Update of Implementation of Recommendations from the NRT Following the *Exxon Valdez* Oil Spill

U.S.
NATIONAL
RESPONSE
TEAM

NRT

Ensuring Effective National Oil and Hazardous Substances Preparedness and Support

Dear Reader:

In support of a recommendation made in the 1990 *Oil Spill Contingency Planning National Status Report to the President,* the NRT is publicly distributing this document to keep an open dialogue with the public on national oil and hazardous substances preparedness and response issues. To that end, we hope you find this document useful in understanding the Federal Government's efforts and activities to improve the nation's preparedness, prevention, and response efforts to potential oil spills. This document has been prepared through the coordinated efforts of the members of the National Response Team.

We invite your comments or concerns on this status report. You may send your comments to:

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(Mail Code 5101)
NRT Preparedness Committee
U.S. Environmental Protection Agency
Washington, D.C. 20460.

Thank you for your interest and involvement.

Jim Makris, Chair, National Response Team
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ACKNOWLEDGEMENTS

This document is a product of the National Response Team (NRT), the organization of 16 federal agencies responsible for national planning and coordination of oil and hazardous substance emergency preparedness and response. The NRT and Regional Response Teams (RRTs) are cited in various federal statutes, including Superfund Amendments and Reauthorization Act - Title III and the Hazardous Materials Transportation Act. NRT and RRT authorities and responsibilities can be found in the Code of Federal Regulations (40 CFR part 300) National Oil and Hazardous Substances Pollution Contingency Plan. The NRT is Chaired by the Environmental Protection Agency (EPA) and the Coast Guard serves as Vice Chair of the NRT.

Responsibility for undertaking this project was delegated by the National Response Team to the NRT Preparedness Committee, which developed this report. The NRT acknowledges the federal agencies participating on the Preparedness Committee for their contributions.

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I. INTRODUCTION

PREFACE

In March 1989 the tank vessel *Exxon Valdez* struck a reef in Prince William Sound, Alaska, resulting in the largest oil spill in U.S. history. The magnitude of the spill revealed numerous weaknesses in the state of oil spill contingency planning and response readiness at the Federal, state, and local levels. As a result of the spill, the President directed the National Response Team (NRT) in April 1989 to study the nation's overall capability to prevent and respond to oil spills of national significance and recommend improvements.

Under the leadership of the U.S. Coast Guard (Coast Guard) and the U.S. Environmental Protection Agency (EPA), the NRT developed two Reports to the President of the United States to fulfill the mandate to study oil spill preparedness and response capabilities. The *EXXON VALDEZ Oil Spill* (or 1989 report), developed by the NRT shortly after the Valdez incident, analyzed the preparedness for and response to the incident. The findings of this study influenced the development of the Oil Pollution Act of 1990 (OPA 90). In October 1990, the NRT issued ***the*** more detailed *Oil Spill Contingency Planning: National Status* (1990 report), which expanded upon the contingency planning issues examined in the 1989 report. The 1990 report focused on the nation's overall contingency planning and response capabilities. The 1989 and 1990 reports together influenced the revision of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), which details the network of planning and response requirements under OPA 90. The most recent version of the NCP was published on September 15, 1994.

Both the 1989 and 1990 reports concluded that there were significant gaps in the state of oil spill readiness at the time of the *Exxon Valdez* disaster. The reports included specific recommendations for addressing those gaps and strengthening the nation's oil spill response and preparedness capabilities, particularly in areas where resources had been "stretched thin." The purpose of this report is to discuss the progress that numerous Federal agencies and others have made in implementing these recommendations, particularly those from the more detailed 1990 report. As this report indicates, many of the specific recommendations have been addressed and the nation's oil spill prevention, preparedness, and response strategies have been vastly improved. However, there remain some areas in which additional action is necessary to further improve the nation's capability to address oil spill emergency preparedness and response.

As discussed in the 1990 report, the history of oil spill preparedness and prevention efforts in the U.S. has shown that immediately after a major incident, there is increased public interest and attention. This is typically followed by declining resources as public attention shifts to other problems. Historically, a lack of consistent, long-term monetary support for prevention and preparedness has made it difficult to maintain effectiveness over time. One of the purposes of this report is to help to continue to focus attention on the strengths and challenges of the post- *Exxon Valdez* oil spill prevention and preparedness regimen in the United States.

STRUCTURE AND METHODOLOGY OF THIS REPORT

The structure of this report is based primarily on the recommendations made in the 1990 report, because they cover most of the relevant recommendations of the 1989 report.

The first part of this report provides an overview of the NRT recommendations for improving oil spill preparedness and response capabilities, and a brief summary of the OPA 90, which is the basis for much of the progress that has been made in oil spill preparedness and response. The second part analyzes each specific recommendation in detail and discusses the progress that has been made. The third part of the report lists the new recommendations for future actions. Each of the recommendations of the 1990 report is specifically discussed in Section Two of this report. A few recommendations from the 1989 report that are similar to specific 1990 report recommendations are addressed immediately following the 1990 report recommendation. The remaining relevant unaddressed recommendations from the 1989 report are discussed separately at the end of Section Two.

OVERVIEW OF RECOMMENDATIONS

The 1989 and 1990 reports pointed to many gaps in and influenced the passage of laws and rules to improve the nation's oil spill prevention, preparedness, and response strategy at the time of the *Exxon Valdez* accident. Recommendations in the reports were developed from lessons learned in response to the *Exxon Valdez* disaster, as well as from reviews of contingency plans and analyses of worst-case scenarios. The reports generally concluded that resources were stretched very thin at the time of the *Exxon Valdez* accident, and that none of the governmental or private parties involved in the spill were properly prepared to respond to a spill of such magnitude. Hence, the 1990 report identified several specific recommendations for correcting preparedness shortfalls and devoting more consistent attention to the issue of oil spills.

The 1990 report recommended enhancing capabilities and resources to combat oil spills, particularly with regard to the National Response System (NRS), emergency response resources, and contingency planning. The recommendations identified specific reforms, such as: (1) enhancing planning efforts, especially for high-risk catastrophic spills; (2) increasing the availability and mobilization of response resources, including state-of-the-art equipment and trained personnel; (3) promoting more effective coordination of contingency planning among various levels of government and industry; (4) accelerating the use of and research into innovative cleanup techniques; (5) improving training and exercising for oil spill response; and (6) promoting stronger oil spill prevention efforts.

OVERVIEW OF THE OIL POLLUTION ACT OF 1990

The nation's overall oil spill strategy, and the attention that has been devoted to the issue of oil spills, have changed significantly since the time of the *Exxon Valdez* response. The most important change has been the development and implementation of the Oil Pollution Act of 1990, 33 U.S.C. §2701 (OPA 90). Although the major concepts in OPA 90 evolved over the course of decades, the *Exxon Valdez* incident clearly was a strong force motivating Congress to revamp oil spill prevention, preparedness, and response responsibilities. Implementation of OPA 90 provisions by the Coast Guard, EPA, and other Federal agencies address many of the preparedness shortcomings identified by the Reports to the President. This fact is partly attributable to the influence of the 1989 report during the Congressional development of the statute. This section briefly summarizes the key provisions of OPA 90, in order to provide a context for discussing the implementation of the recommendations from the 1990 report.

OPA 90 was enacted to expand oil spill prevention, preparedness, and response capabilities of the Federal Government and industry. OPA provisions most relevant to this report are:

- Enhancement of **contingency planning, training exercises,** and **prevention** at all levels in both government and the private sector;
- Broadening of Federal **response management** and capabilities; and
- Consolidation of several existing **oil spill response funds** into a $1 billion trust fund to cover emergency response and damages.

Other provisions include:

- Strengthening encouragement of the use of **alternative cleanup measures;** and
- Authorization of multi-agency **research and development** and identification of the need for coordinated research and development.

Contingency Planning

Section 4202 of OPA strengthened planning and prevention activities by:

- Providing for the establishment of Federally-led, locally-developed oil spill contingency plans, Area Contingency Plans (ACPs), involving Federal, state, and local agencies for all areas of the U.S.;
- Mandating the development of response plans for individual tank vessels and certain facilities that handle, store, or transport oil and clarifying that private industry has primary responsibility for cleaning up spills;
- Requiring private and government planning to include the development of worst-case discharge scenarios and plans that address both actual discharges and substantial threats of discharges;
- Requiring training and drills, including both government and private responders, to ensure plans are adequate and can be carried out; and
- Establishing requirements for spill removal equipment and periodic inspections of this equipment.

OPA 90 also mandated the creation of completely new Federal planning and response entities. These include Area Committees responsible for preparing contingency plans (this authority was delegated to the EPA Administrator and the Commandant of the Coast Guard), a Coast Guard National Strike Force Coordination Center (NSFCC), and Coast Guard district response groups.

OPA 90 also required changes to the NCP. First issued in 1968 and periodically modified since then, the NCP was revised on September 15, 1994, to address OPA requirements. In terms of contingency planning, these revisions included coordination of Federal, state, and local public and private roles; greater attention to fish and wildlife and their habitat; and planning for use of nonmechanical means of oil spill response.

More specifically, the NCP required the development of ACPs to "provide for a well-coordinated response that is integrated and compatible, to the greatest extent possible, with all appropriate contingency plans of state, local, and non-Federal entities" (40 CFR 300.210(c)(2)). The NCP also charges RRTs with providing guidance to Area Committees to ensure consistency among the areas in each region and consistency of an ACP with the Regional Contingency Plan (RCP) and the NCP (40 CFR 300.115(a)(2)).

Under OPA 90, owners or operators of certain facilities and vessels are required to prepare response plans. These plans primarily verify that the facility or vessel has the personnel. resources, and procedures to prevent and respond to oil spills. Although facilities have been required to prepare response plans since 1973, OPA 90 requires far more extensive plans for a worst case discharge and includes more types of facilities than were covered in the past, e.g., pipelines and mobile facilities. OPA 90 facility response plan requirements are discussed in Recommendation no. 2.

The planning process, and the interaction among all the various contingency plans, are outlined in figures in Appendix B.

Training Exercises

OPA 90 required periodic drills to ensure the removal capability of vessel and facility response plans. Various Federal agencies, states, and industry have been working together to develop the National Preparedness for Response Exercise Program (PREP) that establishes a rigorous and regular exercise program to continually evaluate the preparedness of the oil spill response community. This program, which is described in more detail in the discussion of Recommendation no. 6, is particularly designed to ensure response readiness at all times.

Prevention

To reduce the likelihood of an oil spill from a tank vessel, OPA 90 established provisions for double hulling, increasing staffing requirements, and drug and alcohol testing, to name a few. For example, it imposed broad structural improvements for tank vessels, including a schedule for phase-in of double hulls.

Response Management

One of the major challenges in pre-OPA 90 oil spill response was the inability of the Federal government to direct a response action without also assuming responsibility for funding. OPA 90 changed this by strengthening Federal oil spill removal authority. One new feature of this authority is the Federal government's ability to direct response actions regardless of whether such actions are funded and staffed by the government or by the responsible Party.

The September 15, 1994, NCP reflects OPA's national response strategy. This includes the addition of several new entities, such as the NSFCC, to increase the effectiveness of the response system. It also includes a more coordinated response management structure. The NCP describes the response structure for oil spills as a Unified Command Structure (UCS) framework, consisting of the predesignated On-Scene Coordinator (OSC), the state (in conjunction with local authorities), and the responsible party. This system is designed to increase coordination and cooperation during a response, and thereby more effectively utilize all available resources. This system is designed to work as a partnership and increase coordination, while assigning to the OSC ultimate authority to direct response efforts. Routine exercises play an important role in ensuring the effectiveness of this Response Management System (RMS). The UCS for oil spills is outlined in a figure in Appendix B.

Funding/Liability

In addition to improving the network of contingency and response planning, OPA 90 introduced a number of other far-reaching changes. These provisions are not as directly related to the preparedness recommendations that are the focus of this report, but nevertheless significantly strengthen the Federal approach to preventing and responding to oil spills. Many of these changes were also recommended in the 1989 report. These OPA 90 provisions:

- Create a comprehensive Federal liability system for oil spills that increases the types and amounts of damages for which spillers are liable;
- Create a single, unified, and significantly expanded Oil Spill Liability Trust Fund (OSLTF) to cover the costs of Federal oil spill response; and
- Institute more stringent vessel owner financial responsibility and establish higher limits of liability.

OPA 90 also provided access for trustee agencies to money in the OSLTF to initiate assessment of damages to natural resources from the spill.

II. PROGRESS IN IMPLEMENTING RECOMMENDATIONS

RECOMMENDATIONS FOR THE NATIONAL RESPONSE SYSTEM

The NRS refers to the organizational structure detailed by the NCP for response to an oil spill or hazardous substance release. This system includes responsibilities for Federal agencies and response managers, state and local governments, and the responsible party.

RECOMMENDATION NO. 1

Oil spill response should have a high place on the national agenda reflecting public awareness and concern about oil spills. Further analyze the resource needs of preparedness.

- *Federal, state and local governments, and private industry must make long-term commitments to improving response capabilities, and not reduce attention during periods between major incidents.*
- *Preparedness for catastrophic spills should be developed in a way that is practical and can be sustained over time.*

PROGRESS:

While much has been accomplished to increase awareness of oil spills, the reality is that oil spill response commands the attention of the public, and the media, only during a large scale event. Other national priorities usually hold a higher place on the national agenda until we are in the midst of a major spill. The ability to sustain public awareness of oil spills and their impact continues to be a challenge.

A great deal has been accomplished since the *Exxon Valdez* incident in increasing both public and private accountability regarding oil spills. OPA 90 has caused industry and all levels of government to take more responsibility and to make more long-term and consistent commitments. For example, oil spill response capabilities and preparedness have been placed "higher on the national agenda," at least for the past few years, as evidenced by the increased investment of resources at both the government and private levels. The creation of both profit and non-profit response organizations are examples of the increased awareness by all parties of the commitment to improve response capabilities and preparedness. Specific progress has been made in the following areas.

Preparedness and Planning

Oil spill contingency planning requirements were significantly strengthened by OPA 90. Section 4202 of OPA 90 required the Federal government to revise the NCP, and to create a new planning entity, Area Committees (codified at 40 CFR Part 300). OPA 90 directs the Area Committees to develop extensive ACPs. The ACPs are discussed in more detail in the discussion of Recommendation no. 2.

Many states have passed their own legislation similar to OPA 90 indicating their long-term commitment to improving response capabilities.

In addition to improving governmental contingency planning, OPA 90 strengthens the requirements for industry oil spill contingency planning as well. Section 4202 of OPA 90 required the development of detailed facility and vessel response plans and resources to respond to a worst case discharge. The response plan requirement increases the responsibility that industry, as part of the response community, must take for spills planning. Facility and vessel response plans are described in more detail in the discussion of Recommendation no. 2.

Industry Accountability

OPA 90 increased the commitment that industry must make to be prepared for oil spill response. In particular, Section 1016 established a financial responsibility requirement for vessels and offshore facilities to ensure that they have the necessary resources available to cover liability in case of a major spill. Under this Section, vessel owners and operators must obtain Certificates of Financial Responsibility (COFR) from the Coast Guard before being allowed to operate in U.S. ports. This COFR document demonstrates adequate forms of financial responsibility as established by law. It ensures that in incidents involving vessels, Responsible Parties (RPs) are able to be identified and thereby compensate the damaged parties to the full extent of the law for expenses involved with the incident.

Exercise Requirements

Section 4202 of OPA 90 required periodic drills to evaluate the preparedness of the response community. Various Federal agencies, states, and industry have been working together to develop the PREP, which establishes a rigorous and regular exercise program to continually evaluate the preparedness of the oil spill response community. This program, which is described in more detail in the discussion of Recommendation no. 6, is particularly designed to ensure that response readiness is maintained.

Response Funding

OPA 90 retains the concept that the polluters should pay for all the costs of spill response, and it expands the funds available to government response managers in cases where the liable party is unidentifiable or unable to pay. Specifically, Section 1012 of OPA 90 established the Oil Spill Liability Trust Fund (OSLTF) to pay for response activities not covered or not paid in a timely fashion by the spiller. This has created greater continuity and ensures that all spills will receive the appropriate response, regardless of the financial situation of the responsible party.

Each of these improvements discussed above, as well as other changes brought about by OPA 90, collectively help to raise and maintain the awareness in government and industry of the problem of oil spills. In addition, they help to develop and maintain expertise in the rapid and effective response to these spills.

Recommendation for Future Action

Despite the significant progress that has been made, it is important to continually ensure that public and private attention to the problem of oil spills does not lug. Accordingly, the NRT should regularly review public and private contingency planning, exercising ,funding, and other indicators of the level of attention being devoted to the problem of oil spills.

While there is a reliable and stable source of funding for oil spill response through the OSLTF, there still needs to be an equally reliable and stable source of preparedness funding, for example, for participation in Area Committee meetings and exercises. This is necessary to sustain a long-term commitment to preparedness.

RECOMMENDATION NO. 2

Retain the basic structure and concepts of the National Response System (NRS).

- *The principle that industry cleans up most spills, and that the Federal On-Scene Coordinators take charge only when necessary, should be retained.*
- *Specific deficiencies in the NRS should be addressed.*

PROGRESS

The NRS, as revised after enactment of OPA 90, retains most of the principles of the previous NRS. The most important of these principles include:

- The importance of multi-tiered, coordinated, contingency planning, which is required at the facility or vessel, Area, Regional, and National levels;
- The requirement that the polluter pay for and take responsibility for cleaning-up the spill; and
- A structure that allows the Federal government to direct and fund response efforts, should the RP be unable to do so.

One critical change in the NRS is that the OSC always directs spill response, regardless of whether the RP or OSLTF is paying for removal. This is an improvement over the previous system, when a spill had to be "Federalized" (i.e., paid for by Federal funds) for an OSC to direct the response.

Multi-Tiered Planning

OPA 90 required detailed response planning at the site level, by individual facilities and vessels; and required contingency plans by Area Committees and by the RRTs. These levels of planning provide a multi-tiered, comprehensive approach to oil spill response and preparedness. Two critical components of this multi-tiered, planning strategy are the ACPs, prepared by the Area Committees, and the response plans prepared by facilities and vessels. These are described in detail below.

Area Contingency Plans (ACPs)

Section 4202 of OPA 90 called for the formation of Area Committees and the development of ACPs. The Area Committees, as mandated by the NCP, are required to be chaired by a predesignated OSC for the Area. The revised NCP delegates the ability to designate an OSC for each area to the Coast Guard (for Areas in the coastal zone) and EPA (for Areas in the inland zone). The specific boundaries between the coastal and inland zones have been determined by EPA and Coast Guard agreements, and identified in Federal Regional Contingency Plans (RCPs).

Area Committees for coastal areas have been operating since 1991. Inland Area Committees have been operating since April 1992. The Area Committees are "community" planning bodies comprised of Federal, state, and local government agency representatives with responsibility for oil spill and hazardous substance release contingency planning and response. Industry representatives and other private groups may participate in but not be official members of the Area Committees.

The Area Committees are charged with developing ACPs for spill response within the Area. The ACPs are intended to provide information that will assist the response community of that area in spill response, and particularly to help coordinate state and local plans and facility or vessel response plans. Further, the ACP serves as a vehicle to coordinate with local planning efforts under other statutes, including Section 112 (r) of the 1990 Clean Air Act and the Emergency Planning and Community Right-To-Know Act. The Area Committees achieve these objectives through several activities including:

- Collecting and maintaining an extensive amount of enviromnental information;
- Identifying and prioritizing environmentally sensitive and economically important areas, and establishing strategies for protecting these areas;
- Maintaining response equipment in the Areas and response strategies for various spill scenarios, including a worst case discharge;
- Coordinating planning among Federal, state and local government representatives in an area- who will do what in the event of an accident; and
- Identifying where in an area accidents are likely to occur, what needs to be protected in the event of an accident, and how that protection will occur.

The entire country, including the Virgin Islands, Puerto Rico, and Guam, is divided into areas. In the inland zone, some areas are coterminous with regions, and the RRT functions as the Area Committee.

Vessel and Facility Response Plans

Section 4202 of OPA 90 requires the development of vessel and facility response plans to ensure that vessels and facilities involved in the transportation, transfer, handling, and storage of oil and hazardous substances are prepared to respond to spills. In developing the response plans, owners and operators are required to identify the worst case discharge that might occur, what personnel and equipment resources would be available for response to such spills, who would be responsible for managing and carrying out response activities, and how preparedness for response would be developed and maintained. Vessel and facility response plans are also to be consistent with the ACPs so that the entire response planning effort is integrated, especially at the local level.

Polluter Responsibility

As stated in the 1990 report, one of the basic concepts of the NRS that should be retained is that the polluter is responsible for the cleanup of oil spills and hazardous substance releases, with the OSC directing or monitoring the removal actions as appropriate. OPA 90 reaffirmed this basic concept by placing greater responsibility on owners and operators of vessels and facilities involved in transporting, transferring, handling or storing oil or hazardous substances. Various requirements - including the identification of Qualified Individuals (QIs) and Spill Management Teams (SMTs)[1], the necessity for contracts with Oil Spill Removal Organizations (OSROs), which is discussed in Recommendation no. 6, and changes to the COFR regulations - were among measures aimed at ensuring that owners and operators conducted oil transport, storage and treatment in a more responsible manner. Further, it sought to guarantee that these groups were prepared to respond to and clean up spills that occurred.

[1] QIs are shore-based representatives of the vessel owner or operator who meet the requirements of 33 CFR 155.1026. SMTs are the personnel identified as a part of the organizational structure to staff and manage a response plan implementation. QIs, SMTs and OSROs are defined in 33 CFR 1020.

While the "polluter pays" concept is an accepted principle of international environmental law and, although the U.S. is not a participant in the international system of liability and compensation, this theme upholds the doctrine of "polluter pays" through its domestic liability and financial responsibility arrangements.

Funding

OPA 90 established provisions for government funding of a spill response, in case the responsible party is unidentifiable or unable to respond adequately. OPA 90 created the OSLTF, which is described in more detail in Recommendation no. 19, to fund responses in such cases.

NCP Revisions to Response Management

The RMS, as detailed in revisions to the NCP is one area where the current NRS expands upon the previous system. The NCP revisions established the UCS for spill response, consisting of the OSC, the state (and local authorities), and the RP, with the OSC retaining authority. The NRS is outlined in a figure in Appendix B. Under this system, the concept of whether or not a spill response will be "Federalized" is irrelevant. Although all elements of the UCS work in partnership, the OSC has ultimate authority over spill response. The UCS is designed to provide for a coordinated spill response to ensure that relevant issues and concerns of all parties involved are addressed and that the response is conducted in the most efficient and effective manner possible. Exercises are crucial in helping members of the response community to more fully understand and work under the new response management system. PREP, discussed more fully under Recommendation no. 6, incorporates exercising the UCS.

The 1990 report mentioned specific deficiencies in the NRS, which include issues such as:

- The lack of a system to address catastrophic spills;
- The need to better coordinate media and public relations at the national level; and
- The lack of communication among the response structure and political officials at both the state and Federal levels during a response with a high level of public interest. This includes the lack of procedures for how top officials should be brought into the response coordination process during a major spill.

These deficiencies are addressed in the discussion of other recommendations from the 1990 report, most significantly Recommendations nos. 3 and 9.

Recommendation for Future Action

The NRT, working in concert with RRTs, should regularly review response management systems and potential areas of weakness within the NRS and recommend necessary changes. This should include working with RRTs to review the progress of Area Committees in developing and exercising UCS to ensure coordination among all levels of government during a major response. Additionally, the importance of periodic reviews of responses and exercises should be emphasized, us these reviews are mechanisms to identify, problems in the NRS.

RECOMMENDATION NO. 3

Develop a national strategy, implementing the National Contingency Plan at the national level, involving top levels of industry, the Federal government, states, and international organizations in response to "high-risk low-probability" Spills of National Significance (SONS).

A preplanned strategy for accessing and coordinating resources to respond to spills of national significance would include:

- *Defining a Spill of National Significance (SONS);*
- *Activating the NRT in support of the OSC;*
- *Encouraging smooth hand-off of decision-making authority between managerial levels:*
- *Providing for large scale marshaling of resources from Federal, state, local, and private sources;*
- *Developing additional considerations for "Federalizing "a spill; and*
- *Allowing the OSC to direct removal actions without assuming cleanup costs.*

Similar Recommendation from 1989 Report:

The National Oil and Hazardous Substance Contingency Plan (40 CFR Part 300) should be reviewed and amended as needed, to ensure that it activates the most effective response structure for releases or SONS. Such releases or spills should be defined...and a pre-established, integrated command and control mechanism should be identified to address them. This mechanism is necessary to utilize effectively the resources of the parties responsible for the spill, the 16 Federal agencies in the NRT/RRT structure, and the affected state or states and local governments. (p. 10)

PROGRESS

Revisions to the NCP in compliance with OPA 90 address Spills of National Significance (SONS). A discharge may be classified as a SONS by the Administrator of EPA for discharges occurring in the inland zone and by the Commandant of the Coast Guard for discharges occurring in the coastal zone (40 CFR 300.323).

The Coast Guard formed a working group to address the **SONS** issue and to develop a **SONS** protocol for response to another spill such as the *Exxon Vuldez.* This Workgroup completed their preliminary work and submitted a report that is currently under review (Summer, 1995). Once review is completed, the Coast Guard will determine the necessary steps in order to ensure that a workable mechanism is in place for effective response to a SONS.

EPA OSCs will be assisted in responding to a SONS by existing EPA structures. These include the Regional Incident Coordination Team (RICT) and the RRTs, which would enable appropriate regional management to support response actions in a **SONS.**

The following were identified in the 1990 report as specific recommendations for the elements of a **SONS** strategy. These have been addressed by the preliminary work of the **SONS** Workgroup, as follows:

a. Define a SONS - A SONS is defined generally in the NCP (Section 300.3) as a rare, catastrophic spill which greatly exceeds the response capabilities at the local and regional levels.

b. Formally activate the NRT to coordinate actions in Washington, D.C. to support the OSC - During a SONS response, the RRT and NRT would be activated as deemed necessary.

c. Provide for a smooth hand off of decision-making authority from one managerial level to another as necessary in a SONS - This will be addressed in the Coast Guard **SONS** protocol, once fully developed.

d. Provide for large scale marshaling of additional personnel and equipment from all available sources--Federal, state, and local government agencies and private industry- and identifying protocols to fully utilize these resources during a response. OPA 90 mandated specific mechanisms to facilitate oil spill response to a SONS. Each of the following components are discussed below: the District Response Advisory Teams (DRATs), the District Response Groups (DRGs), the NSFCC, and OSROs.

Section 4202 of OPA 90 required the formation of DRATs and DRGs within each Coast Guard District nationwide. These bodies were developed to improve response to **SONS,** as well as to smaller spills. The DRG provides a framework within which Coast Guard districts organize their response operations. It consists of all Coast Guard units, personnel and equipment within a district's boundary, all pre-positioned response equipment strategically located in the district, and the DRAT. The DRAT is intended to be the nucleus of the DRG. The DRAT will serve as the coordinating body of the DRG and be a readily accessible team that can be deployed to provide support for an OSC.

As a result of OPA 90, the U.S. Coast Guard established the NSFCC to coordinate the three National Strike Forces and Strike Force assets, which are available to respond to oil spills and hazardous substance releases. The Atlantic Strike Force is located in Fort Dix, New Jersey, the Gulf Strike Force in Mobile, Alabama, and the Pacific Strike Force in Novato, California. The Strike Forces are available with personnel and equipment to assist OSCs in spill response, as needed. The NSFCC also classifies OSROs and maintains a list of their equipment and capabilities to help marshal resources in the event of a major spill. In addition, the Coast Guard has developed an electronic inventory system for OSROs' nationwide response resources (for more discussion of this issue see Recommendation no. 4).

In addition to resources identified in NSFCC inventories, the General Services Administration (GSA) maintains contracts with private firms that can help with logistical support in the event of a major oil spill. A Memorandum of Agreement (MOA) was established among the GSA, the Coast Guard, and EPA to coordinate access to this support.

e. Develop additional considerations for "Federalizing"a major spill - The response structure outlined in the NCP provides for a UCS, consisting of the OSC, the state, and the responsible party, with the OSC retaining authority. Therefore, the concept of "Federalizing" a spill no longer applies under the NCP. Rather, the Federal government role may be more or less active depending on the nature of the spill.

f. Allow the OSC to direct removal actions without assuming cleanup costs - Section 4201 of OPA 90 allows the OSC to direct removal actions without assuming cleanup costs,

The 1989 recommendation to establish an integrated command and control system for spills of national significance is addressed by the 1994 NCP revisions in several ways, as described below.

- The NCP provides for a new response structure for all spills that better coordinates the resources of all levels of government and the responsible party. Specifically, Subpart B of 40 CFR Part 300 describes the response structure as a UCS that brings together the Federal government, the state government, and the responsible party (with the OSC maintaining authority) to achieve an effective and efficient response. Under this

structure, the state government may solicit local government involvement. This system is designed to increase coordination and cooperation during a response, and thereby more effectively utilize all available resources.

- The NCP contains a section on specifically responding to SONS (40 CFR 300.323), which provides for additional coordination and command integration for such spills. The NCP creates a "strategic management" framework for coordinating governmental resources, public and media relations, and resource administration for responses to SONS. This provision was created in recognition of the extraordinary level of coordination that is necessary for major spills, which would be a significant burden for OSCs to manage alone.

The UCS and the additional strategic management framework established for SONS provide for a more integrated command and control structure for responding to major oil spills. These structures, which were designed to parallel the OSHA definition of an incident command system (29 CFR 1910.120), specifically implement the recommendation.

Recommendation for Future Action

A Coast Guard protocol for SONS is currently being developed. The NRT should ensure that this protocol is consistent with the rest of the NRS and encourage EPA to continue to refine an RMS for SONS in the inland zone. Agencies that support the OSCs during a response should be encouraged to work with EPA and Coast Guard to define their involvement in a SONS response.

RECOMMENDATIONS FOR RESPONSE CAPABILITIES

RECOMMENDATION NO. 4

Stockpile larger amounts of state-of-the-art oil spill equipment.

- *Large quantities of oil spill response equipment should be amassed in central locations.*
- *Equipment stockpiles in local port areas should also be increased, to help local areas begin adequate responses to oil spills before arrival of the equipment from central areas.*
- *Ways of fostering the mobilization of resources in central stockpiles to local areas, such as computerized inventories, should be studied.*

PROGRESS

OPA 90 requires the private sector to ensure "the availability of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge... and to mitigate or prevent a substantial threat of such discharge" (Section 4202(a)(5)). In response to this mandate and implementing regulations, many new commercial response organizations have emerged to meet the nation's needs for spill response. These contractors, along with those previously established, have amassed significant amounts of spill response equipment across the nation and are able to respond to both small and large scale spills.

RECOMMENDATIONS

Since the *Exxon Valdez* oil spill, in response to mandates set forth in OPA 90, the Coast Guard has also prepositioned spill response equipment at 19 sites throughout the country. These sites were selected based on considerations such as an area's history of oil spills, the regularity and volume of oil transport traffic in an area, and the concentration of oil processing facilities in a region. The prepositioned sites are:

- Boston, MA
- Charleston, SC
- Tampa, FL
- New Orleans, LA
- Long Beach, CA
- Seattle, WA
- New London, CT
- Mayport, FL
- Detroit, MI
- Galveston, TX
- Eureka, CA
- Honolulu, HI
- Portsmouth, VA
- Miami, FL
- St. Louis, MO
- corpus christi, TX
- Astoria, OR
- Anchorage, AK

The prepositioned equipment at each site includes:

Vessel of Opportunity Skimming System (VOSS)
Portable Inflatable Collapsible Barges
5,000 feet of foam filled oil containment boom
Trailers
Aircraft pallets
Lightering and storage equipment

The three Coast Guard Strike Teams (Atlantic, Gulf, and Pacific) comprising the National Strike Force have the same equipment as that listed above, as well as an inventory of other Coast Guard response equipment for use as needed. This equipment is deployed and inspected periodically. It is the Coast Guard's policy that Coast Guard response equipment will be used only if commercial resources are unable to respond in a timely manner or are inadequate to meet the needs of the response situation.

In addition to the increased stockpiles of private and Coast Guard equipment, the Coast Guard has developed, as mandated by OPA 90, a worldwide equipment locator computer system known as the Response Resource Inventory (RRI). This system contains response resource data, submitted voluntarily by OSROs on categories such as skimmers, transfer pumps, booms, vessels, HAZWOPER trained personnel, etc.

EPA also has response equipment prepositioned in its regions as well as with the Environmental Response Team (ERT) in Edison, New Jersey.

Following the *Exxon Valdez* incident, the United States, working through the International Maritime Organization (IMO), proposed a new international convention to enhance response capabilities around the world. The idea of the convention was to recognize that international cooperation is paramount to successfully dealing with catastrophic marine oil spills. In 1990, the International Convention on Oil Pollution Preparedness, Response, and Cooperation (OPRC) was adopted by IMO and it entered into force on May 13, 1995.

The OPRC requires parties to adopt national systems of preparedness and response for oil spills and encourages the development of bilateral and multilateral agreements for mutual support in a region affected by a catastrophic spill. It provides the basis for establishing an international inventory of oil pollution response equipment at IMO and promotes cooperation between developing and developed countries in both oil spill response and preparedness. It also establishes the requirement for all ships to carry Shipboard Oil Pollution Emergency Plans modeled after Vessel Response Plans (VRPs), that were required by OPA 90. The OPRC fosters the idea of international cooperation in research and development for oil spill response technologies and encourages the development of compatible equipment to facilitate the interchangeability of equipment in the event of a catastrophic spill.

Resolutions accompanying the OPRC promote the idea of closer governmental and industry association in developing a rational approach to stockpiling equipment internationally for oil pollution response, expanding the OPRC to include releases of hazardous materials from ships, and examining the capability and placement of salvage tugs to prevent groundings and other casualties that may lead to catastrophic spills. During the Persian Gulf oil release of 1991, the provisions of the OPRC were utilized by IMO to coordinate international assistance to the Gulf States, including assistance provided by the United States.

The U.S. shares maritime boundary waters with both Canada and Mexico. These waters support a substantial trade in oil that could result in a catastrophic oil spill. The U.S. government has developed contingency plans for both of these boundary water areas with the respective neighbor. Since the *Exxon Valdez* oil spill, these plans have been subject to review and update. Additionally, the U.S. and Canada are currently reviewing the basis for their cooperation in oil spill response in light of OPA 90 and the newly adopted changes to the Canada Shipping Act. Also, both countries have been negotiating to improve the ability of both countries to respond to oil spills in the transboundary area. Several issues, however, require additional work. The compatibility of legal requirements on both sides of the border are under examination as is the level of liability protection afforded oil spill response organizations. The ability to use equipment from either country in the event of a spill and to move it and emergency response personnel freely across the border continues to require some degree of resolution. The NRT, through its Response Committee, is addressing these and other transboundary response issues.

Recommendation for Future Action

The Coast Guard should periodically update the NRT on the status of the NSFCC's computerized equipment inventory in light of domestic, bilateral, and international obligations. Of special concern are the logistical arrangements for moving equipment from its storage location to where it is required during a response.

RECOMMENDATION No. 5

Provide response managers with a larger cadre of trained personnel.

- *Industry, and Federal, state, and local governments must share responsibility to expand the numbers of trained response personnel.*
- *A core group of trained personnel should be maintained, with other trained and experienced personnel held in reserve, to form a team that could be instantly mobilized in the event of a spill.*
- *The NRT and the RRTs should coordinate efforts to encourage the development of cadres of trained personnel, and resolve difficult issues such as liability and training of volunteers.*

PROGRESS

The training of responders is a very broad and important issue. The focus of this recommendation is the need to increase and maintain the number and professionalism of responders.

Since the enactment of OPA 90, a variety of means have been developed to improve the training of response personnel. These include Federal training programs offered to pubic and private responders, Federal training requirements for responder training, Federal training guidelines for government and private responders, and the establishment of Federal training resources.

Federal Training Programs

Several Federal agencies provide training classes for public and private response personnel. These include EPA's ERT based in Edison, New Jersey; the Coast Guard OSC Crisis Management Course, as well as many other EPA, Coast Guard and other agency classes.

- The ERT periodically conducts a 40-hour Inland Oil Spills Training Course for OSCs and other response personnel. The course includes classroom instruction and problem-solving; hands-on-training; and demonstrations on oil spill prevention, clean-up, treatment and monitoring.

- The Coast Guard developed the OSC Crisis Management Course to train OSCs, as well as state and responsible party response managers for spill response. The course is currently held semiannually, in March and September, at the Coast Guard's Reserve Training Center in Yorktown, Virginia. The course consists of a combination of instructional seminars and role playing sessions designed to provide the class participants with the latest information and hands-on training to better prepare OSCs for their role as spill response managers.

- The Coast Guard established the DRATs (see Recommendation no. 3 for discussion of DRATs) in each district to provide a team of trained personnel dedicated to planning and response efforts for oil and hazardous substance spill.

Federal Training Requirements

- In 1990, OSHA and EPA issued the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations 29 CFR 1910.120,and 40 CFR part 311 for public and private emergency workers and responders. HAZWOPER requires a variety of activities, notably extensive hazard-specific, and function-based training for emergency responders and for workers at certain hazardous waste sites. HAZWOPER applies to workers engaged in hazardous waste operations and emergency response to releases of hazardous substances and oil without regard to location. Several of the programs listed in this section are, in part, to comply with HAZWOPER.

- Section 4202 of OPA 90 addresses the availability and maintenance of a cadre of trained personnel. It requires the private sector to ensure the availability of private personnel necessary to remove a worst case discharge from their vessel or facility. (This is being done primarily by OSROs.) Also, this section requires the establishment of Coast Guard DRGs, which are to include trained Coast Guard personnel dedicated to planning and response efforts for oil spills and hazardous substance releases. In addition, to promote a coordinated response, Facility Response Plans (FRPs) and VRPs must be consistent with the ACP. This requirement ensures that facilities and vessels maintain their training activities and can respond in accordance with the ACP for their area.

Federal Training Guidelines

- The recently established PREP, described in detail in the discussion of Recommendation no. 6, is helping to strengthen the cadre of trained personnel available to response managers. Through its regular voluntary exercise program, PREP increases the number of people from all levels of government and industry that have exercise experience in responding to oil spills.

- The Coast Guard, EPA, the Research and Special Programs Administration (RSPA) of the Department of Transportation (DOT) and the Minerals Management Service (MMS) of the Department of the Interior (DOI)

developed a document entitled *Training Reference for Oil Spill Response*[2] to assist vessel and facility owners and operators in developing training programs for their spill responders. This document is intended to provide response plan holders with a framework for designing a training program to meet each plan holder's individual needs.

Federal Training Resources

The Hazardous Materials Transportation Act (HMTA), as modified by the Hazardous Materials Transportation Uniform Safety Act of 1990 (HMTUSA), authorizes DOT to issue planning and training grants to state and local governments to improve their ability to respond safely and efficiently to accidents involving hazardous materials, including those during transportation. Training grants are provided for training public sector responders (including volunteers) and fund the associated costs of developing course materials, providing training, and paying tuition costs.

The NCP addresses the issue of volunteer roles in response or training only very generally. It does require that the ACP, among other things, identify and secure the means for providing required OSHA and EPA training for volunteers to include those who assist with injured wildlife (see 40 CFR 300.21O(c)(4)(ii)(H)). The NCP does not specify appropriate roles for volunteers in response.

Recommendations for Future Action

Because it is difficult to train unidentified volunteers in advance of a spill response, some type of training program that is expedient as well as comprehensive needs to be developed for implementation on scene during a spill. The NRT should consider how this should be addressed. Any training program developed should ensure that all issues relating to the volunteers are addressed. while liability is an important issue, the health and safety of the volunteers used in a spill response is paramount.

Agencies that support OSCs need to ensure that they have a sufficient number of trained personnel to carry out roles identified in the NCP.

[2] *The Training Reference for Oil Spill Response* costs $8.50 and can be purchased from the General Printing Office at the phone number (202) 518-1800. Its stock number is OSO-012-00364-5.

RECOMMENDATION NO. *6*

Challenge response contractors.

- *Contracting agencies should encourage contractors to increase the depth of their capabilities and the quality of equipment they can make available in the event of a spill.*
- *Unannounced drills, and other aggressive procedures, should be developed to periodically test the capabilities of oil spill contractors.*

PROGRESS

OPA 90 Section 4202(a)(4) mandated holders of vessel and facility response plans to ensure that responders have adequate equipment to respond to worst-case spills. Because such plans rely heavily on response contractors, this requirement will likely result in increased scrutiny of and challenges to capabilities. PREP provides a mechanism to address the testing of capabilities, and, in addition, addresses two other types of capabilities necessary to ensure adequate response through effective management: equipment availability and equipment functioning. These, too, are outlined below.

PREP Exercises

PREP is designed to maintain spill response readiness among the response community by requiring each plan holder to conduct exercises on an ongoing basis. PREP guidelines outline a series of "internal" and "external" exercises designed to challenge, evaluate, and improve preparedness processes nationwide. The internal exercises examine each plan holder's ability to respond within the respective organization. The external exercises include government-initiated unannounced exercises that provide the government with a tool to examine on an individual basis, the response capabilities in the Area. These government-initiated unannounced exercises are limited to four per year, per area. The external exercises also include the Area Exercises that examine the response preparedness of the entire Area by involving all members of the response community, including response contractors, the government, industry and the general public.

Section 4202(a)(7) of OPA 90 required that "The President shall periodically conduct drills of removal capability, without prior notice, in areas for which ACPs are required under this subsection and under relevant tank vessel and facility response plans." In response to this mandate, four Federal agencies assigned to develop oil spill contingency planning requirements[3] - Coast Guard, EPA, RSPA, MMS- along with states and industry worked together to develop PREP. PREP is a voluntary exercise program designed to involve response contractors, and other members of the response community, in a joint effort aimed at testing and enhancing spill response preparedness nationwide.

Equipment Availability and Functioning

PREP outlines requirements for equipment deployment, to ensure that equipment is maintained, used regularly, and that people are trained in its operation. Under OPA 90, *Equipment Requirements and Inspection,*

As a result of OPA 90, Coast Guard was responsible for developing oil spill response plating requirements for vessels and marine transportation-related facilities; EPA for non-transportation, fixed onshore facilities; RSPA in DOT, for pipelines and rolling stock and MMS in DOI, for offshore oil and gas exploration and production facilities.

there is mandated "a period inspection of containment booms, skimmers, vessels and other major equipment used to remove discharges." Through PREP, contractors and other responders will be continually challenged to ensure response preparedness remains a high priority.

Under 33 CFR Part 154, the facility response plan requirements were established by the Coast Guard to ensure equipment operability and readiness, namely that "all equipment identified in a response plan must be designed to operate in the conditions expected in the facility's geographic area." Section 154.1028, *Methods of ensuring the availability of response resources by contract or other approved means,* cites the requirements for contracts with oil spill removal organizations. It requires that these organizations respond with resources commensurate with the plan-holder's needs. Specifically addressing equipment, the rule states that an agreement must actually exist between the parties regarding response resources. Further, it states that the equipment is: to be available within "stipulated response times in the specific geographic areas;" identified as "capable of being provided by the spill removal organization;" and is subject to Coast Guard verification on the availability of the response resources through tests, inspections, and drills. These same requirements apply to vessels under 33 CFR Part 155.

EPA's requirements for OPA 90 response plans for onshore, non-transportation related fixed facilities, which include equipment readiness and operability are contained under 40 CFR Parts 112.20 and 112.21. The rule requires the planning for an implementation of a response to a small, medium, and worst case discharge. General equipment requirements include a description of a facility's response equipment, its location and testing, identification of equipment capable of successfully functioning in the appropriate operating environment, and evaluation of equipment operability in a given environment. The facility must provide evidence of contracts or other approved means for ensuring the availability of personnel and equipment for response.

Similarly, in 49 CFR 194.115, RSPA's Office of Pipeline Safety (OPS) requires operators to document in their plans that they have obtained sufficient private resources to respond to a worst-case discharge.

Recommendations for Future Action

The USCG and EPA should work with resource agencies to include the exercise of wildlife protection strategies in PREP exercises.

RECOMMENDATIONS FOR PREPAREDNESS

RECOMMENDATION NO. *7*

Industry should lead aggressively in rebuilding our national oil spill response capability, since it has the primary responsibility for cleaning up oil spills.

- *Industry should bear primary responsibility for cleaning up oil spills.*
- *The proposed Petroleum Industry Response Organization (PIRO) should be fully implemented, with regional response centers staffed with trained personnel and containing stockpiles of equipment.*
- *Industry should improve response capabilities on inland waters and revitalize the network of private oil spill response cooperatives.*

PROGRESS

OPA 90 reaffirmed the principle that the polluter must pay, and that industry thereby holds the primary responsibility to respond to oil spills. As explained in detail in the discussion of Recommendation no. 2, the OPA 90 requirement for vessel and facility response plans particularly reinforced this industry responsibility. This requirement calls upon industry to identify potential oil spill risks, available response resources, actions to mitigate the risk, and an aggressive plan to respond to spills.

The Marine Spill Response Corporation (MSRC) succeeded the PIRO in 1990. MSRC is one of many cooperative response organizations nationwide with trained personnel and stockpiles of response equipment.

Other industry efforts to assist in response efforts to oil spills are wide-ranging. For example, the voluntary, mutual assistance network known as Petroassist operates through ChemTrec, an emergency response service run by the Chemical Manufacturers Association. Petroassist helps oil, pipeline, and other companies that transport oil to respond to inland oil spills fast. This program expedites response and cleanup by helping members share communications equipment and scientific expertise.

In addition to the strengthened private response planning, industry has established a number of major OSROs since the *Exxon Valdez* oil spill and the enactment of OPA 90. These OSROs have been vigorously amassing spill response equipment and personnel to prepare for all types of spill response, including response to catastrophic spills. The Coast Guard began OSRO classification to assist response plan holders in identifying OSROs with the capability to meet their specific needs for spill response. Coast Guard is continuing to work with industry to ensure appropriate oil spill response capabilities are developed and maintained.

Other work has also been conducted to address inland response issues. Several products and projects of these efforts include:

Publication of initial ACPs for the 13 originally identified inland areas;

"Options for Minimizing Environmental Impacts of Freshwater Spill Response" (coauthored by the American Petroleum Institute and the National Oceanic & Atmospheric Administration);

Several regional workshops conducted annually to address inland spill response issues (hosted by Coast Guard, EPA, NOAA, states); and

Various EPA mapping endeavors - a Region V project on sensitive environments (working with NOAA, several water commissions, and other groups); a Region VI project on relevant oil spill data, including sensitive environments, previous spills, and potential spill sources; Region IV's effort to locate and map oil spills; and further development of EPA's GIS Program's Spatial Data Library of sensitive environments and other spatial data.

Recommendation for Future Action

The NRT should monitor the activities of public and private groups that are conducting research and development on spill response equipment, technology, and environmental and human health issues. Additionally, the NRT, under the OPA 90 Title VII Interagency Coordination Committee on Oil Pollution Research and Development (See Recommendation no.17), should encourage continual industry investment in advanced research projects.

RECOMMENDATION NO. 8

The Federal Government and the states should coordinate their activities in a manner that provides the nation with the most efficient and effective oil spill prevention and response system.

- *The Federal and state governments should define their roles and responsibilities in preventing and responding to oil spills, and should develop formal agreements.*

PROGRESS

Since OPA 90, Area Committees have been established throughout the country to provide for "community" planning for spill response. These Area Committees are comprised of Federal, state, and local government agencies with responsibility for oil spills and hazardous substance release planning and response. The Area Committees have invited industry and other interested parties to participate on the Area Committees through the subcommittee process. Forty-six Area Committees have been formed in the coastal zone of the U.S.. These coastal zone Area Committees are chaired by Coast Guard OSCs. Ten Area Committees have been established in the inland zone to align with the 10 EPA Regions. The Inland Zone Area Committees are chaired by EPA OSCs.

The Area Committees are charged with developing ACPs for response to a worst case discharge from vessels and facilities (including pipelines and offshore facilities) operating in the Area. To promote a coordinated response, FRPs and VRPs must be consistent with the ACP, all of which are required by Section 4202 of OPA 90 (see the discussion of Recommendation no. 2 for descriptions of ACPs and facility and vessel response plans). The ACP development process has proven to be effective in better defining the roles and responsibilities of Federal and state agencies with regard to oil spill response planning, and in coordinating oil spill contingency planning with planning requirements under other Federal statutes. The NCP requires Area Committees to develop the ACP in consultation with Local Emergency Planning Committee (LEPCs) and State Emergency Response Commission (SERCs) (40 CFR 210(c)(I)), and requires OSCs to coordinate with affected SERCs and LEPCs (Section 210(c)(2)). Although progress is being made to provide coordination between RCPs, ACPs, state plans and local plans, more RRT attention is needed in order to ensure a coordinated response.

PREP exercises are designed to provide a mechanism for all levels of government, including state government, and industry to jointly exercise and evaluate contingency plans developed for spill response. Through PREP Area Exercises, the entire Area response mechanism can be evaluated to determine any shortfalls in the response preparedness of the Area.

The UCS, consisting of the OSC, the state (and local authorities, generally through the state) and the responsible party, work together in a response to ensure a coordinated effort is carried out, taking into account all the concerns and issues of those involved in the response. The UCS is being addressed in a technical assistance document being developed by the NRT.

OPA 90 directed that Federal and state governments work together to better protect the marine environment. The Commandant of the Coast Guard directed all District Commanders to enter into MOAs with states to better coordinate Coast Guard and state preparedness and response activities. The goals of MOAs include:

- Ensuring a sound national marine environmental protection policy through joint preparedness, prevention, response, and law enforcement efforts; and

- Minimizing duplicative requirements, leveraging resources, and eliminating barriers to marine transportation due to differing Federal and state requirements.

Thus far, MOAs have been developed between the Coast Guard and the following states and U.S. territories: Alaska, California, Guam, Hawaii, Northern Mariana Islands, Oregon, Samoa, and Washington. Negotiations are underway with Delaware, Florida, Louisiana, New Jersey, New York, Ohio, Pennsylvania, Texas, Virginia, and Wisconsin.

Additionally, the NRT, working with RRT 6, is working to develop guidelines for a single plan, called One-Plan, for facilities to use in response to oil spills or hazardous substance releases. A key goal of the One-Plan project is to issue in the Federal Register an NRT-approved and recommended format for industry emergency response plans.

Recommendation for Future Action

Additional efforts should be made to work with states in order to involve all state agencies that play a role in oil spill response and to educate these agencies on the NRS and the role and responsibilities of the state RRT member.

The NRT should complete the effort begun by its Response Committee to explore the development of the One-Call system. Such a system would reduce the number of phone calls needed to satisfy Federal, state, and local requirements for immediate notification of an oil or hazardous substance release.

RRTs should provide more oversight and consistent review of ***the*** *work of the Area Committees to ensure coordination and consistency among RCPs, ACPs, state plans, and local plans as indicated in the preamble of the NCP (section 300.115). Area Committees should make special efforts to ensure that the United Command Structure includes representation and/or coordination with local responders. The RRTs should encourage the development of* ***joint*** *Federal/state contingency plans.*

The NRT should encourage and support RRT review of ACPs. RRTs should provide more oversight of the work of Area Committees and timely review of ACPs to ensure:

- *consistency among areas within a region and among the RCP, ACPs, and state and local plans, as indicated in the preamble of the NCP (40 CFR 300.115(a)(2));*

- *feasibility of plans; and*

- *identification and dissemination of lessons learned from ACP reviews and coordination efforts.*

RECOMMENDATION NO. 9

Establish close liaison with Governors' offices.

- *Greater attention to RRT contingency planning should be encouraged among Governors.*
- *RRTs should consider assigning a representative to the Governor's office during a major spill.*

PROGRESS

The Area Committee planning process also fosters close communication among the states and the various Federal agencies involved in spill response. Through the Area Committees, the Federal, state, and local agencies have established a network for coordinating planning, preparedness, and response issues.

The NRT and RRTs are also working with the states to foster better communication. While the states are members of the RRTs, a shortage of funding often precludes them from attending all of the meetings. Many of the RRTs are addressing this issue by rotating meeting locations to assist the states in attending the meetings.

A representative of the National Governor's Association (NGA) has attended several NRT meetings to brief the group on NGA activities and observe the NRT and its work. The NRT will continue to work with the NGA to encourage further participation and keep the lines of communication open between the two groups.

The NRT is also producing a video tape that will present an overview of the NRS for hazardous substance releases and oil spills, expected to be available in 1996. The video is intended to communicate that an effective system is in place that combines the resources and technical expertise of Federal, state, and local governments during a response. The primary audience will be high level state and local government officials. The material should also be of interest to the general public.

Recommendation for Future Action

Stronger effort is needed by the NRT and RRTs to foster understanding of emergency response under the NCP among high-level state and local officials to facilitate better coordination in the event of a major spill. The development of better relationships with the Governors ' offices should lead to improved coordination among state authorities that affect spill planning and response. Additionally, it should be the responsibility of the Federal agency chairing the RRT to provide a liaison to the Governor's office to ensure a high degree of understanding of Federal actions in a response.

RECOMMENDATION No. 10

Exercise leadership to increase coordination between industry and the RRTs on contingency planning.

- *RRTs and industry should coordinate contingency planning efforts, in order to more efficiently allocate scarce response resources.*
- *Coordinated contingency planning is particularly important given the increasing risk of spills from pipelines, in addition to other fixed facilities and vessels, and their risk of spills into areas previously not considered high priorities for planning.*

PROGRESS

The new contingency planning requirements of OPA 90 Section 4202, particularly those regarding ACPs, and vessel and facility response plans (detailed in Recommendation no. 2), address this recommendation. As previously mentioned, the NCP required ACPs to "provide for a well-coordinated response that is integrated and compatible, to the greatest extent possible, with all appropriate response plans of state, local, and non-Federal entities" (40 CFR 300.210(c)(2)). The NCP also requires that RRTs provide guidance to Area Committees to ensure consistency and between ACPs and the RCP and the NCP (40 CFR 300.115(a)(2)).

ACPs and industry response plans are designed to mesh in order to provide a comprehensive response mechanism in each Area. Industry response plans address response issues for the specific vessel, facility, pipeline, or offshore facility for which the plan is written, such as the response equipment that would have to be brought in to respond to a worst case discharge from the vessel, etc. ACPs address response issues for the Area in which the spill occurs, such as the sensitive areas at risk and strategies for protecting these areas. Together, these plans provide a mechanism for comprehensive response which, in theory, should address any type of spill that could occur. One particular example of successful coordination between industry and RRT contingency planning was noted in the oil spill response effort at Guadalupe Beach, California in January 1995. According to the Lessons Learned of Response Management, printed in the Coast Guard's Incident Specific Preparedness Review (ISPR) &ted August 2, 1995:

> The preparations made in the Area Contingency Plan and related preparedness actions contributed directly to the success of this response. The concerted action of a Unified Command involving Unocal, the State of California and the U.S. Coast Guard, with inputs from other government agencies and outside stakeholders, prevented a significant release from occurring during the winter of '94-'95(ISPR, dated August 2, 1995).

This experience represented the benefits of industry working with Area Committees on the ACPs, however, not all industries are taking part in the preparation of ACPs.

Industry has been invited to participate in many Area Committee processes to provide input to the Area's planning efforts. As noted above, this helps the Area Committee to work with industry to address specific issues relevant to the transportation, transfer, handling, and storage of oil and hazardous substances in the Area.

The 1990 report addressed the increasing risk of oil spills from pipelines. The Office of Pipeline Safety within the Department of Transportation's Research and Special Programs Administration has established regulations requiring OPA facility response plans for pipelines. As required by Section 4202 of OPA 90, pipelines are also included as part of PREP, with pipeline response plans being exercised with ACPs in the Area Exercises. The

exercise of facility response plans is discussed in Recommendation no. 15. Under OPA 90, RSPA's OPS has responsibility to establish procedures and planning requirements to prevent discharges from and to contain oil and hazardous substances in pipelines. OPS is active in PREP, which is essential to the preparedness process because drills provide an opportunity to validate response plans under realistic conditions.

Recommendation for Future Action

Integration of industry plans into ACPs is not complete for all areas. The NRT should investigate what actions could be taken to increase the coordination and consistency between vessel and facility response plans and ACPs. Along the same lines as Area Committees, the RBTs should provide more oversight and consistent review to enable continuity and coordination. Industries, similarly, should follow the UCS in response plans to ensure ***representation and coordination with local responders.***

RECOMMENDATION No. 11

Address worker and public safety and health more thoroughly in contingency plans.

- *Better planning is needed to address human health problems associated with oil spills, and to resolve issues such as the application of Department of Labor regulations to a major oil spill response.*
- *Spill response teams need better access to socioeconomic features of areas in the predictedpath of a spill. Teams also need access to expert knowledge concerning the best cleanup strategies, particularly for airborne effects of the spill and protecting drinking water.*

PROGRESS

Health and Safety

ACPs are comprehensive plans that address a wide range of issues relating to oil spill and hazardous substance release response. ACPs include a specific section on health and safety, required by 40 CFR 300.150. This section addresses spills where OSHA regulations (29 CFR 1910.120) apply and the OSC's responsibility for compliance with these regulations. In addition, ACPs are required to include procedures for volunteer training, and the safe use of volunteers. These procedures include identifying activities in which volunteers can participate and restricting participation in other more dangerous activities (see 40 CFR 300.185© and 40 CFR 300.2l0(c)(4)(ii)(H)).

OPA 90 section 4202 requirements for vessel and facility response plans require that such plans "describe the training... of persons on the vessel and at the facility...." EPA's FRP rule at 40 CFR Part 121.21 requires facilities to develop a program to train personnel involved in oil spill response activities. It recommends that the training program be based on the Coast Guard's training elements for oil spill response, as applicable to facility operations. An alternative program can also be acceptable, subject to approval by the Regional Administrator.

Coast Guard, joined by EPA, DOT/RSPA, and the MMS, published a document entitled "Training Reference for Oil Spill Response" &signed to assist response plan holders in developing their training programs for both safety, consistent with OSHA's HAZWOPER standard and clean-up strategies. This manual recommends that key

individuals or groups of people should be pre-identified and that training for workers should match the scope of their involvement in order to ensure worker health and safety .

Socioeconomic Features/Clean-up Strategies

ACPs also address the identification of sensitive areas, including critical socioeconomic features such as water intake facilities, and the strategies for protection of these sensitive areas. Geographic-specific annexes to the ACPs are being developed that identify areas needing protection and detail specific protection and cleanup strategies. Technical guidance on spill response in sensitive areas are available and provided in the Countermeasures and Mechanical Protection Manuals. These manuals were issued by NOAA, available to the Coastal Area Committees and are available to responders to allow for a consistent, scientific approach to compile spill-specific data for the OSC.

To further provide the OSCs with access to expert knowledge, the Scientific Support Coordinators (SSCs) of NOAA and the Technical Assistance Teams (TAT) of EPA's ERT provide for critical scientific support during oil or other hazardous materials releases or spills. SSCs aim to reduce risks to marine coastal and inland habitats and resources through the use of spill trajectory estimates, chemical hazard analyses, and sensitivity assessments of resources to assist OSCs in preparedness planning and response decision-making. TATs assist OSCs through various tasks, such as setting up communications/coordination centers, which may include a mobile command post with mobile communications; providing technical assistance to EPA or Potentially Responsible Parties, under CERCLA on clean-up strategies (e.g.,boom equipment or shoreline clean-up measures); providing air monitoring support (explosive limits, O_2, H_2,S, or organic vapors); locating and tracking spills with Global Positioning Systems (GPS); and providing cost tracking documentation for the OSCs. Essentially, NOAA's SSCs primarily support the Coast Guard in coastal spills, while TAT teams primarily support the EPA OSCs in inland spills.

Recommendation for Future Action

Area Committees are progressing at different rates in identifying critical socioeconomic features. The RRTs should investigate what can be done to encourage more rapid progress on this task for the Area Committees in their region.

RECOMMENDATIONS NO. 12

Develop additional tools to support comprehensive contingency planning for environmental features.

- *Computer systems should be developed which provide assistance to the On-Scene Coordinator in identification of critical environmental areas and appropriate response strategies.*
- *Comprehensive planning aids should more fully address rivers, the Great Lakes, and other areas that could be affected by pipeline spills, as well as spills from vessels and facilities.*

PROGRESS

Oil Spill and Hazardous Material Computer-based Tools

Both industry and the Federal government have developed various computerized spill response systems that can assist responders, including CAMEO™ (Computer Aided Management of Emergency Operations), LandView™ II, and SPEARS (Spill Planning, Exercise and Response System). Many of these Federal software programs

integrate risk analysis, planning, exercise, and response functions to aid decision making for incidents involving either hazardous substances or oil. These systems are designed to maximize productivity. They are graphically-oriented tools that provide a centralized location for the diverse data required to respond safely and efficiently to an incident. These tools are discussed more fully in Appendix C.

Environmental Sensitivity Index (ESI) Maps

With the advent of Geographic Information System (GIS) software for microcomputers, automation of ES1 information has been a major new focus of work being done by EPA Region V, with the U. S. Fish and Wildlife Service (USFWS) and NOAA. Gathering data to implement sensitive resource planning requirements is expensive. GIS databases and map products require a large commitment of time and resources to develop. Much of this effort is necessary to acquire, process, and display relevant environmental data. What is especially important is the systematic approach taken to ranking environments for protection and identification of important data elements. Coastal ESIs are comprised of three general types of information. The first is Habitats, which is further divided into Intertidal Shoreline habitats and Subtidal Benthic habitats. The second type is Subtidal Biological Resources, and the third is Human-Use Resources. There are six major classifications of inland resource data: environmentally sensitive areas; natural heritage data; archaeological and historic sites; water intakes; marinas and boat ramps; and Native American properties and hunting/fishing grounds. Sensitivity maps are a valuable tool in both oil spill contingency planning and the early phases of spill response.

NOAA is currently reformatting and standardizing ES1 data digitized from the hard copy NOAA atlases. Coverage includes the continental U.S., Hawaii, Puerto Rico and the Virgin Islands. In many cases, it is anticipated that these data will provide base map information useful in generation of updated ES1 maps. One such update is scheduled for early 1996. In addition, a prototype has been developed that allows users to view and query ES1 data from a Macintosh computer. From within this same application, computerized Spill Tools are available to assist responders in evaluating response options. These tools include dispersant planners, in-situ burn calculators, a tidal predictor, references on oil spill effects on different biota, a sorbent database, and other aids. Many of these tools were developed jointly with the USCG. Some of the spill tools are geographically referenced, such as the Sensitive Area database. These data can be integrated with the ES1 data to create new map views and help the responder establish a frame of reference. Copies of the prototype are presently being tested and evaluated by field personnel. Additionally, cross-platform database solutions are being investigated so the Spill Tools and ES1 database can be accessed by both Macintosh and PC users.

Coast Guard and NOAA have published a guidance document applying mechanical protection priorities in the context of sensitive environments which is being used routinely in addressing equipment needs and operational constraints.

Sensitive Habitat Identification

Currently, sensitive area maps are being produced with predetermined protection strategies for inclusion within ACPs. These maps are intended to facilitate an effective response during the early hours of a spill. For example, the Eighth Coast Guard District will use the maps for the initial deployment of available response resources to divert or exclude oil from areas that have been identified as particularly sensitive. This allows for the immediate protective measures to be taken after the Marine Safety Office (MSO) receives notification of a spill while they contact resource managers and others with very specific local knowledge of the area at risk. These maps are not meant to replace the maps in the ES1 atlases. As such, they do not portray shoreline sensitivity or the distribution of sensitive living resources. Instead they are a supplement to the ESIs with a generalization of ES1 data, at a finer scale.

Similar protection priorities are being established in the Great Lakes using ES1 data. During workshops at Coast Guard MSOs, newly developed Great lakes ES1 maps are being presented to resource and response personnel as well as county and local people interested in the prioritization process. Specific sensitive areas such

as wetland complexes, specific sensitive creeks and rivers, marinas, parks, and bird concentration areas are also being identified. The amount of equipment available in the area and a time frame for arrival and deployment is being established. Once all of the sensitive areas are identified, boom will be allocated to each area based on the highest risk and/or perception of sensitivity. Strategies are established for the western part of Lake Superior, west northern Lake Michigan, the Detroit River system, all of Lake Erie, southern Lake Huron, and parts of the St. Lawrence River. Also, joint strategies with Canada have been completed on the Detroit/St. Clair system and on Lake St. Clair, and are in progress on the St. Marys and St. Lawrence.

Recommendation for Future Action

Much progress has been made in making automated databases available to OSCs for planning and response. What is needed now is a way to synthesize databases so that environmental, geographic,and other data can be used together to assist in planning and emergency response.

RECOMMENDATION NO. 13

Solve disposal issues.

- *A cooperative effort should be encouraged among states, local residents, responders, the responsible party, and other parties to provide solutions to the disposal of oily waste.The RRTs should provide the forum for this discussion.*

PROGRESS

The 1990 report discussed the difficulties involved in disposal of oily wastes. In recognition of this difficulty, OPA 90 requires that disposal issues be addressed in ACPs. The Area Committees, in developing ACPs, have identified procedures for disposing of all contaminated waste from a spill to ensure safe, proper, and legal disposal of these products. The Area Committees identified disposal sites for the disposal of oil and oily debris, as well as ensured that all state and local permit requirements are addressed in advance to expedite the removal and disposal of the oil and oily debris from the scene of the spill site. The ACPs were also tasked with developing guidance for sampling, testing, and classifying recovered oil; sites for disposal of collected oil; and other issues (40 CFR 300.3 10(c)).

RECOMMENDATION NO.14

Seek a national consensus concerning the use of dispersants, other chemicals, biological techniques, and in-situ burning for response to oil spills.

- *Locations in and circumstances under which specific countermeasures may be used should be clarified.*
- *Procedures for preauthorization of such methods, and other procedures to ensure rapid decision-making, should be developed.*
- *Realistic risk assessments of the circumstances under which chemical dispersants will and will not work should be completed.*
- *Realistic, active consideration of bioremediation, in situ burning, and viscoelastic agents should be promoted.*
- *Use of measures on a trial basis during actual spills should be considered.*

PROGRESS

As a result of OPA 90 Section 4202 ***on*** *National Planning and Response System,* the NCP requires Area Committees to work with appropriate Federal, state, and local officials to expedite decisions on the use of dispersants and other mitigating substances and devices. Also, Subpart J of the NCP requires ACPs to include applicable preauthorization plans and address specific countermeasures including bioremediation agents and *in-situ* burning.

The NRT recognizes that the use of dispersants, other chemicals or biological techniques, and *in-situ* burning for response to oil spills can be established at the national level. However, the action and approval for such countermeasures must reside with the Regions and Areas to address local concerns and priorities. Specifically, at least three RRTs have pre-approval plans for ***in-situ*** burning, and at least another three have pre-approval plans for dispersants.

In an effort to support the decision-making process by the Area Committees, the NRT Science and Technology committee has:

- Developed fact sheets and questions and answers on dispersants, bioremediation, and *in-situ* burning;
- Issued results of *in-situ* burning research and development tests, bioremediation tests, shoreline cleaner use at specific spill sites, and viscoelastics use at specific spills;
- Sponsored a workshop on human health issues associated with *in-situ* burning; and
- Tracked ongoing research on countermeasures by RRTs, states, and other organizations. Joint research is ongoing with states, API, Environment Canada, and cleanup contractors. These parties bring new chemical countermeasures and alternative response techniques to Area Committees to facilitate the pre-approval process.

Current examples of ongoing research include:

- **Minerals Management Service (MMS):** The Minerals Management Service (MMS) of DOI is one of the principal U.S. Government agencies sponsoring offshore oil spill response research. For the past 10 years, MMS has maintained a comprehensive international applied research program to improve oil spill response technologies and procedures and thus enhance capabilities to respond to an open ocean oil spill. MMS efforts have focused on improving the capabilities of in-situ burning; modeling the dispersion pattern of smoke emissions from in-situ burns; updating the performance database for new and improved oil spill containment booms and skimmers by reopening OHMSETT - The National Oil Spill Research Test Facility, located in Leonardo, New Jersey; remote sensing and measurement of spilled oil; oil spill chemical treatment agents including dispersants; understanding the properties and behavior of spilled oil in the marine environment; and innovative shoreline cleanup strategies. The research data obtained and disseminated by MMS is available to the Area Committees to assess the risks of using chemical countermeasures and in-situ burning within their area of responsibility for their ACP's.

- **National Response Team (NRT):** The National Response Team supports *in-situ* burning and encourages the RRTs to plan for the use of this technology, as with other alternative response technologies. Some Area Committees have pre-approved the use of chemical countermeasures and/or *in-situ* burning. A majority of the RRTs have a draft or approved dispersant and/or *in-situ* burning pre-approval plan in place. Some of the RRTs have a draft bioremediation and/or a Viscoelastics pre-approval plan.

  The 1990 report recommended using dispersants and *in-situ* burning on a trial basis during actual spills. On-scene research can now be conducted if agreed upon by the OSC and if the research does not interfere with the response activities. For example, bioremediation was studied at the 1990 Apex Barge response in Galveston Bay and at the 1994 San Jacinto response in Houston, Texas. As for the use of substances on a trial basis, the OSC is limited to products on the NCP Product Schedule with approval (or pre-approval) from the state and EPA, unless there is substantial threat to human health or the environment.

- **U.S.Navy Superintendent of Salvage (SUPSALV):** The U.S. Navy Superintendent of Salvage (SUPSALV), identified as a special force in the NCP, is continuing to pursue research and development efforts to make at sea *in-situ* burning an operational reality. Recognizing the lack of a reliable, reusable fire resistant containment boom, SUPSALV is funding efforts to design a fire boom that will be able to withstand the open water environment. The fire boom must be able to tolerate repeated exposures to high temperatures without losing its strength or integrity. Other design parameters, such as weight and compatibility, will be examined to ensure the feasibility of transporting and deploying the system effectively.

  SUPSALV is also testing ancillary techniques that will enhance *in-situ* burning. Such projects include: (1) the development of a barge- or ship-based incineration device to burn significant volumes (i.e., 3,000 gallons per minute) of spilled oil emulsions on-site; and (2) air jet aeration techniques to reduce smoke production to safely dispose of the *in-situ* burning combustion products, employing a combination of forced air and spuming microfilter smoke separator technology. The air jet aeration technique is currently undergoing mesoscale testing. However, all of these products will need to be tested in a large scale open ocean bum to truly evaluate their capabilities for increasing the effectiveness of *in-situ* burning. The Navy will continue to support any efforts that advance the viability of this response technique for wide scale use.

- **Marine Spill Response Corporation (MSRC):** The Science. Technology, and Effects of Controlled Burning of Oil Spills at Sea (Technical Report Series 94-013) was published by MSRC. The report summarizes and evaluates the state of knowledge in the area of ***in-situ*** burning as a countermeasure technique for oil spills at sea. All technological aspects of *in-situ* burning are covered in detail as are the potential impacts of the technique on the environment and on human health and safety.

Recommendation for Future Action

The NRT should continue to work with the RRTs and encourage them to work with the Area Committees to develop pre-approval plans for non-traditional response techniques. Also needed is more outreach to the public on the effects of oil spills and the countermeasures.

RECOMMENDATION NO. 15

Make contingency plan exercises a higher priority.

- *Oil spill contingency plans at all levels of government and industry should be realistically, regular, and thoroughly exercised. Interregional conferences, and other mechanisms to disseminate lessons learned from exercises, should be promoted.*
- *Oil spill contingency planning for potential discharges from pipelines should be comparable to planning for discharges from non-pipeline facilities. Pipeline contingency plans should be exercised regularly and thoroughly and coordinated with other plans.*
- *The Federal government, including the Department of Transportation, should continue to coordinate with other agencies to improve response and cleanup capabilities with regard to pipeline spills.*

PROGRESS

Exercises

Section 4202 of OPA 90 requires that exercises be conducted to examine the adequacy of ACPs and facility and vessel response plans. The national PREP, detailed in the discussion of Recommendation no. 6, is designed to fulfill this requirement by exercising contingency and response plans throughout the nation to ensure they will work in an actual spill response and meet the needs of the community for response capabilities. PREP provides an exercise program for all members of the response community, including the Federal, state and local government agencies, the oil production, handling, storage, and transportation industry, cleanup contractors, and others with authority and responsibility for spill response.

Lessons Learned

Lessons learned from PREP exercises will be distributed through several mechanisms. One will be PREP Lessons Learned System, which is a computer system designed to provide the exercise lessons learned to the response community through electronic means. Exercise lessons learned will also be disseminated through the *NRT-RRT Information Exchange: Lessons Learned from Exercises,* which is available in hard-copy form to all members of the response community.

Pipelines

The recommendation specifically identifies the need for strengthened and regularly exercised pipeline response plans. DOT's Office of Pipeline Safety (OPS), as mandated by OPA 90, addressed this recommendation by promulgating spill response planning requirements for pipelines in 49 CFR Part 194. These requirements are similar to those for vessels and other facilities.

DOT believes that a rigorous exercise program is an important part of the preparedness process. Pipeline companies also have to exercise their plans "regularly,"(49 CFR Part 149). As mentioned previously in this report, OPS is active in PREP, and is essential to the preparedness process through providing an opportunity to validate response plans under realistic conditions. OPS has responsibility to assist in the conduct of these pipeline-related exercises. This provides OPS an opportunity to assess the ability of the pipeline operator to implement its FRP and establish an effective unified command with the Federal and state responders. Since June 1995, DOT has conducted three Area oil spill drills under PREP guidelines with pipeline operators as the responsible parties. One drill involved Buckeye Pipeline Company and EPA Region III, the second drill involved Portland Pipeline Company and EPA Region I, and the last drill was conducted in October 1995 between Williams Pipeline and EPA Region VII.

In addition to strengthening response planning, DOT is coordinating with RRTs to improve response capabilities. OPS is working with the RRT VI as a member of the Region VI Consolidated Contingency Planning Workgroup, to develop the "One-Plan" proposal, which is discussed in Recommendation no. 8. The purpose of this NRT-sponsored initiative is to develop a consolidated planning format that industry can use instead of having to submit multiple response plans to different regulatory agencies, each in its own agency-specific format.

RECOMMENDATION NO. 16

Strengthen research and development.

- *Increased governmental and private research is needed, particularty with regard to finding ways to respond to spills in poor operating conditions and evaluating the effectiveness of emerging response technologies.*

PROGRESS

OPA 90 required strengthened research and development efforts to improve the Nation's capabilities in prevention, response, mitigation and minimization of environmental effects from oil spills. Title VII of OPA 90 required the establishment of an interagency coordination committee on oil pollution research. The committee is charged with coordinating a comprehensive program of oil pollution research, technology development, and demonstration among the Federal agencies, in cooperation with industry, universities, research institutions, State governments, and other nations, as appropriate, and to foster cost-effective research mechanisms, including the joint funding of research. The title was authorized at $21.25 million annually; however, moneys appropriated under this title have been less than one-fourth than authorized annually.

The interagency committee has prepared the five year plan required by the statute and is working on revising the plan to reflect advancements in R & D. The committee has sponsored the conduct of two international oil spill R & D fora aimed at increasing coordination among research scientists, including the compilation of a database summary of ongoing projects. The committee has met annually with industry and states to share information on ongoing and planned research and to identify potential cooperative projects.

The NRT's Science and Technology Committee complements the work of the interagency committee established under OPA. The main audiences of the Committee are the RRTs and OSCs. Consequently, the Committee provides the interface between the research community and the operational users of the products of research. This Committee synthesizes the results of research, translates it into non-scientific terminology and applies it to operational problems. The Committee is also the funnel for directing research needs from responders

toward potential funding agencies represented on the Title VII interagency committee. Examples of the work of the Committee are discussed under Recommendation No. 14.

Recommendation for Future Action

Research and development activities have been strengthened in the time since the Exxon Valdez, but public and private resources and attention must continue to be allocated at the current levels. The NRT should consider the role it could play in evaluating interagency oil spill R & D to ensure that priority needs continue to be addressed and whatever funding is available is used effectively.

RECOMMENDATION NO. 17

Improve operational communications capabilities.

- *Communications capabilities should be assessed, upgraded, and standardized where possible. Networks should be established to provide responders and other parties with timely and relevant information about a spill, as well as technical, statistical and historical data regarding the area of the spill.*

- *Communications equipment appropriate for a variety of response scenarios should be stockpiled, and input on equipment needs should be sought from all levels of government and industry.*

PROGRESS

The NRT Response Committee was tasked with reporting on operational communications needs and making recommendations for addressing those needs. The Response Committee's Communications Report concluded that communications coordination should be worked out in the RCPs and the ACPs.

The Area Committees in coastal areas were directed (in Coast Guard guidance published under OPA 90 Section 4202) to develop ACPs to address specifically and include information on operational communications necessary for spill response.

Communications to and from the OSC and RRTs are accomplished by telefax, Internet E-Mail, NOAA's FirstClass® E-Mail, conference calling, and laptop computers used in the field. In 1995, the NRT's Ad-Hoc Communications Committee identified the need for more frequent and substantive interaction among NRT and RRT members. The NRT has approved the use of NOAA's FirstClass® system for this purpose. Additional uses of FirstClass® by the NRT are posting information on the NRT activities; exchanging information and needs; and maintaining awareness, remotely, of spill activities through the HOTLINE conference. In addition, the broader use of electronic networks during drills emulating spill conditions reflects a growing recognition of the utility of electronic communications for rapidly disseminating accurate, timely information to all responders during spills.

Electronic databases, such as SPEARS, are being developed for use by OSCs to provide them with science and technical information and the ability to integrate this information into spill preparedness and response.

The Coast Guard (through the National Response Center) and EPA (through ERNS, the Emergency Response Notification System) are developing systems to make spill histories and spill notification information more accessible to Federal, state, and local responders. Operational communications capabilities are routinely tested in PREP exercises.

Recommendation for Future Action

Information management software that facilitates the work of the Area Committees during spill planning and the On Scene Coordinator during a response needs more attention.

RECOMMENDATION NO. 18

Communicate more effectively with the public.

- *Centralized information centers should be established which would provide coordinated, accurate, and timely information. NRT and RRT activities should also include greater emphasis on media and public relations.*

PROGRESS

The 1990 report addressed the need for centralized information centers at the national and regional levels during spills of national significance. This is being addressed by the SONS Workgroup. Joint Information Centers will be a part of the response structure in a SONS.

Also, Joint Information Centers (JIC) are currently being used in spill responses as part of the UCS. The JIC is designed to ensure that spill response information is effectively coordinated among the OSC, state, and responsible party prior to its dissemination to the public. This provides for accuracy, timeliness, and a more accurate portrayal of the response effort to the public. An incident in which the JIC was utilized effectively was during the Northridge Earthquake where the JIC was established and functioned relatively well, according to EPA After Action Reports. Similarly, in the San Jacinto ISPR released by Coast Guard on October 7, 1994, the JIC was cited as the meeting area for Public Information Assistance Team (PIAT) members to work in cooperation with public affairs staff, enabling all stakeholders interests to be represented.

To ensure that OSCs are effectively trained for communication, the Coast Guard's On-Scene Coordinator Crisis Management Course has a special module focusing on media and public relations. The Coast Guard's PIAT assists OSCs, as requested, with public information and public participation regarding spills. In addition, EPA provides an inland oil spills course that addresses public relations concerns.

Communications and public affairs are routinely exercised in PREP exercises.

The NRT Ad-Hoc Communications Committee's mission is to foster better communications throughout the NRS, RRTs, and state and local government. The committee is working to identify and implement electronic coordination mechanisms with each of these entities. As mentioned, in 1995 the NRT approved the use of NOAA's First Class@ system to link all RRT Co-Chairs and NRT members. By the end of 1995, the committee hopes to have implemented a system to better reach state and local governments, and the public.

Recommendation for Future Action

Certain areas of media and public communication still need to be addressed. One is the preparation of short fact sheets on different aspects of oil spills and spill response, such as EPA's informational booklets for students and Coast Guard's educational materials promoting water pollution education for school children. The media have certain constraints during a spill-- time and space. Having pre-prepared 'shorts ' on the standard questions asked by the press

could improve the quality of information released during a spill, especially during the first few days when the public's attention is focused on the incident.

RECOMMENDATION NO. 19

Find adequate methods of funding Federal oil spill response.

- *Better methods of funding Federalized spills need to be developed.*
- *On-Scene Coordinators need the flexibility to partially fund a response with Federal funding.*
- *Efficient means of channeling funds to agencies whose services are requested by the responder, for non-Federalized spills need to be developed.*

PROGRESS

Changes to the National Response System under OPA 90 eliminated the concept of "Federalizing" a spill. Under OPA 90; the OSC "directs or monitors all Federal, state, and private actions to remove a discharge" (40 CFR 300.305(d)(l)(ii)). OPA 90 also provided a better mechanism to fund specific spill response efforts.

The OSLTF provides timely funding for removal activities in case the responsible party is unknown, unable, or unwilling to do so. The Fund provides a mechanism to ensure that time-sensitive response activities are not delayed by questions about who will pay or when money will be available. Response monies from the National Pollution Fund Center (NPFC) are available, through the OSC, to agencies whose assistance is requested by the OSC. The NPFC, a unit of the Coast Guard which manages the fund, seeks full and prompt reimbursement from the RP. In addition, the Fund Center has had workshops to train government personnel on procedures to access the fund, and the NPFC has supported other agencies with their in-house training.

RECOMMENDATION NO. 20

Streamline Federal emergency contracting procedures.

- *Contracting procedures, and existing contracts, should be periodically m reviewed to ensure that they are sufficiently flexible and are capable of supporting a variety of emergency response scenarios.*

PROGRESS

The Area Committees, in developing ACPs, are to identify all potential contracting issues that would arise in a spill response and address methods of resolving any problem areas prior to a spill. All information pertaining to this should be included in the ACP. Contracting issues are also included in the scenarios for PREP exercises. Similarly, as discussed in Recommendation no. 3, an MOA has been established among the GSA, Coast Guard, and EPA to provide logistical support in the event of an oil spill.

ACPs address OSROs available to the OSC in the Area for spill response. Coast Guard ACPs are to address Basic Ordering Agreements (BOAs) that have been established, as well as other contracting procedures for obtaining response contractor services in a spill response. ACPs address other contracting issues, including the methods for procuring such items as berthing and messing for spill responders. ACPs also address the procurement of space for command post sites for use in a spill response.

RECOMMENDATION NO. 21

Increase the commitment to prevention.

- *Greater emphasis needs to be placed on successful oil spill prevention programs, such as EPA's Spill Prevention, Countermeasures, and Control (SPCC) program, and the Coast Guard's Marine Safety program.*
- *The pressure towards budget austerity should be resisted in affirming a strong commitment to prevention.*

PROGRESS

Prevention has been a major focus among responsible Federal agencies since the *Exxon Valdez* spill. OPA 90 Title IV, Subtitle A requires a number of prevention-related initiatives. Most notably, Section 411 of OPA 90 requires installation of double hulls on tank vessels. Other regulatory initiatives are focusing on tug escorts for tank vessels in certain areas, etc.

The Coast Guard is also looking at other prevention initiatives, including the human factors aspect of spill prevention, which is being looked at in the "Prevention through People" program. EPA is enhancing its already active outreach program.

EPA has taken or is in the process of taking the following steps to strengthen its prevention program. EPA has:

- Finalized requirements for facilities within its jurisdiction to develop oil spill response plans through revisions to its Oil Pollution Prevention regulation (40 CFR part 112); these revisions also reinforce certain oil spill prevention program requirements;
- Proposed revisions to strengthen the prevention aspects of the Oil Pollution Prevention regulation were published on October 22, 1991 -- EPA is considering the extensive public comments received on the proposed revisions as well as additional information from studies and surveys and plans to renew efforts to finalize the revisions in the near future:
- Increased the number of yearly prevention inspections at facilities within its jurisdiction; and
- Established an Aboveground Oil Storage Facilities Workgroup to assess the problem of spills and leaks from aboveground storage tank facilities and determine whether additional changes to EPA's oil program are needed to address this problem.

EPA is:

- Developing a facility inspection training course to ensure a consistent nationwide approach among Regions in assessing facility compliance with prevention and response requirements of 40 CFR part 112;

- Assessing data obtained through a national survey of facilities subject to the oil pollution prevention regulation; data will be used to help make decisions about future regulatory and non-regulatory initiatives designed to improve the oil spill prevention and response program;

- Completing a congressionally mandated study of liner systems to evaluate the feasibility of using synthetic, steel, concrete, or clay liners or other means of containment to prevent, or aid in detecting, leaks from aboveground oil storage facilities; and

- Continuing to conduct outreach sessions and distribute information to members of the regulated community. For example, EPA maintains the SPCC prevention and response information line for inquiries about oil program issues.

ADDITIONAL RECOMMENDATIONS FROM THE 1989 REPORT

The majority of recommendations from the 1989 report relevant to national oil pollution issues were incorporated in the 1990 report. However, there are a few general recommendations from the 1989 report that have not been addressed in the discussion of the 1990 report recommendations. These recommendations, and the progress that has been made in implementing them, are discussed below:

- The 1989 report included recommendations for improving Federal oil spill liability, compensation, and funding. OPA 90 Title I implemented these recommendations by creating a comprehensive liability system, broadening the types and amounts of damages for which spillers are liable, and overhauling the Federal trust fund to finance cleanups and pay damages.

- The 1989 report recommended strengthening civil and criminal penalties for spillers and administrative/judicial authority to order cleanups - all of which were implemented under OPA 90 Title IV, Subtitle C.

- The 1989 report recommended further strengthening international ties to combat oil pollution. Tremendous progress has been made in this area in the last few years. Specifically, the International Maritime Organization (IMO), as discussed in Recommendation no. 4, adopted the International Convention on Oil Pollution Preparedness and Cooperation (OPRC) in 1990. This agreement establishes an international network to share knowledge, training, and resources to combat oil pollution. The OPRC contain provisions relating to international oil spill prevention, liability, contingency planning, salvage services, and other issues. The U.S. provided technical and financial support to help develop this convention, and ratified the agreement in 1992. The OPRC will formally enter into force when it is ratified by 15 nations. Additionally, new bilateral agreements and joint plans are currently under development between the U.S. and Canada, and the U.S. and Mexico.

III. SUMMARY OF RECOMMENDATIONS FOR FUTURE ACTION

This section lists all the recommendations for future action in this report. They are presented in the order in which they appear in the 1990 report.

RECOMMENDATIONS FOR FUTURE ACTION

1 Taken from Recommendation no. 1:

Despite the significant progress that has been made, it is important to continually ensure that public and private attention to the problem of oil spills does not lag. Accordingly, the NRT should regularly review public and private contingency planning, exercising, funding, and other indicators of the level of attention being devoted to the problem of oil spills.

While there is a reliable and stable source of funding for oil spill response through the OSLTF, there still needs to be an equally reliable and stable source of preparedness funding, for example, for participation in Area Committee meetings and exercises. This is necessary to sustain a long-term commitment to preparedness.

2 Taken from Recommendation no. 2:

The NRT, working in concert with RRTs, should regularly review response management systems and potential areas of weakness within the NRS and recommend necessary changes. This should include working with RRTs to review the progress of Area Committees in developing and exercising UCS in order to ensure coordination among all levels of government during a major response. Additionally, the importance of periodic reviews of responses and exercises should be emphasized, as these reviews are mechanisms to identify problems in the NRS.

3 Taken from Recommendation no. 3:

A Coast Guard protocol for SONS is currently being developed. The NRT should ensure that this protocol is consistent with the rest of the NRS and encourage EPA to continue to refine an RMS for SONS in the inland zone.

Agencies that support the OSCs during a response should be encouraged to work with EPA and Coast Guard to define their involvement in a SONS response.

4 Taken from Recommendation no. 4:

The Coast Guard should periodically update the NRT on the status of the NSFCC's computerized equipment inventory in light of domestic, bilateral, and international obligations. Of special concern are the logistical arrangements for moving equipment from its storage location to where it is required during a response.

5 Taken from Recommendation no. 5:

Because it is difficult to train unidentified volunteers in advance of a spill response, some type of training program that is expedient as well as comprehensive needs to be developed for implementation on

scene during a spill in consultation with the RRTs. The NRT should consider how this should be addressed. Any training program developed should ensure that all issues relating to the volunteers are addressed. While liability is an important issue, the health and safety of the volunteers used in a spill response is paramount.

Agencies that support OSCs need to ensure that they have a sufficient number of trained personnel to carry out roles identified in the NCP.

6 Taken from Recommendation no. 6:

The USCG and EPA should work with resource agencies to include the exercise of wildlife protection strategies in PREP exercises.

7 Taken from Recommendation no. 7:

The NRT should monitor the activities of public and private groups that are conducting research and development on spill response equipment, technology, and environmental and human health issues. Additionally, the NRT, under the OPA 90 Title VII Interagency Coordination Committee on Oil Pollution Research and Development (See Recommendation no. 17), should encourage continual industry investment in advanced research projects.

8 Taken from Recommendation no. 8:

Additional efforts should be made to work with states in order to involve all state agencies that play a role in oil spill response and to educate these agencies on the NRS and the role and responsibilities of the state RRT member.

The NRT should complete the effort begun by its Response Committee to explore the development of the One-Call system. Such a system would reduce the number of phone calls needed to satisfy Federal, state, and local requirements for immediate notification of an oil or hazardous substance release.

RRTs should provide more oversight and consistent review of the work of the Area Committees to ensure coordination and consistency between RCPs, ACPs, state plans, and local plans as indicated in the preamble of the NCP (section 300.115). Area Committees should make special efforts to ensure that the United Command structure includes representation and/or coordination with local responders. The RRTs should encourage the development of joint Federal/state contingency plans.

The NRT should encourage and support RRT review of ACPs. RRTs should provide more oversight of the work of Area Committees and timely review of ACPs to ensure:

- consistency among areas within a region and among the RCP, ACPs, and state and local plans, as indicated in the preamble of the NCP (40 CFR 300.115(a)(2));
- feasibility of plans; and
- identification and dissemination of lessons learned from ACP reviews and coordination efforts.

9 Taken from Recommendation no. 9:

Stronger effort is needed by the NRT and RRTs to foster understanding of emergency response under the NCP among high-level state and local officials to facilitate better coordination in the event of a major spill. The development of better relationships with the Governors' offices should lead to improved coordination

among state office authorities that affect spill planning and response. Additionally, it should be the responsibility of the Federal agency chairing the RRT to provide a liaison to the Governor's office to ensure a high degree of understanding of Federal actions in a response.

10 Taken from Recommendation no. 10:

Integration of industry plans into ACPs is not complete for all areas. The NRT should investigate what actions could be taken to increase the coordination and consistency between vessel and facility response plans and ACPs. Along the same lines as Area Committees, the RRTs should provide more oversight and consistent review to enable continuity and coordination. Industries, similarly, should follow the UCS in response plans to ensure representation and coordination with local responders.

11 Taken from Recommendation no. 11:

Area Committees are progressing at different rates in identifying critical socioeconomic features. The RRTs should investigate what can be done to encourage more rapid progress on this task for the Area Committees in their region.

12 Taken from Recommendation no. 12:

Much progress has been made in making automated databases available to OSCs for planning and response. What is needed now is a way to synthesize databases so that environmental, geographic, and other data can be used together to assist in planning and emergency response.

13 Taken from Recommendation no. 14:

The NRT should continue to work with the RRTs and encourage them to work with the Area Committees to develop pre-approval plans for non-traditional response techniques. Also needed is more outreach to the public on the effects of oil spills and the countermeasures.:

14 Taken from Recommendation no. 16:

Research and development activities have been strengthened in the time since the *Exxon Valdez,* but public and private resources and attention must continue to be allocated at the current levels. The NRT should consider the role it could play in evaluating interagency oil spill R & D to ensure that priority needs continue to be addressed and whatever funding is available is used effectively.

15 Taken from Recommendation no. 17:

Information management software that facilitates the work of Area Committees during spill planning and the On Scene Coordinator during a response needs more attention.

16 Taken from Recommendation no. 18:

Certain areas of media and public communication still need to be addressed. One is the preparation of short fact sheets on different aspects of oil spills and spill response, such as EPA's informational booklets for students and Coast Guard's educational materials promoting water pollution education for school children. The media have certain constraints during a spill-- time and space. Having pre-prepared 'shorts' on the standard questions asked by the press could improve the quality of information released during a spill, especially during the first few days when the public's attention is focused on the incident.

APPENDIX A: ACRONYMS USED

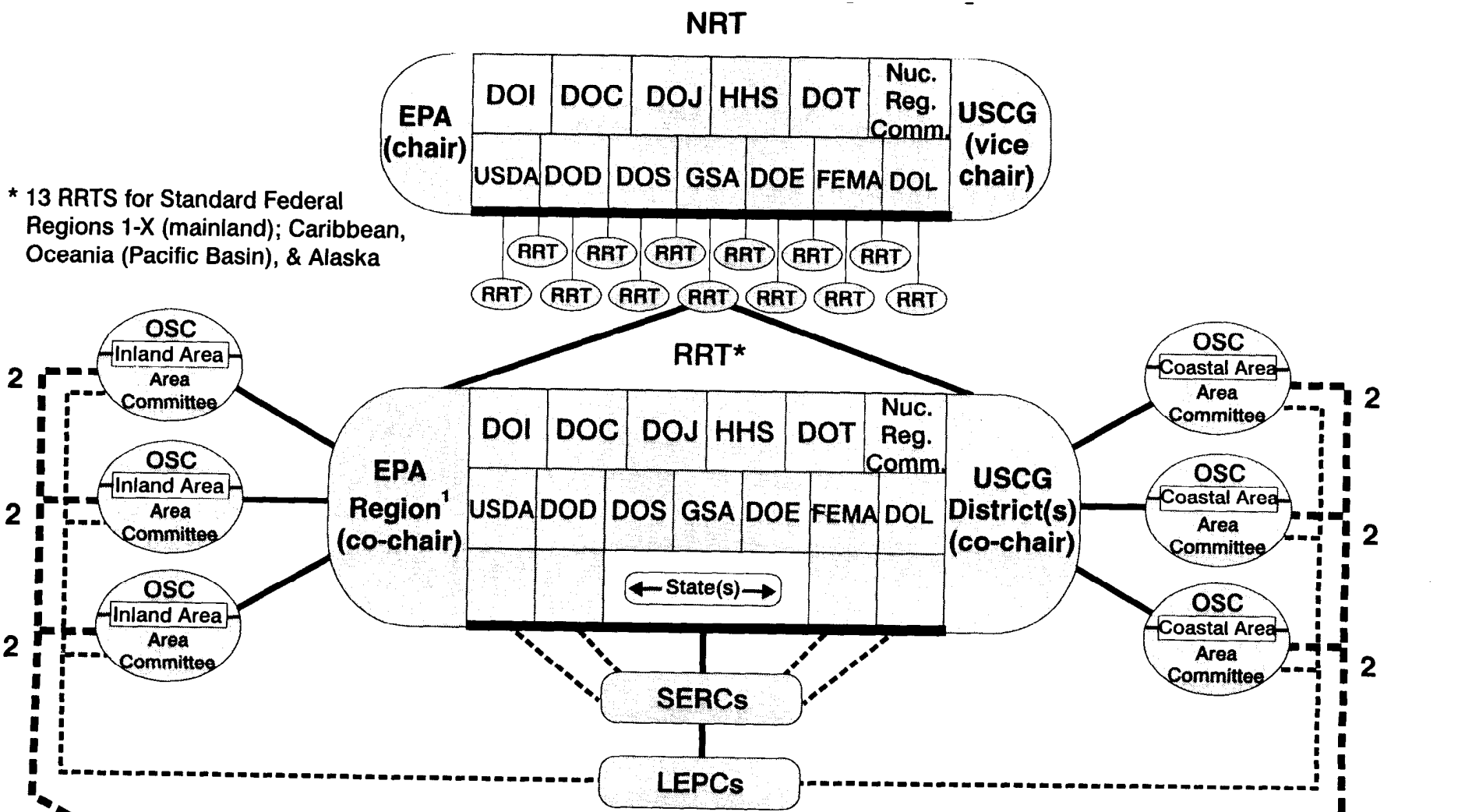
ACRONYM	FULL NAME
ACP	Area Contingency Plan
API	American Petroleum Institute
BOA	Basic Ordering Agreement
CAMEO	Computer-Aided Management of Emergency Operations
CERCLA	Comprehensive Environmental Response, Compensation, & Liability Act of 1980 (Superfund)
COFR	Certificates of Financial Responsibility
DOI	Department of the Interior
DRAT	District Response Advisory Team
DRG	District Response Group
EPA	Environmental Protection Agency
ERNS	Emergency Response Notification System
ERT	Environmental Response Team
ESI	Environmental Sensitivity Index
FRP	Facility Response Plan
GIS	Geographic Information System
GPS	Global Positioning System
GSA	General Services Administration
HAZWOPER	Hazardous Waste Operations and Emergency Response
HMTA	Hazardous Materials Transportation Act
HMTUSA	Hazardous Materials Transportation Uniform Safety Act of 1990
IMO	International Maritime Organization
ISPR	Incident Specific Preparedness Review
JIC	Joint Information Center
LEPC	Local Emergency Planning Committee
MMS	Minerals Management Service

ACRONYM	FULL NAME
MOA	Memorandum of Agreement
MSO	Marine Safety Office
MSRC	Marine Spill Response Corporation
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NGA	National Governor's Association
NOAA	National Oceanic and Atmospheric Administration
NPFC	National Pollution Fund Center
NRS	National Response System
NRT	National Response Team
NSFCC	National Strike Force Coordination Center
OPA 90	Oil Pollution Act of 1990
OPRC	International Convention on Oil Pollution Preparedness, Response, and Cooperation
OPS	Office of Pipeline Safety
OSC	On Scene Coordinator
OSHA	Occupational Safety and Health Administration
OSLTF	Oil Spill Liability Trust Fund
OSRO	Oil Spill Removal Organization
PIRO	Petroleum Industry Response Organization
PIAT	Public Information Assistance Team
PREP	National Preparedness for Response Exercise Program
QI	Qualified Individual
RCP	Regional Contingency Plan
RMS	Response Management System
RP	Responsible Party
RR1	Response Resource Inventory
RRT	Regional Response Team
RSPA	Research and Special Programs Administration of the U.S. Department of Transportation

ACRONYM	FULL NAME
SERC	State Emergency Response Commission
SMT	Spill Management Team
SSC	Scientific Support Coordinator
SONS	Spill of National Significance
SPEARS	Spill Planning, Exercise and Response System
SUPSALV	U.S. Navy Superintendent of Salvage
TAT	Technical Assistance Team
UCS	Unified Command Structure
USFWS	U.S. Fish and Wildlife Service
VRP	Vessel Response Plan
VOSS	Vessel of Opportunity Skimming System

APPENDIX B: FIGURES

National Response System Concepts: Response

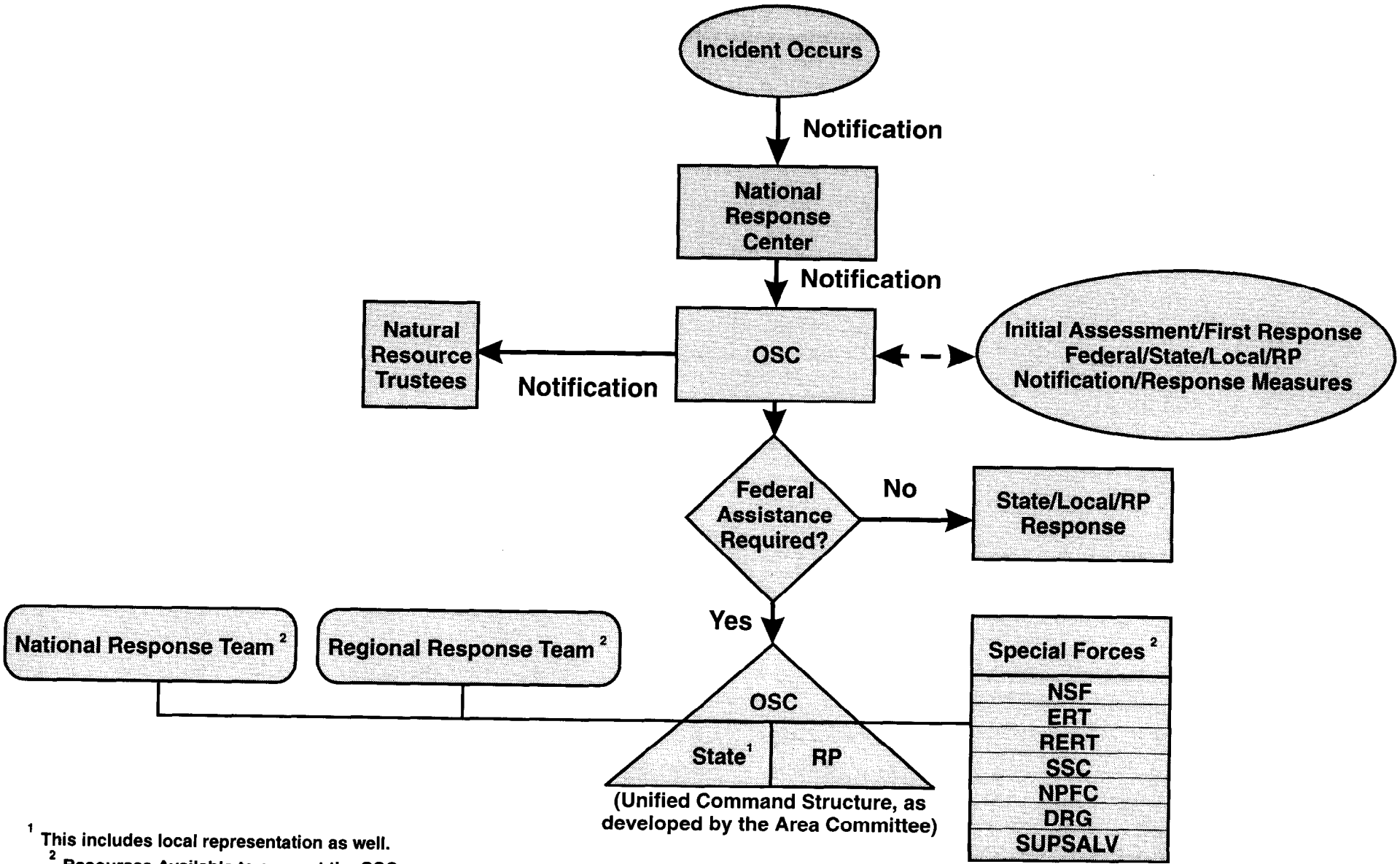


Sources of Input and Guidance to Area Committees	
Government	Non-Government
Strike Teams NPFC ERT RERT DRG DRAT SSC PIAT SUPSALV	Facility and vessel owners/operators[2] Shipping company representatives Cleanup contractors Emergency planning and response officials Marine pilot associations Members of academia Environmental advocacy groups Response organizations/officers Citizens

[1] RRT serves as the Area Committee for inland areas not covered by a separate Area Committee, unless a separate Area Committee is designated by the Regional Administrator.

[2] Federal laws require facility owner/operators to prepare a response plan.

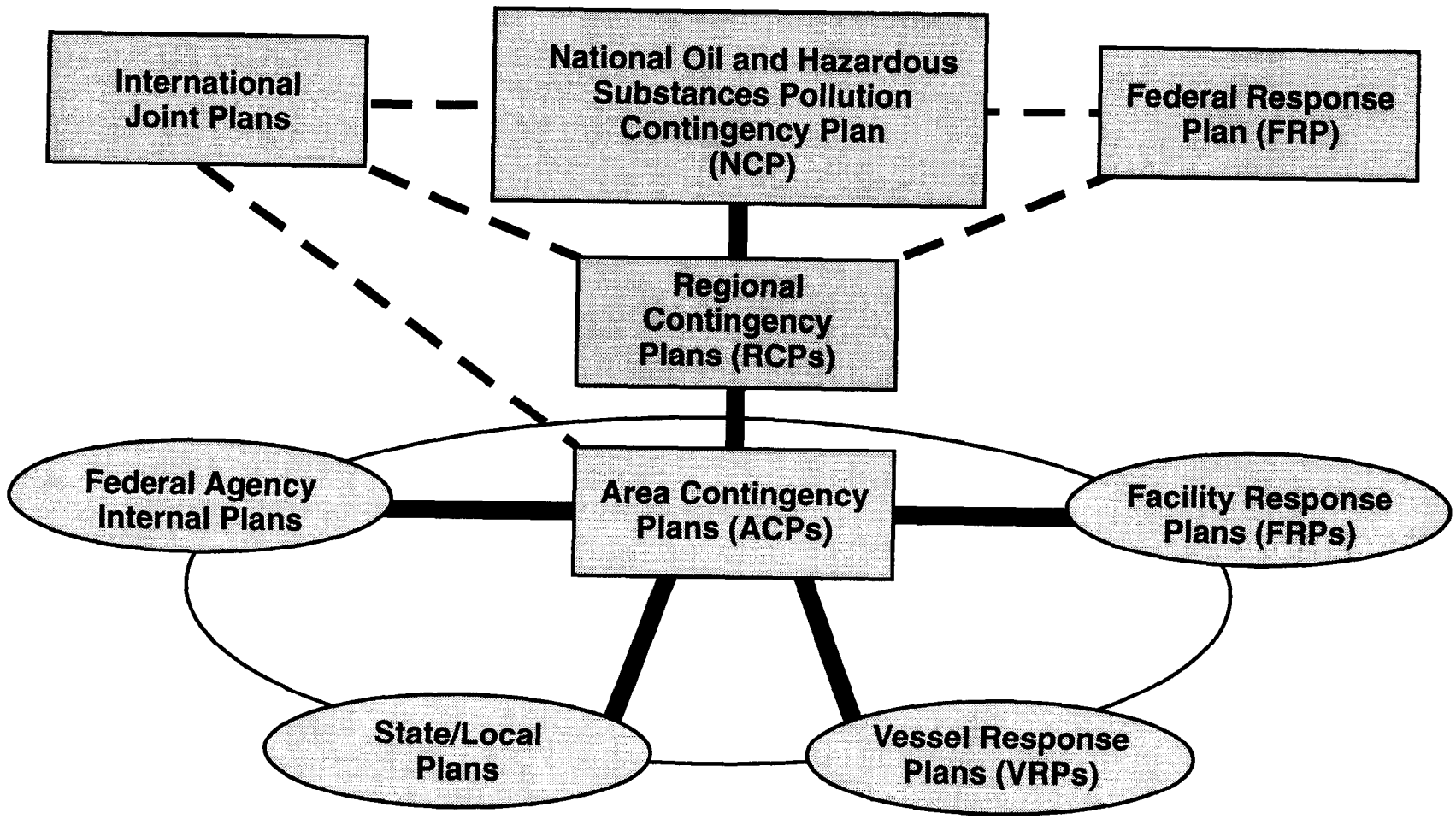
National Response System Concepts: Planning



[1] This includes local representation as well.
[2] Resources Available to support the OSC upon request.

Source: Federal Register, Sep. 15, 1994, Vol. 59, No. 178, p. 47425 (NCP Final Rule)

Relationship of Plans



Plans of the National Response System (NRS)

Points of coordination with the NRS

Plans integrated with the ACP

Source: Federal Register, Sep. 15, 1994 Vol. 59, No. 178: 47442 (NCP Final Rule)

APPENDIX C: COMPUTERIZED SPILL RESPONSE SYSTEMS

CAMEO™

CAMEO™, Computer Aided Management of Emergency Operations, is a software program originally developed by the National Oceanic and Atmospheric Administration and jointly funded by EPA to support its Scientific Support Coordinators (SSCs) and the first response community. Following the passage of the 1986 amendments to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) which included a title for emergency planning at the state and local levels, EPA requested NOAA to expand the functions of CAMEO" to include provisions for emergency planning to assist state and local communities implement this new title.

CAMEO™ has four types of modules: a chemical database, air dispersion models, templates for the entry of local information, and maps linked to demographic information. The chemical database includes over 4000 chemicals and 59000 synonyms. This database is searchable by codes common to the response community or by word strings and is linked to information critical for the first responder (e.g.,first aid, response techniques, type of protective clothing, etc.). The air dispersions models are chemical specific and include both a model for scenario analysis as well as a more sophisticated model that can incorporate site-specific information, such as weather, different release rates and source types. Templates are included for the local community to enter information required for implementation of CERCLA's Title III provisions, such as facility-reported chemical inventories from Tier II information. These templates and the results of the air modeling analyses can be linked to maps to show spatial relationships. CAMEO™ uses digital maps and demographic information provided through agreement with the US Census Bureau. The program is available in the DOS, Macintosh and Windows environments. CAMEO™ is distributed through the National Safety Council, and is available to the public.

LandView™ II

LandView™ II is a geographic reference and mapping tool, displaying EPA-regulated sites, demographic and economic information from the 1990 Census, and key environmental and geographic features of the United States. It was developed at EPA's Chemical Emergency Preparedness and Prevention Office with assistance from NOAA and the Bureau of Census. Because of the wealth of data in the LandView™ II CDs and their relatively low cost, LandView™ II is an accessible tool for comprehensive environmental and contingency planning. LandView™ II can access other data sets in a Dbase file format, so that, as environmental features are identified and accurately located, they can be added to LandView™ II as new layers for display and analysis.

LandView™ II includes a subset of the facilities, sites, and monitoring stations represented in five EPA data bases, including information on facilities that discharge into air, water, or underground; facilities that handle hazardous waste; and abandoned hazardous waste sites (Superfund). Additionally, LandView™ II includes the complete Census Bureau's 1992 TIGER/Line file information, which provides spatial characteristics of streets (with address ranges and ZIP codes), rivers, railroads, and other landmarks. It also contains 1990 demographic and economic data from the Bureau of the Census, including population and housing characteristics drawn from two census data bases, Summary Tape Files (STF) 1A and 3A.

With LandView™ II, users can view EPA and Bureau of the Census information along with different geographic boundaries including states, Congressional Districts (103rd), metropolitan areas, counties, cities, Indian lands, census tracts and census block groups. Users can also display, search for, and identify map objects and locations. They can also choose and thematically display information or identify population characteristics for any radius around a point. LandView™ II allows users to print custom maps and reports.

SPEARS

SPEARS (Spill Planning, Exercise and Response System) is a computer-based tool developed cooperatively by the Coast Guard and NOAA, and designed exclusively for use by Coast Guard OSCs to assist them in spill planning and response. SPEARS is an integrated risk analysis, planning, exercise and response tool to aid decision-making for incidents involving either hazardous substances or oil. It is a user-friendly system designed to maximize productivity and the value of contingency planning information during a response. It is a graphically-oriented tool that provides a central location for the diverse data required to respond to an incident safely and efficiently. SPEARS is intended to be used for planning, exercises, and responses.