primarily involved using strike team personnel to support an OSC and generally did not involve the use or presence of equipment. The strike teams supported the OSC by providing technical advice, monitoring private organizations' cleanups, and documenting cleanup costs.

Objectives, Scope, and Methodology

On September 11, 1990, the Chairman, Subcommittee on Transportation and Related Agencies, House Committee on Appropriations, requested that we provide information on the Coast Guard's activities and capabilities for ensuring that spilled oil is contained and recovered. Specifically, as agreed, we examined (1) the Coast Guard's efforts to coordinate with the private sector and others its plans to purchase oil spill response equipment to avoid unnecessary duplication and (2) the new responsibilities OPA places on the private sector and the Coast Guard and if these responsibilities call for a shift in emphasis in the Coast Guard's oil spill response activities.

To address the first objective, we performed work at Coast Guard headquarters, in Washington, D.C. We interviewed Coast Guard officials to obtain information on the agency's plans to buy and locate additional response equipment. We also examined the agency's justifications for the types and amounts of additional response equipment.

We interviewed key officials of the Marine Spill Response Corporation and obtained documents on the Corporation's mission, organizational structure, funding, and proposed equipment purchases. We also interviewed officials of the nine major response cooperatives with the capability of responding to spills in the open water. The purpose of the interviews was to obtain information regarding the cooperatives' current and planned response capabilities. The nine cooperatives were (1) the Delaware Bay and River Cooperative, Lewes, Delaware; (2) Clean Gulf, New Orleans, Louisiana; (3) Clean Bay, Concord, California; (4) Clean Seas, Carpinteria, California; (5) Clean Coastal Waters, Long Beach, California; (6) Clean Sound, Edmonds, Washington; (7) Alyeska Pipeline Service Company, Prince William Sound, Alaska; (8) Cook Inlet Spill Prevention and Response, Inc., Kenai, Alaska; and (9) Clean Islands Council, Honolulu, Hawaii.

To assess the extent and effectiveness of the Coast Guard's coordination with other federal agencies, we interviewed the Department of Defense's representative on the National Response Team. We also interviewed officials of the Navy's Supervisor of Salvage, the contractor that manages the Supervisor of Salvage's response equipment, and the Army Corps of Engineers to obtain information on the Navy's and the Corps' current and planned response capabilities, agreements to provide assistance to the Coast Guard to respond to private sector spills, and efforts to coordinate activities and plans with the Coast Guard.

To address the second objective, we interviewed Coast Guard officials to obtain information on the agency's current response capabilities and plans to address OPA's requirements for responding to spills.

We reviewed provisions of OPA and its legislative history, the Federal Water Pollution Control Act, the appropriate executive orders, and the National Contingency Plan to determine the Coast Guard's responsibilities for preparing for and responding to oil spills. Furthermore, we reviewed the Coast Guard's Marine Safety Manual, which provides standard operating procedures for the Coast Guard to accomplish its responsibilities under the National Contingency Plan.

In addition, we reviewed a number of interagency and Coast Guard studies, including a 1990 interagency report to the President entitled Oil Spill Contingency Planning: National Status; the Coast Guard's 1989 study of strike team staffing, equipment, and location issues entitled Report of a National Strike Force (NSF) Study; and the Coast Guard's February 1979 report entitled Deployment Requirements for U.S. Coast Guard Pollution Response Equipment.

We visited the strike teams' facilities at Mobile, Alabama, and Novato, California, and interviewed personnel to obtain an understanding of the teams' missions, activities, and staffing levels. Additionally, through interviews with strike team personnel, Coast Guard headquarters personnel, and spill response experts and reviews of internal Coast Guard documents, we obtained information on the strengths and weaknesses of the teams' current inventories of response equipment.

To obtain an understanding of the roles and responsibilities of the OSC and of the strike teams' assistance to an OSC during a response to an oil spill, we interviewed the Coast Guard Captains of the Port for New York, New York; Mobile, Alabama; New Orleans, Louisiana; Puget Sound, Washington; and San Francisco, and Los Angeles/Long Beach, California.

Furthermore, to obtain a more complete understanding of the new responsibilities OPA places on the private and public sectors and to obtain additional information on existing response capabilities, we attended the 1991 International Oil Spill Conference, jointly sponsored by the Coast Guard, the Environmental Protection Agency, and the American Petroleum Institute. We also reviewed several conference presenters' papers.

Our work was performed from September 1990 through July 1991 in accordance with generally accepted government auditing standards. We discussed the information in this report with Coast Guard headquarters officials responsible for the agency's marine environmental protection program who provided some suggestions for clarification, which we incorporated where appropriate. While these officials generally agreed with our statements of fact, our interpretation of OPA's provisions, and our principal findings, they were not in full agreement with our conclusions and recommendation. As requested, we did not obtain formal agency comments on the draft of this report.

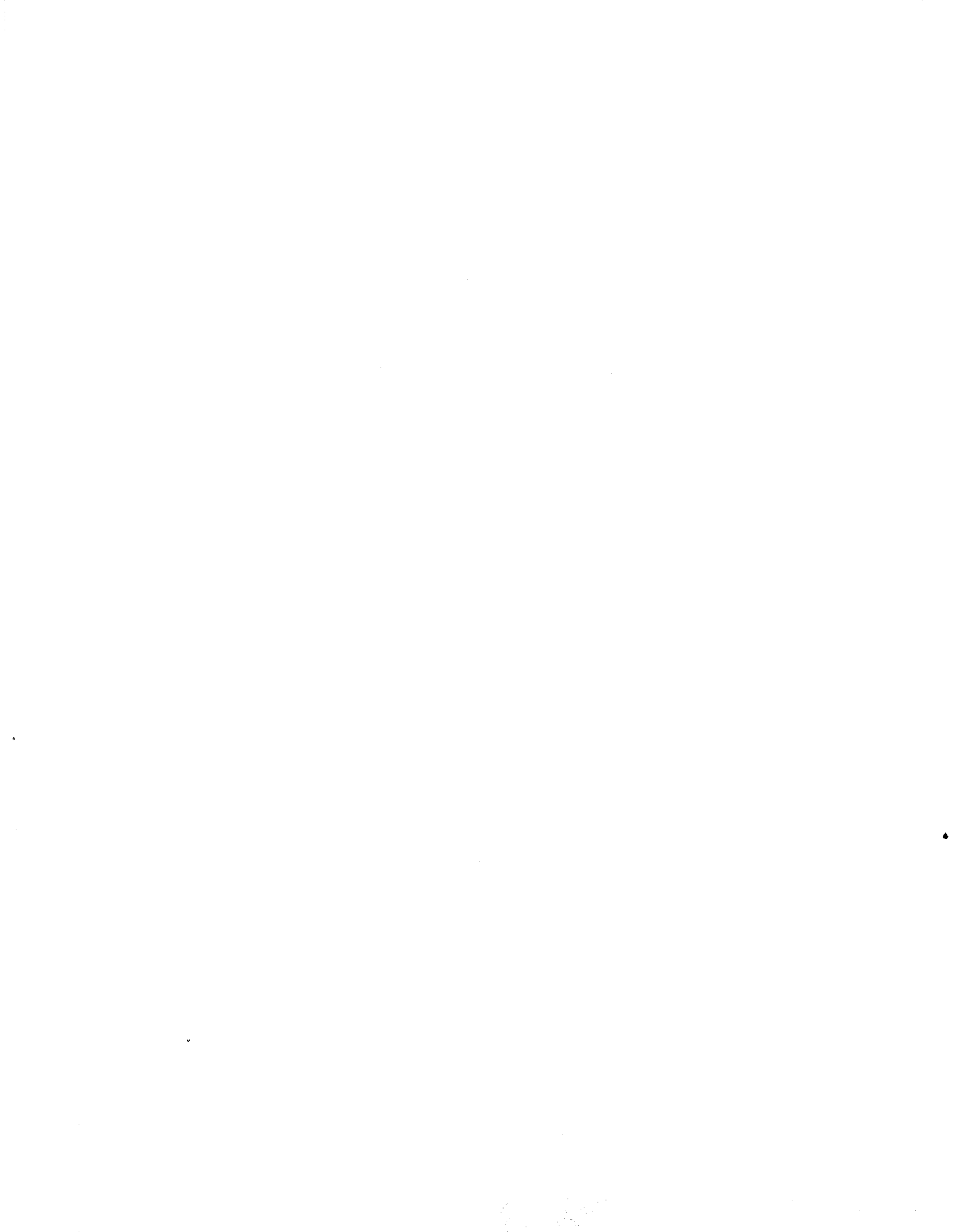
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