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Oil Spill Program Update

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Center Report

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THE OIL POLLUTION ACT AT 10

The Oil Pollution Act of 1990 (OPA 90) celebrates its 10th anniversary on August 18, 2000. OPA 90 is a landmark piece of legislation addressing oil spill prevention, preparedness, and response, and providing guidance on prevention, mitigation, cleanup, and liability. This legislation was borne out of response to spills such as the Ashland and *Exxon Valdez* spills of 1988 and 1989, respectively, which demonstrated how costly and damaging oil spills can be. OPA 90 was the culmination of 15 years of debate about the need to improve U.S. laws regulating oil spill prevention, preparedness, and response.

In the ten years since OPA 90 was enacted, EPA, in cooperation with other federal, local, and state agencies, as well as private industry, has worked to prevent, prepare for, and respond to oil spills in the United States. These efforts include inspections of facilities to ensure compliance with oil pollution prevention regulations, preparation of area contingency

plans, simulated spill response exercises, outreach activities, and response to oil spills to mitigate damage to human health and the environment. This special issue of the Oil Spill Program Update presents some of the events leading up to OPA 90, EPA's progress in implementing the law, and future directions in preventing oil pollution.

Events Leading to OPA 90

The Ashland and *Exxon Valdez* oil spills helped galvanize support for OPA 90. Proponents of more stringent standards and prevention measures had been arguing for action for years, but it was widely believed that pre-OPA 90 liability was a sufficient incentive for prevention. The catastrophic events at Floreffe, Pennsylvania and Prince William Sound, Alaska showed the shortcomings of that belief.

Ashland

On January 2, 1988, a major oil spill occurred in Floreffe, Pennsylvania, when a 4-million gallon

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storage tank owned by the Ashland Oil Company, Inc., split and collapsed, releasing over 3.8 million gallons of No. 2 diesel fuel (enough to fill 430 tanker trucks). The fuel surged over containment berms, through an adjacent parking lot, and a storm sewer, which sent 750,000 gallons of oil into the Monongahela River. From there, the oil flowed directly into the Ohio River, resulting in the shut-down of 15 municipal drinking water intakes and disrupting water supplies of over 2.7 million residents of Pennsylvania, Ohio, and West Virginia. EPA, in cooperation with other agencies, monitored the cleanup process and river conditions, and performed follow-up activities, such as facility compliance and Spill Prevention Control and Countermeasure (SPCC) plan inspections.

Several key problems hampered response efforts and led to a call for reform. First, a central command post was not rapidly established onsite and the Regional Response Team was not dispatched until two days after the spill occurred. In addition, the response effort was crippled by a lack of containment and monitoring equipment. A final problem was that water suppliers did not have contingency water supplies and equipment on hand in anticipation of such an incident. As a result of those major problems, more preparation prior to future spill responses was considered a priority.

Exxon Valdez

The largest and most notable oil spill in U.S. history occurred on March 28, 1989. The *Exxon Valdez*, a 987-foot oil tanker, ran aground in Prince William Sound,

Alaska, releasing 11 million gallons of oil. The spill caused extensive damage to the environment, archaeological sites, and recreational areas. Local residents were deeply impacted by the spill, in that the fishing industry, their main source of income, declined severely following the incident.

Like the Ashland Spill, the *Exxon Valdez* spill was an illustration of how a lack of preparedness can hinder a response. Oil spill response equipment was neither readily available, nor sufficient to handle such an expansive spill. When the equipment finally arrived, it had to be transported nine hours by truck from the closest airport large enough to accept the equipment. Response teams were not able to find housing near the site, further hampering response efforts.

The spill eventually spread as far as 600 miles southwest of the site and contaminated 1,100 miles of shoreline, causing \$2.1 billion in damage. According to a report released by the *Exxon Valdez* Oil Spill Trustee Council in February 1999, only two species of wildlife affected by the spill have fully recovered. The long-term impacts are still not fully known. This incident, more than any other, instigated the call for revised spill control legislation. Together, the Ashland and *Exxon Valdez* spills demonstrated a national need for better prevention and preparedness measures.



Remains of collapsed four million gallon storage tank.

National Oil and Hazardous Pollution Contingency Plan

Before the passage of OPA 90, the National Oil and Hazardous Substance Pollution Contingency Plan (NCP) was the federal government's primary guide for preparing for and responding to oil spills. Established in 1968, the NCP is the federal government's blueprint for responding to both oil spills and hazardous substance releases. Developed by a team of federal agencies, this regulation established the background and framework for most of the response and preparedness measures enacted in the U.S. It was developed as a result of the need for a national response capability and to establish a coordinated hierarchy of responders and contingency plans. OPA 90 instituted a shift in contingency planning from the national level to a more regional approach. Rather than attempting to rely on a national plan, OPA mandates the development of several area contingency plans with input from state and local representatives.

The NCP was revised in 1973, following enactment of the Clean Water Act of 1972 (CWA), to include information for responding to hazardous substance spills. Then, after the passage of Superfund in 1980, the NCP was modified to include releases at hazardous waste sites requiring emergency removal actions. The latest revision was published in 1994 to reflect the provisions of OPA 90.

What is the Oil Pollution Prevention Act of 1990?

The Oil Pollution Act of 1990 (OPA 90), landmark legislation addressing oil spill prevention and response and providing guidance on prevention, mitigation, cleanup, and liability, was signed into law on August 18, 1990. For several years, similar proposals had been unsuccessful in garnering support, but the widely publicized Ashland and Exxon Valdez spills and their effects solidified support for the legislation. OPA 90 expanded oil spill prevention and preparedness activities, improved response capabilities, ensured that entities responsible for oil spills pay for spill costs, provided an additional economic incentive to prevent spills through increased penalties and enhanced enforcement, established an expanded research and development program, and established the Oil Spill Liability Trust Fund administered by the U.S. Coast Guard. The targets of OPA 90 are to reduce the number of spills and the quantity of oil

spilled, increase response effectiveness, and reduce the magnitude of damage caused by oil spills.

OPA 90 has several major provisions. The first is an increase in the liability limits and penalties for oil spills in an attempt to provide a financial incentive for the oil industry to improve spill prevention and preparedness. The second component is to ensure that the federal response system is prepared to respond to spills of any size. Finally, OPA 90 mandates implementation of prevention and preparedness measures.

Expanded Liability

Before OPA 90 was written into law, responsible parties were only liable for response costs that the federal government incurred in responding to and cleaning up a spill. The Act expanded liability to include costs and damages incurred by local governments, agencies, and private parties. OPA 90 adopts the liability provisions of the CWA. It states that the owner or operator of a vessel or facility from which oil is discharged, or which poses the substantial threat of discharge of oil, when defined as a responsible

party, is liable for damages and any removal costs incurred in a manner consistent with the NCP. Responsible parties may be liable for six categories of damages under OPA 90:

- 1) Natural resource damages including the reasonable costs of assessing these damages;
- 2) Real or personal property damages;
- 3) Substantial loss of natural resources;
- 4) Net loss of tax and other revenue;
- 5) Loss of profits or earning capacity; and
- 6) Net cost of additional public services provided during or after removal actions.

OPA 90 also extended the liability limits and financial obligations of responsible parties that were set by the CWA. It provided for larger fines for discharges of oil or other hazardous substances, or for failure to comply with a federal removal order. OPA 90 set liability limits for tank vessels from \$2 million to over \$10 million, depending on the size of the vessel. Maximum liability for offshore facilities is the total of removal costs plus \$75 million, while liability for onshore facilities and

OPA 90 does establish the following conditions under which liability is unlimited:

- **Discharges caused by gross negligence, willful misconduct, or violation of applicable federal safety, construction, or operating regulation;**
- **Failure to report a spill; and**
- **Failure or refusal to cooperate in a removal action.**

OPA 90 does not preempt state laws, which may impose additional liability, penalties, or cleanup requirements.

deepwater ports is \$350 million.

Extended Spill Prevention and Preparedness Measures

Along with increased financial liability, OPA 90 also mandated that some vessels and inland oil facilities develop individual response plans. These plans require the owners or operators of vessels and non-transportation-related oil storage facilities to plan for the worst case spill scenario and develop strategies for responding to the spill and the threats that it may pose to human health and the environment. EPA has implemented this requirement by mandating facility response plans (FRPs) for certain oil facilities. If an oil spill from a facility might cause substantial environmental harm, it must have a plan that demonstrates that the facility is prepared to respond to a worst case scenario spill event. By raising oil spill planning and response awareness, FRPs can aid in identifying problems and help to prevent spills. EPA has jurisdiction over non-transportation-related facilities for preparation and implementation of response plans; DOT has jurisdiction over vessels and transportation-related facilities.

OPA 90 mandated enhancements to the National Response System and the National Response Center (NRC) to keep track of oil spill response equipment, provide technical assistance in the event of a spill, and perform administrative functions related to other requirements of the Act. The NRC is the



Skimmers, like the one pictured here, are used to collect spilled oil.

sole federal point of contact for reporting oil and chemical spills and is under U.S. Coast Guard (USCG) oversight. Regionally, OPA 90 required the formation of USCG District Response Groups to maintain the equipment and provide technical assistance during spill events.

In addition, OPA 90 required Area Contingency Plans (ACPs) and Area Planning Committees. These Committees are made up of members of appropriate local, state, and federal agencies and are responsible for developing the contingency plans that apply to their geographic region. The goal of establishing ACPs is to create a coordinated network of response resources to allow responders to be aware of and use the best available personnel and equipment in the event of a spill.

Additional OPA 90 Provisions

OPA 90 also established an Oil Spill Liability Trust Fund administered by the USCG to pay for removal costs and damages not recovered from responsible parties. Fund monies are acquired from a five-cent per barrel tax on oil. This tax is not currently in

effect, because the fund balance is large enough to meet current needs. However, it may be reinstated in the future if there is a need for additional funds. On-Scene Coordinators (OSCs), who are responsible for overseeing federal activities at spill sites, have access to these funds in the event of a spill. Other federal, state, and local government agencies hired by the OSC are eligible for reimbursement of their costs. The Fund will pay contractors through the federal procurement process, but both federal trustees and claimants must submit claims to the Fund for adjudication.

Research and Development

Aiming to improve oil spill response in the long term, OPA 90 established provisions for an interagency research and development (R&D) program in oil pollution and spill response. Some of the topics that the OPA 90 R&D program have covered include technologies, such as booms and skimmers; chemical and biological treatments; and remote sensing and monitoring of spills and spill response activities via Geographic Information Systems and other innovations.

FIRST 10 YEARS OF OPA 90

Since the passage of OPA 90, EPA has worked with states, local governments, tribes, and the oil industry to implement the provisions of the Act. These efforts have been in three major areas: prevention, preparation, and response.

Area Contingency Plans

Area Contingency Plans (ACPs) are the cornerstone of preparedness efforts under OPA 90. The ACP provisions require Federal, State, and Local agencies to prepare for a worst case discharge with the intent of mitigating such a discharge or preventing it from reaching navigable waters of the United States. These plans were mandated in order to identify and plan for joint response efforts, including appropriate procedures for mechanical recovery, dispersal, shoreline cleanup and protection of sensitive environmental areas.

Under OPA 90, ACPs are developed by Area Committees made up of representatives of federal, state, and local government agencies. ACPs are developed under the direction of a Federal On-Scene Coordinator working with State Emergency Planning Committees (SERCs), and Local Emergency Planning Committees (LEPCs). Each ACP contains information necessary to focus on preparedness and response activities in its specific area. The process for developing ACPs ensures that the concerns and resources of many localities are accounted for in the plan. For example, LEPCs are concerned

with smaller areas than Area Planning Committees are, but the planning process takes input from, and integrates the contributions of multiple LEPCs. Local participation also allows local planners to make their plans consistent with the ACP that covers their locality. The goal of coordinated planning is to prepare federal, state, and local agencies, as well as private sector responders for response. The planning process helps each involved agency understand the skills, resources, and procedures of other agencies.

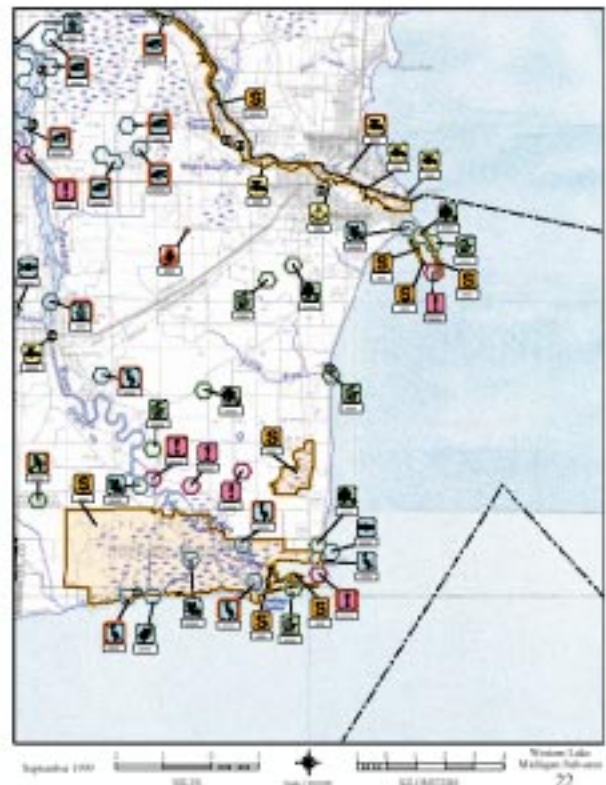
SPCC Expedited Enforcement Program

As EPA continues to implement OPA 90, it develops innovative prevention methods. Because enforcement of Oil Pollution Prevention Regulations and promoting compliance are EPA's primary prevention tools, the Oil Spill Program has worked to make enforcement more efficient through the SPCC Expedited Enforcement Program (SEEP I) and the Spill Expedited Enforcement Program (SEEP II). SEEP I allows non-negotiable, reduced penalties (\$400 to \$2,500) for violations identified during SPCC inspections. The program allows for prompt resolution of easily correctable violations, and utilizes the much

more resource intensive traditional administrative enforcement procedures only when warranted by more serious violations. Under SEEP II, the same expedited process is used for smaller spills (less than 100 Bbls) where an adequate or superior clean-up has been completed. The streamlined enforcement process allows prompt action on spills with minimal cost and aggravation to both the owner/operators and EPA.

Both programs were originally piloted in Region 6 and have proven highly effective for achieving higher compliance rates in the regulated community. Over 100 Expedited Enforcement Actions were issued in Region 6 during FY 1999 and 130 more are expected by the end of FY 2000. Overall, the OPA Expedited Enforcement

Maps help to identify areas sensitive to oil spills.



pilots have demonstrated a practical, low cost alternative to traditional enforcement, and have potential for use across the Regions.

Preparedness Exercises

Oil spill training is a vital element in EPA's oil spill prevention and preparedness efforts. EPA has utilized the National Preparedness for Response Exercise Program (PREP) to provide guidelines for compliance with OPA 90's pollution response exercise requirements. In 1994, they began requiring oil spill response training for facilities that are required to prepare a facility response plan. Facilities are required to develop and implement an oil spill drill/exercise program that includes both announced and unannounced tabletop and deployment exercises, as well as participation in larger area drills and exercises. In addition, EPA has been conducting periodic unannounced drills at facilities across the country. During the drills, they work with the facility to roll out equipment, contact response contractors to ensure their readiness, and ensure that personnel are familiar with the components of their facility response plan.

Technology

EPA Oil Spill Program staff in Regional offices and at headquarters have adopted new technologies to serve the program's needs and further the goals of OPA 90. One of EPA's ongoing planning and response roles is to manage the NCP Product Schedule which

lists chemical and biological agents that can be used in oil spill response. EPA regularly updates the NCP Product Schedule.

In addition, EPA participates in research efforts to advance planning and response capabilities and drafts technical papers analyzing response technologies. EPA's technology improvement efforts have addressed issues such as bioremediation—using microbes to break down spilled oil; in-situ burning—burning spilled oil off surface waters; and, mechanical containment devices, such as booms, skimmers, and sorbents.



Response teams work together on a cleanup effort.

In addition, the Oil Spill Program employs up-to-date information technologies, such as Geographic Information Systems (GIS), and Internet/Intranet technology to advance planning and response. Rather than relying solely on paper maps and documents, most EPA regions have developed GIS applications to aid their planning and response. These systems help planners and responders locate potential spill sources, sensitive environments, access routes to spills, and other important geographic features more quickly.

Finally, the Oil Spill Program has developed an Internet web site to support its outreach efforts and Intranet web sites to facilitate communication and collaboration among the Regions.

Response Efforts

Shortly after the enactment of OPA 90, a Colonial Pipeline Company pipeline ruptured in Fairfax County, Virginia, releasing more than 400,000 gallons of oil. The March 1993 Colonial Pipeline spill was one of the largest inland oil spills in recent history, affecting

nine miles of Sugarland Run and the Potomac River. However, the spill response closely followed the guidelines set forth by OPA 90, in that the National Response Center was contacted immediately to coordinate with the Regional Response Team and the Responsible Party to implement Colonial Pipeline's response plan. Colonial Pipeline hired

contractors to perform the containment and recovery actions, which involved placing booms to try to contain the oil, then using skimmers, vacuum trucks, sorbents, and a temporary pipeline to recover the oil. During cleanup, EPA received citizen complaints about fuel odors in the area. As a result of these complaints, they closed Great Falls National Park and temporarily evacuated 41 residents while monitoring air quality to identify and remedy any health risks.

The response demonstrated the smooth operation of the National Response System, in which

federal, state, and local authorities cooperated to use personnel and equipment efficiently. A suggestion made after this incident was that personnel communicate better with those downstream of a release. This spill also provided the opportunity to examine and improve response technology.

More recently, Maryland's worst oil spill in over a decade occurred when PEPCO's Chalk Point power plant experienced a pipeline rupture, releasing 110,000 gallons of petroleum near the Patuxent River. PEPCO officials notified EPA of the spill and initiated cleanup on the night of the spill, beginning to place containment booms around the creek. Three EPA OSCs were dispatched to the site early the following morning, but initial cleanup efforts were hampered by a shortage of equipment, such as the proper type of booms and drum skimmers to remove floating oil.

The Chalk Point Spill is the most extensive cleanup effort in Region III's history. EPA dispatched six OSCs, two community involvement coordinators, the removal program section chief, and various other officials to the scene to oversee cleanup efforts. The spill illustrates the need for coordinated, planned response.

Outreach

In order to keep stakeholders and the public informed of Oil Spill Program activities and to encourage partnership among all interested parties, the Oil Spill Program engages in a variety of outreach activities. These include publication of newsletters and develop-

ment of guidance documents to facilitate industry compliance with oil pollution prevention rules. These documents are featured on the Oil Spill Program web site, www.epa.gov/oilspill.

Sponsorship of the biennial Freshwater Spills Symposium provides a forum for discussion of issues regarding inland oil spills and the opportunity to exchange information on the unique problems of spills in freshwater environments. The Symposium brings together representatives of state, tribal, and local governments, other federal agencies, industry, environmental groups, academia, and members of the international community to share ideas and innovations in preventing, preparing for, and responding to inland area oil spills.

Core Oil Spill Program

In order to ensure that the provisions of OPA 90 are applied consistently throughout all EPA Regions, EPA has developed a Core Oil Spill Program. The program is a joint effort of EPA headquarters and all ten Regions to help define fundamental Oil Spill Program activities nationwide and to ensure that EPA maintains a well-trained, dedicated staff with the necessary resources to prevent, prepare for, and respond to oil and hazardous substance incidents which threaten the waters of the United States.

NEXT 10 YEARS OF OPA

Although the EPA Oil Spill Program has made significant gains in implementing OPA 90, many challenges remain. The program

faces aging oil storage and transportation infrastructure, and an ongoing need to ensure compliance at regulated facilities. Over the next several years, the Oil Spill Program will continue to address these needs despite limited resources.

Aging Infrastructure

During the 1990s, lower oil prices and other market forces have led the oil industry to merge many of its facilities into increasingly large corporations. As a result, the oil industry frequently leaves its most unprofitable facilities to be run by smaller and perhaps more marginal operators. Further, as the cost of plugging wells becomes prohibitive, many of these sites will require EPA intervention.

Additionally, many aging facilities are in need of repair, thereby increasing spill risk. Likewise, the transportation infrastructure (e.g., railways, tank cars, etc.) is aging. Many major spills in recent years have been pipeline spills, indicating that aging infrastructure is a critical problem.

Continued Cooperation with the Office of Pipeline Safety

Although EPA responds to spills from all sources, the Department of Transportation's (DOT) Office of Pipeline Safety (OPS) regulates most pipeline operations. Five major pipeline spills have occurred within the past year, alerting EPA, lawmakers, and the industry that changes are needed. The most recent spill occurred in April 2000 when a PEPCO pipeline released 129,000 gallons of oil into a marsh at Chalk Point, Maryland. Just a



Workers repair a pipeline following an oil spill.

month earlier, a spill of 564,000 gallons of unleaded gasoline contaminated one-third of Dallas, Texas' public water supply. In February, 67,000 gallons of crude oil seeped from a pipeline onto Pennsylvania's John Heinz National Wildlife Refuge, threatening some of the nation's most severely endangered species. Yet another pipeline ruptured in January, releasing 500,000 gallons of crude oil near the Kentucky River, which provides water to the Town of Lexington. As the result of a pipeline rupture, in June 1999, 277,000 gallons of gasoline were released, leading to an explosion and fire in Bellingham, Washington. The incident resulted in three deaths, severe environmental damage, disruptions in local water supplies, and millions of dollars in property damage.

The Office of Pipeline Safety has reported a 38 percent increase in the amount of oil spilled from 1996 through 1999, compared to 1991 through 1995. EPA has a long history of cooperation with OPS as evidenced by a series of agreements covering areas of shared jurisdiction. EPA will continue to work with OPS to promote safety and preparedness for spills.

Maximization of EPA Resources

EPA's Oil Spill Program budget has been straightlined at \$15 million for the past several years, but the program has also experienced an increase in its oil spill response workload. Oil spill

response costs, which should be paid from the reimbursable emergency portion of the Oil Spill Liability Trust Fund, have in recent years required about 20 percent of the Oil Spill Program's personnel resources. However, in recent years EPA has in part funded its personnel costs for oil spill response work from its annual appropriations, thus diminishing the resources available for oil spill prevention and preparedness activities. Beginning in FY2001, EPA plans to maximize the use of OSLTF reimbursable funds for oil spill response work, thereby freeing funding for its appropriated prevention and preparedness activities.

Innovative Approaches

The Program's main priority continues to be response to spills or threats of spills. The Program will work to keep all program areas viable, and continue to explore innovative approaches to oil spill prevention, response, and enforcement. One new approach is fuels management. Fuels management focuses on the entire oil life cycle from production, through refining, storage, and distribution. It encourages regulatory agencies that address differ-

ent parts of the life cycle to understand each other's functions; promotes better understanding of the oil industry among all regulators; and helps to identify regulatory gaps, inconsistencies, and shortcomings in implementation.

Increased Program Awareness

Another Program priority is to help the program grow and prosper via an increase in internal and external awareness of Program responsibilities and accomplishments. The goal is to improve the Oil Spill Program's outreach on program accomplishments to EPA management, elected officials, state and local governments, the public, and other stakeholders. Headquarters and Regional managers will work together to ensure that each Region works toward the overall goals of the Oil Spill Program, while addressing specific Regional priorities and issues in prevention and preparedness activities. Through OPA 90, EPA is finding the best ways to ensure maximum prevention, preparedness, and response to oil spills.

About The Update

EPA's *Oil Spill Program Update* is produced quarterly, using information provided by EPA Regional staff, and in accordance with Regions' information needs. The goal of the Update is to provide straightforward information to keep EPA Regional staff, other federal agencies and departments, industries and businesses, and the regulated community current with the latest developments. The Update is available on the Oil Program homepage at www.epa.gov/oilspill.