

## **FY 2004 POLLUTION PREVENTION TEAM AWARD NAVY REGION NORTHWEST**

### **INTRODUCTION**

Puget Sound is the U.S. Navy's third largest fleet concentration area and is home to approximately 26,000 active duty members, 16,000 civilian employees, 6,000 drilling reservists, 80,000 family members, and 45,000 Navy retirees. Region installations and facilities occupy more than 28,000 acres of land. As the Navy's Regional Environmental Coordinator in the ten-state area of Washington, Oregon, Idaho, Alaska, North and South Dakota, Montana, Colorado, Utah, and Wyoming, Navy Region Northwest (NRNW) provides coordination of environmental support for operating forces throughout the region. In a typical year, 285,000,000 gallons of oil are transferred throughout the region.



### **BACKGROUND**

The NRNW Spill Prevention and Response Team (the Team) has enjoyed a positive reputation with the U.S. Coast Guard (USCG) and Washington Department of Ecology (WDOE) as a result of its collective and proactive approach to preventing spills in the Pacific Northwest. Environmental protection is stressed as a high priority when conducting all operations. Emphasis is placed on identifying spill risks, implementing best management practices, and providing proper training for all personnel involved in the handling or transferring of oil and hazardous materials. Our continuing goal is zero discharge of oil into the environment; all transfers, whether fuel, bilge water, or compensating ballast water must follow the same strict transfer procedures.

### **TEAM COMPOSITION**

The Team consists of a core group of civilian and military environmental and operations personnel from facilities located in the NRNW area of responsibility (AOR). Team members include: NRNW; Puget Sound Naval Shipyard & Intermediate Maintenance Facility (PSNS & IMF); Naval Base Kitsap; Naval Magazine Indian Island, Naval Station Everett; Naval Air Station Whidbey Island; Fleet and Industrial Supply Center (FISC), Puget Sound, Manchester Fuel Department; Naval Undersea Warfare Center, Keyport; and Engineering Field Activity, Northwest.

### **ACCOMPLISHMENTS**

#### **1. PROGRAM MANAGEMENT**

NRNW has standardized and streamlined prevention and response practices throughout the region. Development of a trained team provides a core group of experienced personnel ready to respond to all types of spills either at or away from naval activities. In concert with the Team, the NRNW Navy On-Scene Coordinator (NOSC) has gone far beyond traditional planning and policy efforts. The NOSC, the program manager (PM), and environmental staff are closely involved in spill investigations and prevention policymaking. The PM has worked closely with all commands to ensure they understand the requirements, provide standardized prevention and response guidance to all activities and vessels, and create an efficient and well-trained spill

response organization. NRNW has partnered with local regulatory and response agencies to develop an intimate working knowledge of the Incident Command System (ICS) and the Navy's role in spill response, as well as guide rulemaking and policy decisions, to ensure they don't encroach on the Navy's mission.

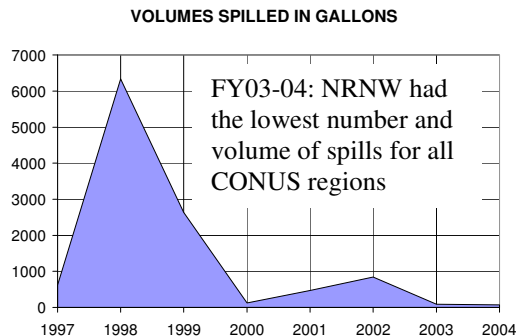
NRNW has several facilities regulated by various oil and hazardous substance (OHS) spill prevention and response planning regulations. Nine facilities require contingency plans under OPA 90, and six of these are regulated as complex facilities. As a process improvement and cost-saving measure, NRNW has consolidated the regulated OHS facilities into one regional Integrated Contingency Plan (ICP), written in-house by the PM. This plan meets all regulatory requirements and significantly reduced the update burdens for each facility. In addition, detailed field guides were developed for each facility to provide key emergency information quickly to responders. Table 1-1 depicts region wide savings of \$233,700 obtained during FY03-04.

Table 1-1: NRNW Cost Savings

Reduced plan updates	\$68,000
Equipment	\$49,900
Drills	\$64,400
Training	\$51,400
<b>Total</b>	<b>\$233,700</b>

## 2. SPILL PREVENTION

In 1998 and 1999, NRNW spilled nearly 9000 gallons of oil. Starting in 2002, a regionalized approach to spill prevention and response was initiated that has helped reduce the quantity of oil spilled during FY03 and FY04 to record lows of 69 gallons in FY03 and 80 gallons in FY04. During FY04, approximately 285,000,000 gallons of oil was transferred in the NRNW AOR.



For spills attributed to facility personnel, there were only nine oil spills for a very low total of 15 gallons in FY04. This shows that improved spill prevention practices, such as secondary containment, Operational Risk Management (ORM), and increased monitoring of all transfers, are being fully implemented. Additionally, training and awareness for operations is having a direct and positive effect on pollution prevention.

NRNW works with all vessels and facilities on spill prevention issues. Regional guidance is provided on standard spill prevention requirements. In addition, the Team meets with ship's force to discuss regional spill prevention and response practices and assist them in meeting the requirements.

During the last couple years, NRNW has implemented a number of prevention projects at various NRNW facilities. These projects have led to cost savings, reduced pollution, and increased prevention opportunities. Some examples include:

- Propeller Hydraulic Oil Collection Device – The collection device is a reusable rectangular funnel (made from non-porous, flexible Herculite) that attaches to the propeller of a P-3 and allows the hydraulic oil drained from the Constant Speed Prop to be contained and directed to a container through a drain valve and hose at the bottom of a funnel. This prevents

spillage and resultant clean up work during fluid change and is projected to save \$153,120 over the next ten years.

- Automated Fuel Handling Equipment (AFHE) – With millions of gallons of oil transferred each year, the FISC, Puget Sound, Manchester Fuel Department has potential for a large magnitude spill. As an example of proactive prevention planning and to minimize the potential for operator error, all bulk storage tanks are equipped with the AFHE computer-based system. AFHE allows for remote monitoring and operation of valves and pumps, and provides inventory and data management capability. The Fuel Control Operator can control the movement of fuel through the operation of actuated valves and provide the operator with tank inventories, flow rates measured using meters and tank level readings, product temperature, pump vibration, temperature alarms and low/high level conditions. Tanks are configured with audible and visual high and low level operating alarms that alert the Operator when level set points have been reached.



- T-56 Engine Wash Capture System – The T-56 engine wash process requires a system to capture the rinsate coming off the engine from both the exhaust pipe and drain holes in the engine nacelle. This system has a mobile trailer-mounted tank that contains all the necessary attachments and devices to effectively capture the engine wash. This effectively eliminates potential spills.
- Double-hulled Barges – NRNW is currently procuring double-hulled barges to replace older single-hulled vessels, and has taken possession of its first double-hulled fuel barge. Newer technology will reduce operating and maintenance costs, and the double-hulls dramatically reduce risk of rupture in the event of a grounding or collision.
- External No Foam Unit – Crash Fire Rescue (CFR) trucks are required to perform Aqueous Film-Forming Foam (AFFF) discharge tests to verify that the AFFF delivery system is functioning properly. Currently, the CFR trucks are tested twice a month and AFFF containing wastewater is discharged into the sanitary sewer system. Due to permit requirements, this process will no longer be allowed. This project will retrofit six CFR trucks with an External No Foam Test System. The External No-Foam Test System will allow testing of the CFR trucks while eliminating the release of AFFF into the environment.
- Spill Tracking Database – NRNW maintains a web-based spill-tracking database that is utilized by all facilities in the region. Facilities input into the system both reportable and non-reportable water and land-based spills. A major component of the system is the ability for facilities to provide root cause analysis information concerning spills. This information is viewable by all regional spill program managers and is a good source for reviewing lessons learned from other incidents. NRNW is also able to quickly provide data on the number of spills, quantities and product type, as well as developing strategies for dealing with spill trends.

### 3. ORIENTATION TO MISSION

The Team's strong prevention program (including update and implementation of SPCC plans) demonstrates to regulators that the Navy is serious about spill prevention. This has a positive affect on the mission by eliminating fines, reducing resources spent on responding to Notices of Violation (NOVs), and minimizing resources spent on cleaning up spills. The Navy's limited resources can then be spent on other mission-related issues.

- Limitations on fuel transfers, booming of all ships when in port, increased oversight of transfers, additional watchstanders, and ORM briefings are just some of the things that have contributed to our decline in spill amounts. Nighttime transfers are not allowed unless operationally necessary, and only then when approved by the Regional Commander. If approved, any ship that has to fuel after dark must be double-boomed. Coordination of equipment procurements and increased cross training between facilities has also contributed to the reduction of spills.
- The creation of a single Integrated Contingency Plan (ICP) covering all installations and contingency planning regulatory requirements has streamlined our notification and response processes and ensures standardization in response reporting and procedures for all vessels that come to NRNW ports. Due to the reduction in spills, the Navy has dramatically improved the public and regulatory communities perception of our impact on the environment, and who, in turn, holds NRNW up as an example of a proactive prevention program.

### 4. TRANSFERABILITY

Many of the spill prevention and response practices and standards adopted in NRNW have been or could be shared not only throughout the Navy, but industry as well. It is well known in the



Setting boom prior to fueling USS Sacramento at Manchester Fuel Depot

regulated community that our prevention program is effective in reducing spills. As part of the public's reaction to a recent non-Navy spill in Washington, a legislative bill was introduced to get regulators to adopt some of our spill prevention practices. NRNW is serving on an advisory committee to address these new transfer standards. Other areas where the Team has shared information and program ideas include:

#### **“State considers adopting Navy strategies to avoid oil spills”**

By R. McClure  
Seattle Post-Intelligencer  
January 22, 2004

- Incident Command System (ICS) Guidance Manual – As part of preparation for a worst-case discharge exercise, NRNW purchased unlimited Navy-wide printing and distribution rights to a detailed ICS Guidance Manual that has been provided to responders throughout the Navy. In addition, the manual is currently being revised to meet National Incident Management System requirements. This ICS manual is a quick-reference guide from which any Navy responder can easily determine the specific responsibilities of a position within the ICS structure, and is an invaluable training tool and resource for a real event. The manual has already been distributed to several other Navy regions.

- Regional Oil Spill Working Group (ROSWG) – NRNW has become an active member of the San Diego based ROSWG and shares local prevention measures with the group. We share lessons learned, improved prevention practices, and root cause analyses with other team members to promulgate Navy-wide. As an active member of this group, we contribute to long term ORM goals for minimizing oil pollution incidents.
- Ad Hoc Equipment Workgroup – NRNW participates in the Northwest Ad Hoc Equipment Workgroup, lead by the local USCG District. This group investigates new prevention and response equipment. This workgroup also developed an online listing of all northwest area response equipment (federal and private), and keeps this information maintained for use by resource personnel in a spill or drill. The group assembled equipment lists into an Excel spreadsheet that are used on a weekly basis for drill and spill applications. This tool assists the Incident Command System’s Operation, Planning, and Logistic Sections to assemble, track, and order specialized response equipment. This is a great tool for the ICS Situation Unit, and may be exported throughout the nation.

## 5. STAKEHOLDER INTERACTION

NRNW and other federal, state, and local agencies are tasked with responding to spill incidents throughout the Pacific Northwest. Specifically, the USCG, WDOE, the National Oceanographic and Atmospheric Administration (NOAA), and the NRNW Team meet frequently in various workgroups and committees including:

- Regional Response Teams (RRT) – NRNW is an active member of both the Alaska and Region X RRTs. Regional Response Teams provide coordination of preparedness activities prior to a pollution incident by addressing regional and international issues and providing guidance to industry, State Emergency Response Commissions, Tribal Emergency Response Commissions, and Local Emergency Planning Committees.
- Northwest Area Committee – The Area Committee is given the responsibility for working with the response community to plan for joint response efforts that include spill containment, mechanical recovery, use of dispersants, in-situ burning, shoreline cleanup, protection of sensitive areas, and protection, rescue, and rehabilitation of fish and wildlife.
- Oil Spill Advisory Committee – An advisory group lead by Washington Department of Ecology that provides input and advice to spill programs on current oil spill prevention, preparedness, and response issues.
- Oil Spill Rulemaking Committee – Committee developed to amend and consolidate the vessel and facility oil spill contingency plan requirements into one updated rule, to include Washington’s more stringent contractor hiring, drill, and exercise requirements. The rule updates are necessary to build on the last ten years of successes, improvements, and lessons learned in spill preparedness.

- Oil Transfer Operations Advisory Committee – An advisory group of key stakeholders directed to study oil transfers in Washington and develop regulations to help prevent and prepare for oil transfer spills. The state legislature imposed a new requirement to develop improved prevention rules by June 2006, and is considering pre-booming or other alternative measures to safeguard oil transfers.

NRNW has partnered on a number of spill response and prevention-related projects. These projects have been instrumental in solidifying the relationship between the Navy and various regulatory and stakeholder groups. Some projects include:

- Environmental Sensitivity Index (ESI) Maps – The NRNW Team has partnered with NOAA, the U.S. Environmental Protection Agency (EPA), USCG, WDOE and Concurrent Technologies Corporation (CTC) to develop an integrated spill response module that encompasses all the mapping and other data that spill responders need; the data is currently housed in many different areas. Tasking includes developing a new set of ESI maps for Puget Sound and the Strait of Juan de Fuca, which are due to be completed in March of 2005. These maps will provide a link between new GIS ESI and shorezone data.
- Dalco Passage Spill – Navy Region NW assisted in the response to a 1,000-gallon heavy oil spill that spread throughout Puget Sound, originating at Dalco Passage near Commencement Bay. Navy crews worked under the direction of the USCG and WDOE, and alongside spill response contractors, to skim, deploy booming strategies to protect sensitive areas, and provide transportation for federal and state assessment teams. The local USCG District and WDOE conveyed much appreciation for the responsiveness and great work of the Navy crews engaged in the clean up.
- Joint Response Exercises – Shortly after the Dalco Passage spill, NRNW hosted a three-day joint response equipment deployment exercise at Naval Magazine, Indian Island. Local



PM working with WDOE, DF&W, and USCG on joint equipment deployment drill that evaluates local booming strategies.

Navy commands, USCG, WDOE, Washington Fish & Wildlife, Army Corps of Engineers, and response contractors all deployed personnel and equipment to test various skimming and boom deployment strategies around Indian Island, site of many extremely environmentally sensitive areas. The exercise was a great success, refining many communication and boom deployment strategies. Local Geographic Response Plan strategies are being changed as a result of this field-testing.