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VESSEL OIL POLLUTION: REDUCING THE RISK OF FUTURE SPILLS

FIELD HEARING

BEFORE THE

SUBCOMMITTEE ON FISHERIES AND THE COAST GUARD

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

AUGUST 1, 2005

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VESSEL OIL POLLUTION: REDUCING THE RISK OF FUTURE SPILLS

MONDAY, AUGUST 1, 2005

U.S. SENATE,
SUBCOMMITTEE ON FISHERIES AND THE COAST GUARD,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Seattle, WA.

The Subcommittee met, pursuant to notice, at 10 a.m. in the Port of Seattle Commission Chambers, Hon. Maria Cantwell presiding.

OPENING STATEMENT OF HON. MARIA CANTWELL, U.S. SENATOR FROM WASHINGTON

Senator CANTWELL. Good morning. Today's field hearing is a hearing of the U.S. Senate Commerce Committee to make sure that we are doing all we can to prevent future oil spills in Washington State waterways, and to make sure that the area of oil spill prevention and response is something that not only Washington State is good at, but to learn from the Washington State experience as we look at Federal policies and legislation to address the nationwide risk from continued oil spills.

Today's hearing is important for several reasons. First and foremost, Congress recently received a report from the Coast Guard assessing the progress our Nation has made in implementing the ground-breaking Oil Pollution Act of 1990, a major piece of legislation Congress passed in the wake of the devastating *Exxon Valdez* incident.

What the Coast Guard told us is that while the Oil Pollution Act of 1990 has done a lot to reduce the risk of maritime oil pollution, spills are still occurring far too often. In fact, according to the Coast Guard, the total volume of oil spills in the United States from vessels in 2004 was larger than in 1992.

One of the primary findings of the report was that the Oil Spill Liability Trust Fund, which makes sure that resources are available to respond to oil spills immediately, would be running out before 2009. In fact, new predictions based on the rising costs of the ongoing cleanup in the Delaware River from the *Athos I* spill estimate that the Fund could actually run out even sooner. This could have a big impact on Washington State, which received over $5 million from the Trust Fund between 1997 and 2004 for emergency response and cleanup.

I was surprised to learn that spills can cost anywhere from $1,000 per gallon of oil released. With 50 spills in Washington State over 10,000 gallons over the past 30 years, the Trust Fund has provided a critical source of funding, ensuring fast and effec-

tive response, and that states are not crippled by the burden of paying for oil spill cleanup.

Fortunately I am pleased to report that Congress, in the energy bill passed last week, included language from Senate Bill 1222, which would reinstate the fee that ensures the health of the Oil Spill Cleanup Fund.

However, the Coast Guard report indicated that there are other remaining issues. These issues include: one, whether the cost of spills is outpacing the amount that responsible parties are to pay; two, whether enough is being done to guard against the risks from aging single-hulled vessels; three, whether all of the navigational tools that we have at-hand are up to date and being used fully; four, whether adequate manning and inspection regulations are in place; and lastly, whether response capabilities are sufficient.

Now, 15 years after the Oil Spill Pollution Act, I hope we can reexamine these vital issues, especially as they relate today to the State of Washington, so that I can take this information back to my colleagues in Washington, D.C. That's why I'm pleased to have the group of panelists that we have before us today.

We have expert witnesses from two key Federal agencies involved with oil spill prevention, response, and cleanup, and I thank them for coming today. We are also lucky to have a key player in our state's oil prevention effort, Mr. Dale Jensen from the Washington State Department of Ecology. Washington State has been extremely active in addressing and reducing oil spill threats and has worked collaboratively with our Federal partners.

I'd like to publicly thank Governor Gregoire for her leadership on this critical issue. She has submitted a statement and I will include that in the record of our hearing today. We, I believe, do have a proud history with previous Governors who have looked at the valuable resource we have in Puget Sound, and taken aggressive action to protect it from oil pollution.

Rounding out our government panel will be Dave Sones, who I believe is on his way, the Vice Chairman of the Makah Tribal Council who will speak on behalf of the Northwest Indian Fisheries Commission in representing our diverse coastal tribes.

Our second panel is equally important because it has a set of witnesses that represent key stakeholders including the oil industry, the oil spill response industry, a key academic analyst, and members of our vigilant citizens' groups who have been at the forefront of fighting to protect Puget Sound and our incredible quality of life here.

So again, thank you all for coming. I know we share the goals of having good, sound oil spill prevention, and if necessary, cleanup, and we're all here to protect our magnificent Puget Sound and coastal regions, not just in the State of Washington but around the Nation. So I look forward to hearing from each of you and your insights on the issues this morning.

The Port here has a fabulous technology conference center, but it doesn't allow us the same technology signals that we have in the U.S. Senate. I'm going to ask, if you can, to keep your comments to 5 minutes, and longer statements can be submitted for the record.

And all I have here is this little digital clock—not only am I chairing the hearing, I'm the official time-keeper here. I will be lenient, but if you can, keep to your 5 minutes and that will be helpful.

[The prepared statement of Governor Gregoire follows:]

PREPARED STATEMENT OF HON. CHRISTINE O. GREGOIRE, GOVERNOR OF THE STATE OF WASHINGTON

Senator and Madame Chair Cantwell and Members of the Committee:

Greetings and welcome to Washington State!

There could be no better backdrop than Puget Sound to highlight the critical importance of Federal and state oil spill prevention and response programs. And there is no better program in the country than the partnership between the U.S. Coast Guard and the state of Washington.

Our state is a national leader in oil spill prevention, preparedness, and response. We have a proud history of taking action to protect our valuable natural resources from oil spills. The courts have been clear about the respective roles of the Federal and state government, including the obligations of each level of government to ensure sufficient funding for spill response.

The state has established the Oil Spill Response Account to provide funding for incident response activities. This account is funded through a tax on crude oil and petroleum products. On the Federal side, the Oil Spill Liability Trust Fund is a key tool in our ability to respond to spills. Access to this fund was crucial in securing quick and effective response to significant spill events in Puget Sound such as the Olympic Pipeline explosion and the recent Dalco Passage mystery spill.

I thank Senator Cantwell for securing continued funding for this account through her efforts with the Federal energy bill.

The Federal and state oil spill partnership benefits from the strong support of our oil and shipping industries. Our inspections and surprise drills show strong compliance, a high state of readiness, and a solid commitment to the programs. Just last week, we called for an increase in the number of spill response vessels to improve our ability to respond to a larger spill. As they have in the past, our industry representatives have signaled that they will do what is necessary to make sure Puget Sound is safe and protected.

Equally important, our oil spill programs have benefited from the active engagement of our citizens. We are giving our citizens a stronger voice in these matters. Pursuant to new state law, I am pleased to announce that I have appointed Mike Cooper as the chair of the Washington Oil Spill Advisory Council. The details of Mike's role, and the remaining council members, will be announced in the coming days.

I extend my gratitude to Senator Cantwell for holding this hearing and bringing our region to the Committee's attention. I pledge the state's continued vigilance, and ask for your support to ensure the Federal Government's vigorous engagement in oil spill prevention and cleanup.

Senator CANTWELL. Again, thank you all very much for being here, and I think we're going to start with you, Captain Boothe.

STATEMENT OF CAPTAIN MYLES BOOTHE, COMMANDANT, U.S. COAST GUARD

Captain BOOTHE. Thank you, good morning, Senator Cantwell. It is a pleasure to appear before you today to discuss the Coast Guard's role in protecting our marine resources within the Pacific Northwest against the threat of pollution, while also preserving the safe and efficient flow of commerce within our diverse waterway systems here. The Coast Guard Captains of the Port as the pre-designated Federal On-Scene coordinators for the coastal zones, have primary responsibility for preparedness and response to oil and hazardous material spills within this area.

Despite the increased emphasis on maritime homeland security since September 11, 2001, these Captains of the Port have stead-

fastly led their respective area committees' planning and response actions prescribed under the Oil Pollution Act of 1990, or OPA. The Pacific Northwest environment and economy are of exceptional, if not strategic, importance to the Nation. We all know that. The Coast Guard's overarching environmental protection goal is to eliminate damage to our environment and degradation of our natural resources associated with maritime activities.

We strive to achieve this goal by eliminating or reducing the probability and/or consequence of pollution resulting from a marine accident with the same vigor as we did prior to the attacks on America. Spills in Washington coastal waters under Coast Guard jurisdiction have averaged just three—or 10,300 gallons in the last 5 years. Considering that some 15 billion gallons of oil are transferred or moved annually by marine sources in Washington, that equals approximately 7/10 of a gallon per million gallons shipped.

Based on a 2002 National Research Council report which alluded that over 29 million gallons of oil is spilled annually in the United States marine environment, Washington State's spills within the coastal zone equal only 3/100 of a percent of this annual pollution. Yet even acknowledging this remarkably low spill rate, we cannot become complacent in our relative success. We must remain ever vigilant to address the risk of future pollution.

OPA 90 has dramatically reduced pollution in America. Within the Pacific Northwest, OPA measures have greatly enhanced Coast Guard, Washington Department of Ecology, industry, and Canadian efforts to prevent and mitigate the effects of an acute oil or hazardous material spill in our environment. As detailed in my written statement submitted for the record, within the Pacific Northwest and Puget Sound in particular we have established arguably the strongest marine safety prevention net in the Nation, including 16 major intervention strategies that vastly reduce the probability of a catastrophic release of oil from a vessel in transit or during cargo transfer operations.

Some of the measures like tug escorts, vessel monitoring systems, vessel traffic services, and single-hull tank vessel phaseouts were either imposed or strengthened further by OPA, and are addressed generally within the Coast Guard's recent report to Congress on OPA's implementation. However, the combination of OPA measures with several other strategies established through separate efforts unique to this region, creates an extraordinary level of risk reduction.

Likewise, this region has a unique and active unified regional and area response system operating under a single contingency plan to assure consistent, effective, and coordinated responses to mitigate the severity and impact of oil spills.

While we have one of the strongest pollution mitigation systems in the country, or at least I say so, we nonetheless must, and do, continually assess areas for improvement. Last winter, the Governor and the District Commander here established an Oil Spill Early Action Task Force, convened under the auspices of the Regional Response Team and the area committee to assess the potential areas for improved response to oil spills and adverse weather conditions.

The task force developed 11 broad recommendations for system improvement. Many of these have already been integrated into the Northwest Area Community Strategy Work Plan for implementation, while Washington State is addressing others separately. A key task force concern was the Federal and state response to a mystery spill. In the absence of an effective responsible party-led and financed response effort, the Coast Guard and states must have the means to respond promptly and appropriately to meet the mandates of OPA 90 and the Federal Order Pollution Control Act.

Thank you, Senator Cantwell, for your leadership and interest in preserving the Oil Spill Liability Trust Fund as a viable and stable funding source for this purpose.

Nationally there are a number of important gap closing over rulemakings that also remain outstanding that I would like to talk about. But in conclusion, the Pacific Northwest has a robust collaborative maritime safety prevention and response net which has greatly mitigated the potential for a catastrophic spill within the region. Their tremendous success is achieved or due in large part to the strong partnerships and an engaged environmental community here. Much work remains to be done to complete the OPA agenda and reduce America's vulnerability to pollution and other maritime safety threats. With continued Congressional and Administration support I'm confident that we will succeed in delivering the robust maritime safety and environmental security this state and America expects and deserves.

Thank you for the opportunity to testify this morning, ma'am. I'll be happy to answer any questions.

[The prepared statement of Captain Boothe follows:]

PREPARED STATEMENT OF CAPTAIN MYLES BOOTHE, COMMANDANT, U.S. COAST GUARD

Introduction

Good morning Senator Cantwell and distinguished members of the Committee. It is a pleasure to be here today to discuss the Coast Guard's role in protecting our marine resources within the Pacific Northwest against the threat of pollution while preserving the safe and efficient flow of commerce within our diverse waterway systems.

The Coast Guard has continued to meet our statutory responsibilities, even with the increased emphasis on maritime homeland security since September 11, 2001. This is particularly true regarding protection of the marine environment, from both a prevention and response perspective. The Coast Guard has primary responsibility for preparedness and response to oil and hazardous material spills within the coastal zone. Our Captains of the Port, as the pre-designated Federal On-Scene Coordinators for the coastal zones under the National Contingency Plan, have continued to lead their respective Area Committees' planning and response actions prescribed under the Oil Pollution Act of 1990 (OPA 90). In particular, the Coast Guard continues to oversee and manage numerous intervention strategies to prevent maritime accidents that may cause harm to our environment, and oversee or direct most clean-up efforts within the coastal zone with the same vigor as prior to the attacks on America.

The Pacific Northwest Environment and Economy

Environmental Sensitivity

Washington State waters within the coastal zone represent some of the most pristine coastal areas within the Nation. Encompassing over 4,000 square miles and over 2,700 miles of rugged coastline, including over 300 hundred miles of the Columbia River, this diverse ecosystem includes many "environmentally sensitive" areas, some of which include the Olympic Coast National Marine Sanctuary, Padilla Bay National Estuarine Research Reserve, the South Slough National Estuarine Re-

search Reserve, the Washington Maritime National Wildlife Refuge Complex, the Willapa National Wildlife Refuge Complex, the Grays Harbor National Wildlife Refuge, and numerous tribal aquaculture sites. Both resident and migrating orca (killer whale) pods feed extensively throughout the waters of the Strait of Juan de Fuca, Puget Sound, and Haro Strait. Many species of nesting, wintering, and migrating seabirds, shorebirds, waterfowl, and raptors utilize the outer coast as well as the Strait of Juan de Fuca and Puget Sound for foraging, nesting, and resting. Environmental responses can be particularly challenging along Washington State's Pacific coast, due to the steep slopes on shore, exposed location, shoals and offshore rocks, and lack of roads. Within the Puget Sound region, the challenges include significant tidal ranges and sensitive wetland mud flat areas.

Puget Sound is a complex environmental system made up of diverse shoreline features. There are heavily industrialized areas immediately adjacent to sensitive refuge areas. There are several historical and tribal archaeological sites along much of the coastal zone. Vegetated banks and marshes line most of the waters that flow into the Sound, and Columbia River and its tributaries.

The biological resources in the region cross the spectrum of marine life including birds, fish, shellfish, and marine mammals. There are high concentrations of waterfowl present over most seasons, as well as several birds of prey which nest in the region. Coastal estuaries are sensitive habitats for many types of birds and forage fish. Coastal islands are used as nesting and rearing sites for many seabird species, some of which are nationally rare. The Grays Harbor estuary provides an internationally significant resting and feeding area for tens of thousands of migrating shorebirds that concentrate there in the spring. The Puget Sound region is home or feeding grounds for several orca families, and the region has several seal rookeries. Dungeness crab, oysters, clams, and mussels are the predominant significant shellfish in Puget Sound and coastal zone region. Numerous salmon species also thrive in these waters, as well as the Columbia River and its tributaries, which serve as both fish highways and critical spawning grounds.

Economics

The Puget Sound region, Gray's Harbor, Columbia River, and other waters of the Pacific Northwest provide several fine harbors for commercial and public vessels. The area has historically supported valuable fisheries (both recreational and commercial) and a large, ever-increasing, recreational boating community. We share a 125-mile international maritime border with Canada along the Strait of Juan de Fuca, Haro Strait, Boundary Pass, and the Strait of Georgia, which provide access to the ports of Victoria and Vancouver, British Columbia, and several U.S. ports. The Marine Transportation System (MTS) in Puget Sound and the Columbia River port complexes provide an important economic link to Asian markets and to the West Coast of the United States, including Alaska.

The Puget Sound region receives approximately 5,000 deep-draft vessel arrivals through the Strait of Juan de Fuca each year. Approximately three-fifths of those vessels transiting the 125-mile international maritime border are bound for U.S. ports, while the remainder proceed to Canadian ports. The Seattle-Tacoma port complex is the third largest containerized cargo complex in the Nation, and Puget Sound is homeport to a large Seattle-based fishing fleet, the largest passenger ferry fleet in the Nation, and a major cruise ship industry which has seen dramatic growth over the last several years. Over 700 tank ships arrive each year, transporting approximately 15 billion gallons of crude oil and refined products to and from the five refineries in Puget Sound waters. Puget Sound possesses one of only 15 strategic ports in the Nation, transporting military supplies and equipment by vessel to support our troops overseas. The Puget Sound region is critical not only locally, but also to the Nation.

Gray's Harbor, approximately 10 miles south of the Olympic Coast National Marine Sanctuary on the Washington coast serves as a major local coastal fisheries homeport, as well as one of the principal oyster aquaculture beds for the region.

Finally, the Columbia River system, along the Washington-Oregon border, serves the principal port complexes of Longview, Washington at mile 50; and Vancouver, Washington, and Portland, Oregon; located 100 miles from the entrance. This system serves as the Pacific gateway and the second largest port complex for U.S. grain export. It also serves as a major automobile distribution port. Approximately 1,800 foreign, deep-draft vessels transit this 100 mile serpentine stretch of the river each year.

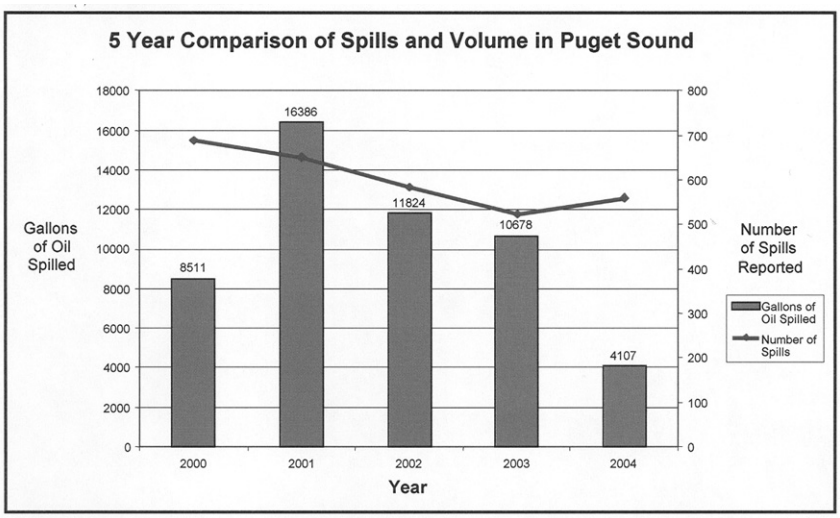
The port complexes in Puget Sound and the Columbia River are key contributors to the economic vitality of the United States, ranking on the Coast Guard's list of the most economically significant ports in the Nation.

Reducing Risk in the Pacific Northwest Maritime Environment

The Coast Guard's overarching environmental protection goal is to eliminate damage to our environment and degradation of our natural resources associated with maritime activities, including transportation, commercial fishing, and recreational boating. Having set the stage for the level of activity in this marine transportation system and the resources at risk throughout the region, I will describe the key risks of pollution within the region, the substantial and unique safety net which this region boasts, and then some areas for improvement.

Causes of Spills: Spills can originate from every type of vessel and facility on or near the water. However many spills, including some high-volume spills, come from sources completely outside the Coast Guard's jurisdiction, such as rail, small plane, truck and industrial accidents, highway runoff, or underground storage tanks leaking into storm drains. In the National Research Council report, *Oil in the Sea III: Inputs . . . and Effects (2002),* it is noted that 16.2 million gallons of a total of 29 million gallons spilled annually in the United States are attributable to street runoff, industrial waste, municipal wastewater, refinery wastewater, and recreational vessels. Of that amount, approximately 1.5 million gallons are attributable to spills from tank vessels.

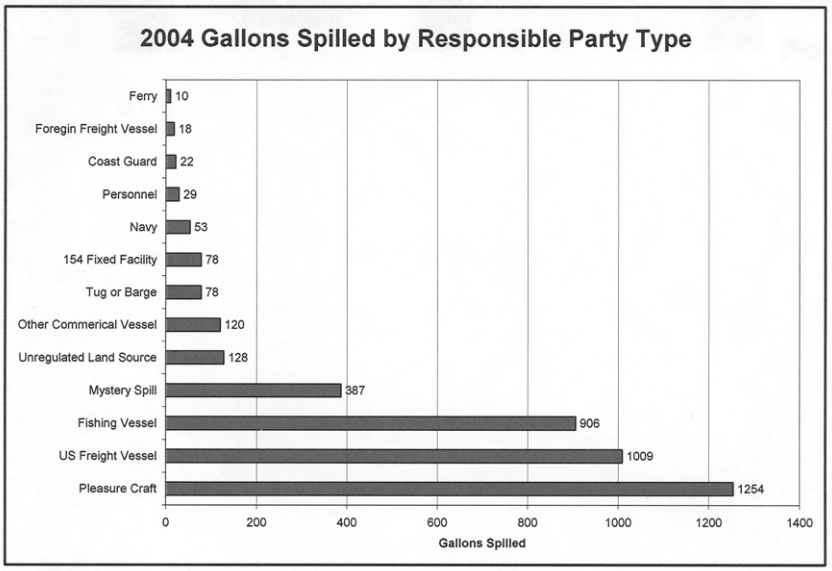
Regionally, our record is much brighter. While we have averaged about 10,300 gallons per year of oil spilled for the past 5 years, in 2004 less than 5,000 gallons of oil were spilled in Washington waters, and that included the 1,000 gallon spill attributable to the Dalco Passage incident. That is a remarkably low amount of oil spilled, given the excess of 15 billion gallons of oil that is transferred annually by Washington marine sources.



Recreational vessels and fishing vessels typically account for the highest number of identified marine related spills each year. The pollution threat potential from recreational vessels is relatively small in the total volume spilled per incident; however, for 2004, the recreational vessel spills accounted for the most gallons spilled within the Puget Sound region. Tank vessels and bulk liquid oil facilities are highly regulated and are operated by highly trained and certified professionals. The probability of spills from tank vessels and facilities is understandably lower. However, should such spills occur, the potential spill volumes are much greater in magnitude. The volume from one spill from those sources could easily be over 1,000 gallons given quantities and typical handling rates. Likewise, spills from uninspected commercial vessels (fishing and towing vessels) and derelict vessels can also involve relatively high potential oil volumes. Together, known recreational vessels and fishing vessels accounted for over 50 percent of the oil spilled within the Washington coastal zone in 2004. A significant amount attributable to "mystery spills" is also considered likely to come from these mostly uninspected and unregulated marine sources.

Hundreds of oil transfers take place every week in the Pacific Northwest region. These may range from a recreational boater getting a fill-up at a marina, to a 900-foot tank ship unloading a cargo of crude oil at a local refinery. During each trans-

fer, there is a risk of an oil spill. In 2004, 58 of the 560 spills reported were linked to oil transfer operations, accounting for 6 percent of the total volume spilled.

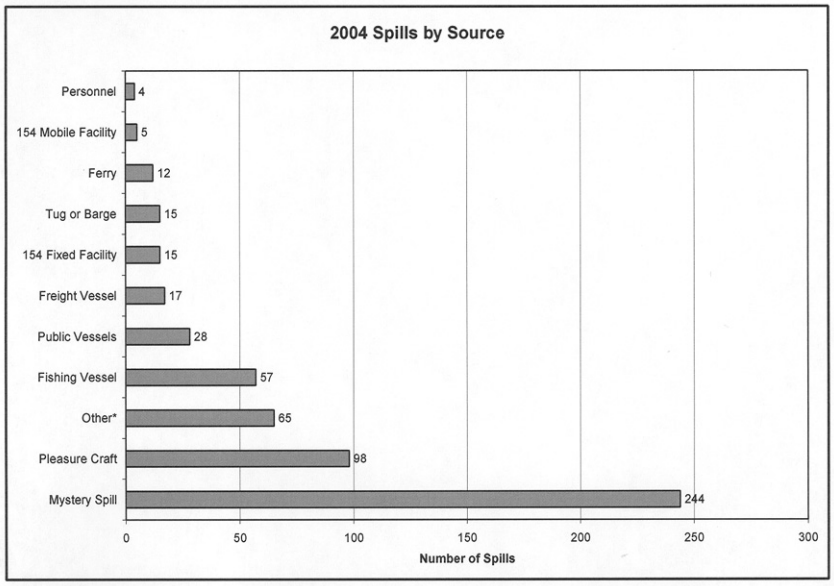


The cause of oil spills is, of course, related to the source. While most spills from vessels occur at the dock, rather than while the vessel is underway, there can be many contributing factors causing these spills. The most common causes include:

- Mechanical failure of hydraulic lines.
- Structural failure of hulls of derelict vessels (vessel sinkings).
- Structural failure of cargo tanks, cargo piping, or cargo relief valves.
- Operator error during fueling—generally related to overfilling a tank.
- Human factors such as poorly-documented procedures.
- Truck rollovers, collisions, mechanical failures, and human errors from non-marine sources such as trucks, trains, factories, etc.

Of the 8 billion gallons of crude oil typically transported and transferred by tank vessels within Puget Sound each year, less than 1,500 gallons of crude oil were spilled within the last 5 years. Another 7 billion gallons of refined products are annually transported by tank vessels; again, only 500 gallons of refined oil was spilled over the last 5 years by tankers. These spills were the result of human error during cargo handling or ballasting operations. None of these spills from tank ships were attributable to collisions, allisions, or groundings.

Despite this extraordinary tank vessel safety history, and an acknowledgement that the likelihood of in-transit accidents within the Puget Sound region are greatly mitigated by the existing safety net within Puget Sound region, the inherent hazards associated with the transport and transfer of such significant volumes of oil through an extremely difficult navigation area represent a very high consequence should a major grounding and large-volume oil spill occur. Therefore, the Coast Guard and industry must remain prepared, regardless of source, to monitor and direct a proper response for all spills impacting coastal zone waters, and specifically be prepared to address the acute damaging impact to the environment of a large oil spill from a vessel.



Unique Pacific Northwest Marine Safety Net

Within the Pacific Northwest we have one of the strongest maritime safety nets in the Nation to help prevent and mitigate the effects of oil and hazardous material spills on our environment. The Coast Guard employs a threat-based, risk managed approach to mitigate the potential for a serious marine incident that might result in a substantial threat to the marine environment.

Prevention Systems

- *Pre-Arrival Checks and Offshore Routing*: Before any vessel greater than 1,600 gross tons enters U.S. waters its crew is obligated to perform safety checks of propulsion and steering equipment, and report any deficiencies prior to entering port, to help guard against a mechanical malfunction occurring close to U.S. shorelines or within maneuvering waters. In addition, tank vessels enroute or departing the region are required to follow offshore routing schemes that hold them further off the pristine coastlines of Washington and Vancouver Island, British Columbia. On the U.S. side, the International Maritime Organization has recognized an "Area To Be Avoided" (ATBA) buffer zone extending 25 miles out from the Washington coast along the Olympic Coast National Marine Sanctuary, for all laden tank vessels and other vessels of 1,600 gross tons and above. Similarly, a 50-mile wide Tanker Exclusion Zone has been established off of the Canadian coast to route the Trans-Alaskan Pipeline tanker traffic further offshore to protect against groundings as a result of any potential disabling vessel conditions. Most deep draft freight vessels operating off the Washington coast comply with the voluntary Olympic Coast National Marine Sanctuary ATBA.
- *The United States and Canada jointly operated Cooperative Vessel Traffic Service (CVTS) and the International Maritime Organization adopted Traffic Separation Scheme (TSS)* within the Puget Sound Waters have existed for decades and serve to ensure an ordered and predictable traffic pattern for shipping in the region. All deep draft vessels (all above 300 gross tons) are obligated to participate in the CVTS and follow the TSS according to the International Navigation Rules of the Road. The TSS establishes one-way traffic lanes, similar to an interstate highway, with a separation zone between the opposing lanes of marine traffic. The Cooperative Vessel Traffic Service actually tracks and directs all participating vessels transiting the region as necessary to ensure collisions and powered groundings will not occur. Significant improvements to the TSS were implemented with international approval in 2004, after an extensive analysis and collaboration with Canada and tribal interests and as complemented by the discussions and recommendations from the Long-term Risk Management

Panel. The most significant adjustments ensure greater separation for tankers while in transit throughout the system, particularly in more confined waters. The CVTS system is a model of bilateral cooperation and waterways safety management, ensuring the environmental protection and safety of our shared waters.

- *Automated Identification System (AIS)*: In addition to the required participation in the CVTS, as of December 2004, nearly all commercial vessels, including tugs, are required to have AIS transponders installed which automatically broadcast vessel name, position course, speed, and other marine information to other shipping and to U.S. and Canadian safety officials. These broadcasts are being received as far away as several hundred miles from shore, greatly enhancing our awareness of vessels in our environ and their activities. Indeed, the AIS has enhanced the CVTS coverage by providing vessel tracking within waters which were previously not covered by the existing Vessel Traffic Service radars.
- *Port State Control Examination Program.* In 1994, the Coast Guard enhanced our pre-existing foreign tank vessel examination program to include foreign freight vessels, such as container ships and bulk carriers, in an effort to eliminate substandard shipping in U.S. waters. Every foreign vessel bound for a U.S. port is screened upon receipt of their 96-hour Advance Notice of Arrival to the United States utilizing a targeting matrix which considers numerous risk factors, including vessel type, ownership, flag state, classification society and vessel's operating history as indicated in the USCG's marine information databases. All vessels above a certain score are then targeted for a USCG safety and environmental protection compliance examination either at sea prior to port entry or after docking, depending on the relative risk determined. Vessels found in non-compliance may be denied entry. If already in port, they will be detained until major discrepancies are corrected. While the national average percentage of foreign vessels examined is approximately 19 percent, the two Captains of the Port in the Thirteenth District examined over 38 percent of all foreign vessel arrivals, and over 80 percent of distinct vessel arrivals accounting for the fact that many foreign vessel may make repeat port calls.
- *Pilotage Requirements*: Upon arrival at Port Angeles, all deep draft vessels and most foreign vessels other than small yachts are obligated to embark a Puget Sound pilot, a local knowledge expert and professional mariner, for continued transit of the vessel to its final destination. Vessels bound for Canadian ports are similarly obligated to embark a British Columbia pilot.
- *Tug Escorts*: Almost all oil laden tank vessels must also be under the escort of two tugs which are capable of stopping the vessel's movement within strict parameters. No vessel above 100 gross tons is permitted to meet a laden tanker transiting Rosario Strait, the typical route for tankers destined for Washington refineries. Typically, as tankers enter Rosario Strait, escort tugs actually tether themselves to the tanker for enhanced ability to positively control the tanker's movement if needed.
- *Weather Sensors and Decision Aids*: As a result of a special appropriation for Puget Sound pollution prevention enhancement, two sophisticated weather buoys and numerous other weather sensors and cameras have been installed throughout Puget Sound waters to enhance the mariners' and the Coast Guard's situational awareness in the region. In addition, a Rescue Tug Deployment Decision Making tool has been created to assist the Captain of the Port in objectively determining the need for the dispatch and pre-staging of stand-by tug capabilities to protect against adverse weather and potential disabled vessels combining to create an unacceptable risk for particular areas within the region. These measures all combine to facilitate both normal voyage planning and emergency response decisionmaking.
- *Double Hull Requirements*: Most tankers servicing these ports have a double hull, in compliance with OPA 90 standards; and many are also equipped with redundant propulsion systems to mitigate even further any loss of vessel control.
- *Oil Pollution Prevention and Response Agreements:* In 2003, the Thirteenth Coast Guard District and Washington Department of Ecology established a series of protocols to implement and guide our respective operations in the area of spill prevention, preparedness and response to reduce duplication of effort, and instill better coordination and communication.
- *Harbor Safety Committees*: In addition to government safety and pollution prevention efforts, the Puget Sound and Columbia River region's maritime industries have established strong Harbor Safety Committees, with members from a

broad spectrum of industry. These Committees have established Standards of Care, voluntary measures for operating practices and equipment testing that supplement the Federal and state standards. These additional measures have proven a valuable tool in quickly improving the maritime industry's performance, without the need to embark in regulatory changes.

- *MARPOL Enforcement*: The Thirteenth Coast Guard District Captains of the Port, in close cooperation with the U.S. Attorney, Environmental Protection Agency and Washington Department of Ecology Investigators have gained international acclaim for trailblazing efforts to uncover criminal acts of intentional marine pollution at sea. This collaborative tenacious effort has produced Federal prosecutions of 21 ship owners, numerous convictions of the vessels' senior crew, and the collection of over $38 million in criminal fines and settlements, including over $7 million for environmental restoration projects within the Pacific Northwest.

Response System

- *Regional Response Team, Region 10/Northwest Area Committee and Contingency Plan*: The Oil Pollution Act of 1990 and the National Contingency Plan mandates each Federal On-Scene Coordinator establish Area Committees to protect public health, safety and environment by ensuring coordinated, efficient, and effective response to oil and hazardous material spills. Within the Pacific Northwest, the two Coast Guard FOSCs, the EPA FOSCs, and Washington, Oregon, and Idaho State environmental response organizations established a single Area Committee to address all regional environmental response activities in a more collective manner. Further, the Regional Response Team and Area Committee established a single Contingency Plan to address responses executed by each authority.
- *Orphan Spills*: In the absence of an identified responsible party (spiller), or in case of a party's failure to adequately respond to a spill, the Federal On-Scene Coordinator is responsible to mount such response. As noted earlier, many of the oil spills within this region are "mystery" spills, and as such, fall to the Coast Guard and state environmental response agencies to mount an effective and coordinated response action.
- *National Preparedness for Response Program (NPREP)* was established under OPA 90 to ensure Area Committees and facility and vessel operators maintain an active exercise program to continually test their regional response capability to address both worst case and most probable spill scenarios on a regular basis. The results of these exercises feed into a lessons learned database accessible to all within the national response system. The lessons learned are then taken for action by the Area Committee and individual operators, as appropriate.
- *Non-Tank Vessel Response Plans*: Next week vessel spill response plans for non-tankers must be implemented, as mandated by Congress. This initiative will compel virtually all deep draft vessels to have detailed plans and capabilities in place to ensure an aggressive and effective response to spills occurring from those vessels, similar to the system already required of tank vessels. Washington State has had a state-driven requirement since the early 1990s, when the state legislature established a vessel fee and a maritime commission to serve as an umbrella response management structure to effect a "first 24-hours" response to spills.
- *Standby Rescue Tugs:* Since 1999, Washington State has maintained a dedicated rescue tug at the mouth of the Strait of Juan de Fuca to respond to disabled vessels and to participate in response drills and exercises. That same year, a Coast Guard cost-benefit analysis suggested that the International Tug of Opportunity System (ITOS), paid for by industry fees collected through Puget Sound Marine Exchange, was a fiscally responsible alternative. In contrast, a standby rescue tug system, which incorporates tug deployment in areas deemed to present a higher risk due to severe weather or other causes, is also an effective countermeasure to groundings in the region, but at greater cost. The Automated Identification System has greatly expanded the Coast Guard's maritime domain awareness, providing the ability to identify a tug's presence, capabilities, and availability to assist vessels in distress and has successfully been employed by the Captain of the Port in the past.

Areas for Improvement

As a result of the recent Dalco Passage Spill, an Oil Spill Early Action Task Force was convened under the auspices of the Regional Response Team, Region 10 and

the Northwest Area Committee. The Task Force was charged to evaluate actions to be taken during the early stages of oil spills when meteorological conditions are adverse, and make recommendations to improve notification procedures, response policies and response technology, including any recommended changes to the Northwest Area Contingency Plan. The task force developed 11 broad recommendations, many of which the Area Committee has already integrated into the NWAC strategic work plan for implementation. It was clear that the assessment and response to the relatively minor (1,000 gallon) oil spill was exacerbated by weather conditions, and that the Area Committee needs to further explore means to more effectively and aggressively assess spills during reduced visibility to permit more rapid implementation and coordination of appropriate response strategies, particularly in situations where no responsible party has acknowledged the spill and taken action to respond.

Conclusion

While we must always remain vigilant in assuring our ability to respond aggressively and appropriately to oil and hazardous material spills, it is evident that the Pacific Northwest's broad prevention efforts and its collaborative maritime safety net have greatly mitigated the potential for a catastrophic spill within this region. We endeavor to improve the system through continual self-examination. The tremendous successes we have achieved in this endeavor are due, in large part, to the cooperation and prompt measures taken by the government, the spill response community, the environmental community, scientists, and industry working together as partners. Much work remains to be done to reduce America's vulnerability to pollution and other maritime safety threats, but with the continued support of the Congress and the Administration I know that we will succeed in delivering the robust maritime safety and environmental security America expects and deserves well into the 21st century.

Thank you for the opportunity to testify today. I will be happy to answer any questions.

Senator CANTWELL. Thank you, Captain Boothe. We're going to let all the panelists speak and then we'll come back to questions. So, Mr. Helton, thank you for being here, thank you for representing NOAA at today's hearing.

STATEMENT OF DOUGLAS HELTON, INCIDENT OPERATIONS COORDINATOR, OFFICE OF RESPONSE AND RESTORATION, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA), DOC

Mr. HELTON. Thank you. Thank you for inviting me to speak today about oil pollution issues in Washington State. My name is Doug Helton, I'm the Incident Operations Coordinator for the National Oceanic and Atmospheric Administration. NOAA's Spill Response program is headquartered here in Seattle, we have over 45 scientists and responders available on a 24/7 basis to provide technical support for oil spills throughout the nation.

When a spill occurs that team provides and coordinates advice on scientific issues, cleanup, natural resource assessment issues, and spills. NOAA essentially, as support coordinator, leads this effort with a team of scientists on-scene, provides support in such areas as pollutant fate and transport, resources identification and protection strategies, cleanup, shoreline cleanup assessment and natural resource trustee coordination. NOAA also provides currents, tides, and weather forecasts during spills.

Effective spill responses also depend on planning and preparation. Between incidents NOAA promotes preparedness by working closely with local responders and Federal partners. We work with a regional response team on a variety of issues including dispersant use, best cleanup practices, communications and response capa-

bilities. NOAA also enhances the state-of-readiness by developing better response tools.

NOAA works with our Federal, State, and tribal partners to determine how best to restore injured resources to the State they were in before the incident and to compensate the public for the loss of natural resources resulting from those injuries. NOAA scientists and economists provide technical foundation for natural resource damage assessments. Our experts collect data, conduct studies, and perform analysis needed to identify whether coastal regions have been injured by spills and how to restore those spills.

In the Puget Sound region, approximately 500 spills are reported each year. Fortunately large spills are infrequent, most of those are quite small, with the average spill being less than 20 gallons; however, with the increased daily travel of fishing vessels, cruise ships, freighters, there is an increasing number of spills in this region.

I'd like to talk to you about a couple of examples of prevention. Catastrophic discharge of oil in the Olympic Coast National Marine Sanctuary is one of the greatest threats facing that sanctuary, and reducing this threat has been one of NOAA's highest priorities. The sanctuary is located at the entrance of the Strait of Juan de Fuca, it's a major fairway for ships going to the Pacific Rim. NOAA worked with the Coast Guard to develop an Area To Be Avoided, and that was implemented in 1995.

This Area advises operators carrying petroleum and hazardous materials to stay at least 25 miles off the coast while they're approaching the entrance to the Strait of Juan de Fuca. Since that Area has been adopted, NOAA has also worked on its charts and other publications to make sure that mariners are aware of that on the appropriate charts.

We have two other programs that are critical here in Seattle to our work in prevention of spills. One of them is the Navigation Response Team and the other one is our PORTS® program. The Navigation Response Team conducts surveys of obstructions in harbor areas and to locate potential navigation problems before they cause spills. The team also is available to respond after spills to help identify whether that obstruction was the cause of that incident. This team is on hand throughout the year and a regional team is based here in the Seattle area.

The other program is the PORTS® program. This is the Physical Oceanographic Real Time System. This is a system that we have in the Port of Tacoma that provides realtime weather, tides, and current information to the marine operators in the harbor. This information is critical to daily harbor operations, but it's also very important during spill responses.

In the last few years NOAA has assisted the Coast Guard in several spills in this region, and I'd like to give you a few examples. The 2004 mystery spill—you've all heard about it—in Dalco Passage, NOAA and the State worked on perfecting overflights for that incident, due to calm weather conditions that oil was spread over a very large area, giving the impression that it was a very significant spill.

Response teams worked to treat the affected beaches and the follow-up investigations that we've done along with the State of Washington have shown relatively minor environmental impacts.

At Point Wells, just north of here in Seattle, there was a 4,600-gallon spill in December 2003. That oil spread across central Puget Sound and affected an area of the Suquamish Tribe over in Port Madison. Unfortunately, oiled the pristine marsh and shoreline area. In that incident NOAA provided response services, including tracking the floating oil, predictions of how the oil would evaporate, and where it would go. We helped with the shoreline surveys; we also helped with the seafood sampling afterwards because there was concerns about the wholesomeness of seafood. We're continuing to work with the State and U.S. Fish & Wildlife Service on completing a cooperative damage assessment on that incident.

The final incident I want to share with you is the 1999 Olympic Pipeline spill. It's a reminder that not all spills come from marine sources. This incident affected Bellingham, Washington, including aquatic and terrestrial resources in the Whatcom Creek and Whatcom Falls area. NOAA's regulations under the Oil Pollution Act encouraged cooperative and restoration assessments, and those efforts were illustrated in this effort.

Working with the other trustees and the responsible party NOAA was the lead administrative trustee and worked to develop both emergency and long-term restoration plans for that creek. A number of restoration actions were implemented during the summer following the spill, and salmon successfully spawned in the creek that fall. Several long-term projects were also developed, and those are being implemented now.

Thank you for this opportunity to let me talk about NOAA's spill response program. I'd be happy to talk more about prevention, preparedness, and recovery actions associated with oil spills. I look forward to answering any questions you may have.

[The prepared statement of Mr. Helton follows:]

PREPARED STATEMENT OF DOUGLAS HELTON, INCIDENT OPERATIONS COORDINATOR, OFFICE OF RESPONSE AND RESTORATION, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA), DOC

Thank you for the opportunity to testify on the role of the National Oceanic and Atmospheric Administration (NOAA) in response, restoration, and research under the Oil Pollution Act of 1990 (OPA; 33 U.S.C. 2701–2761). I am Douglas Helton, Incident Operations Coordinator for the Office of Response and Restoration, National Oceanic and Atmospheric Administration within the Department of Commerce. NOAA's spill response program is headquartered in Seattle, WA, and has over 45 scientists and responders available 24 hours a day, 7 days a week, to provide technical support for oil spills nationwide. As the Incident Operations Coordinator, my role is to plan and staff incident responses, and to ensure that NOAA products are timely and useful. I also help to coordinate preliminary natural resource damage assessment studies, working closely with biologists, economists, and legal counsel in the NOAA Damage Assessment and Restoration Program. Over the past 12 years, I have been involved with most major spills in the United States, including several here in the Puget Sound region.

Brief Overview

The *Exxon Valdez* oil spill taught us a valuable lesson. Our Nation must be prepared to respond to major oil spills. Some time has passed since a domestic spill rivaled the *Exxon Valdez* in size. However, the recent *Prestige* spill in Europe and the near simultaneous spills in Delaware and Alaska last winter serve as reminders that, although rare, significant oil spills still happen. We must therefore continue to be prepared to respond to these spills when they do occur. OPA created a comprehensive prevention, response, liability, and compensation regime that is needed to respond to these types of oil pollution incidents from both vessels and on-shore facilities. OPA authorized NOAA to represent the public as a natural resource trust-

ee for ocean and coastal resources regarding the discharge or threatened discharge of oil into the environment. NOAA is mandated to seek damages on behalf of the public to restore natural resources injured by oil spills. When oil spills threaten or injure these resources, NOAA and other natural resource trustees are responsible for:

- Working through the Regional Response Teams and National Response Team to ensure that the most appropriate response and cleanup actions are taken to protect resources from further injury;
- Assessing and recovering natural resource damages to compensate for the loss of services that the natural resources provided; and
- Implementing restoration projects for injured natural resources.

OPA required NOAA to draft regulations under which all natural resource trustees perform natural resource damage assessments. In addition, OPA mandates oil spill research and development under Title VII, and created the Interagency Coordinating Committee on Oil Pollution Research to coordinate research and development efforts among industry, universities, and others.

NOAA's Response Role

When a spill occurs a multi-agency interdisciplinary scientific response team provides and coordinates advice on response, cleanup, and natural resource issues. For spills in the marine environment, or spills in areas where the U.S. Coast Guard (USCG) has jurisdiction, NOAA assumes the role of Scientific Support Coordinator (SSC). NOAA has SSCs in USCG offices to assist the USCG in its role as Federal On-Scene Coordinators. The SSC also supports the Unified Command, an organizational structure that allows the Incident Commander position to be shared among several agencies and organizations that have jurisdiction, in order to enhance coordination among these agencies. SSCs lead a team of scientists who provide support in such areas as pollutant fate and transport, resource identification and protection strategies, shoreline cleanup assessment, and natural resource trustee coordination.

NOAA's response to each incident is dependent upon the spill's characteristics. Scientific coordination is critical. Through experience, expertise, and state-of-the-art technology NOAA forecasts the movement and behavior of spilled oil, evaluates the risk to resources, and recommends protection priorities and appropriate cleanup actions.

Effective spill response depends on effective planning and preparation. NOAA promotes preparedness by working closely with Regional Response Teams on a variety of issues including dispersant use, best cleanup practices, communications, and response organization. In addition, NOAA enhances the state-of-readiness by developing better response tools including trajectory models, fate models, and integration of improved weather data and data from ocean observing systems into spill trajectory forecasts.

NOAA's Restoration and Damage Assessment Role

Oil spills can harm natural resources in a number of ways. The most immediate and visible impacts may be oiled beaches and injured or dead organisms, such as fish, lobsters, birds, and wetland plants. Other impacts may not be readily apparent and may not show up for weeks, months, or even years. Nurseries for fish or nesting sites for birds and turtles may be destroyed, and birds and other wildlife may become ill from eating contaminated food.

Wetlands may slowly be destroyed several months after an incident, coral reefs may continue to erode and be more susceptible to disease, and fish may be unable to reproduce. A spill may also diminish the services that natural resources provide us, such as fishing, boating, beach going, and wildlife viewing, as well as ecological services, such as providing habitat, nutrient cycling, and energy transfer through food webs.

Many factors affect how quickly restoration actions can be implemented and how fast recovery can occur. These factors include the type of resource that was injured, the time of year it was injured, and the type, amount, and duration of the oil spilled. In some circumstances, natural recovery may be sufficient to restore resources. In other instances, active restoration efforts may be necessary.

NOAA and other natural resource trustees ensure that restoration projects satisfy the OPA's goal of restoring natural resources and services to baseline (the pre-incident condition) and compensating the public for interim losses resulting from the injury. Trustees are responsible for two types of restoration: primary and compensatory. The purpose of primary restoration action is to return the injured natural resources and services to baseline conditions, while the purpose of compensatory

restoration is to compensate the public for losses occurring from the time of the incident to the return of injured resources and services to baseline. In developing primary restoration plans, trustees focus on actions that accelerate the recovery of the injured resources, such as reconstructing physical habitat that was destroyed. In developing compensatory restoration plans, trustees ensure that restoration projects address the period from injury until recovery. This is vital because while a resource is impaired, it is unable to provide services on which other parts of the ecosystem and the public rely.

NOAA scientists and economists provide the technical foundation for natural resource damage assessments and work with other trustees and responsible parties to restore resources injured by oil spills. To accomplish this effort NOAA experts collect data, conduct studies, and perform analyses needed to determine whether coastal resources have sustained injury from oil spills. NOAA experts determine how best to restore injured resources and to ascertain the most appropriate restoration projects to compensate the public for associated lost services.

Regulations promulgated by NOAA under OPA provide a framework for conducting natural resource damage assessments when oil spills injure the public's natural resources. The regulations require the following steps in the natural resource damage assessment process:

1. *Preassessment*—Trustees evaluate data on impacts to natural resources to determine whether natural resources and their associated services have been injured;

2. *Restoration Planning*—Trustees quantify injuries to natural resources and their services and use that information to determine the type and scale of restoration activities that fully compensate the public for the injures; and

3. *Restoration Implementation*—Trustees, often working with those responsible for the release, implement restoration actions.

NOAA has long been interested in looking at alternative ways to expedite and cut costs for natural resource damage assessment. One alternative is the cooperative assessment in which the Responsible Party plays a major role with the natural resource trustees. Based on NOAA's successful experiences in cooperative assessments, NOAA is promoting this approach through national and regional dialogues. The intent is to expedite restoration, encourage innovative approaches, strengthen partnerships, and provide meaningful public involvement. Cooperative assessments offer industry the opportunity for a greater role and more control over the timing of restoration actions without undermining the natural resource trustee responsibilities. This approach also reduces damage assessment costs and the risk of litigation.

Environmental and Navigation Safety at Work

A catastrophic discharge of oil or hazardous materials remains one of the greatest threats facing the Olympic Coast National Marine Sanctuary. Reducing this threat has been one of NOAA's highest priorities. The Sanctuary, the third largest in the United States, sits at the entrance to the Strait of Juan de Fuca, a major commercial thoroughfare linking the ports of Seattle, Tacoma, and Vancouver, with trading partners around the Pacific Rim. The juxtaposition of such an important international trade route and a national marine sanctuary requires the balancing of political, social, economic, and natural resource issues.

NOAA worked with the USCG to propose that the International Maritime Organization approve and adopt an "Area To Be Avoided" (ATBA) off the Olympic Coast. This ATBA, which went into effect in June 1995, advises operators of vessels carrying petroleum and hazardous materials to maintain a 25-mile buffer from the coast. This distance narrows as the vessel traffic lanes converge at the entrance to the Strait of Juan de Fuca. Since the ATBA was adopted, Olympic Coast National Marine Sanctuary has ensured that information on the ATBA is included on the appropriate nautical charts and in relevant publications.

It is important to note that the boundaries of the ATBA and of the Sanctuary are not contiguous. National marine sanctuaries are not exclusionary areas (e.g., commercial fishing and shipping occur within Olympic Coast National Marine Sanctuary). While the designation of the ATBA has improved maritime and environmental safety within the Sanctuary, it is only one means of reducing risk. NOAA has been participating in other initiatives reviewing additional measures to improve maritime and environmental safety in the region.

NOAA has Navigation Response Teams (NRTs) that conduct hazardous obstructions surveys using diving operations, electronic navigation capture, data collection, and mapping support capabilities to locate potential navigation impediments and to prevent a spill. NRTs also perform emergency response surveys at the request of the USCG to locate obstructions that may have caused a spill. An NRT is on hand

365 days a year in the State of Washington to support NOAA's mission of promoting safe marine navigation.

NOAA has identified the navigable approaches to the Puget Sound as one of the critical areas in the national hydrographic survey backlog. In Fiscal Year 2006, NOAA expects to conduct surveys around Puget Sound, as well as in Alaska, the Gulf of Mexico, and along the East Coast. This project will provide essential chart data and reduce the "critical areas" backlog for hydrographic surveys. Additionally, this project will provide a response to requests from the Puget Sound Pilots Association for such a survey. The Association is concerned with this area because four major traffic lanes cross here, there are shoals in the vicinity of those traffic lanes, and the area experiences a high density of traffic.

NOAA's Physical Oceanographic Real Time System (PORTS®) provides quality controlled real-time oceanographic (water levels, currents, water temperature, salinity, etc.) and meteorological (wind speed, direction, air temperature, barometric pressure, etc.) data in support of safe and efficient marine navigation. PORTS® data also helps support response efforts when spills occur by providing responders with a better understanding of their operational environment and improving trajectory model forecasts. There are currently 12 PORTS® around the nation, including one in Tacoma, WA, in partnership with the Port of Tacoma. PORTS® is recognized as a backbone system within the Integrated Ocean Observing System (IOOS).

A fully implemented IOOS would make observations and model data from various local, state, and Federal agencies available for spill response. This would include real-time and historical observations and products for meteorological, physical oceanographic, and biological parameters. The resulting enhancement of data management and communications would improve the quality and quantity of model input and output for spill trajectory modeling. IOOS would provide emergency responders with access to unprecedented amounts of real-time and historical data for decisionmaking regarding spill response and mitigation. The envisioned Northwest Association of Networked Ocean Observing Systems component of IOOS would meet local needs and requirements of the region and enhance response and decisionmaking support in the event of a spill.

Examples of Response and Restoration at Work

The USCG is notified of approximately 20,000 incidents annually in the United States, including approximately 500 annually in the Puget Sound region. Fortunately, large spills are infrequent, and most incidents are small fuel spills and mystery sheens reported in marinas and harbors, or spills from terrestrial sources such as truck accidents. The average spill report in Puget Sound is 20 gallons. However, anywhere vessels transit, there is a risk of spills, and the risk is not only from tank vessels. Daily transits of fishing vessels, ferries, cruise ships, naval vessels, and even large yachts can pose a threat of spills. A typical Alaska-bound cruise ship may carry in excess of 500,000 gallons of fuel while an ocean-going tug may carry over 100,000 gallons of fuel and lube oils.

Over the past 2 years, NOAA has assisted the USCG in several spills in the region including the following:

- Mystery Spill, Port Townsend, April 2005—Unknown (small) amount
- Dalco Passage Incident, October 2004 (1,500–2,000 gallons)
- Foss Barge, Pt. Wells, December 2003 (4,600 gallons)

Now I would like to illustrate NOAA's recent efforts in regards to Northwest and Alaska oil spills.

M/V Selendang Ayu

During a major winter storm event on December 8, 2004, the cargo vessel *M/V Selendang Ayu* lost power, ran aground and broke in half on the shore of Unalaska Island, within Alaskan waters of the Bering Sea and part of the Alaska Maritime National Wildlife Refuge. The *Selendang Ayu* loaded here in Seattle, with approximately 60,000 tons of soybeans, and was destined for China via the Great Circle Route. That navigation route took the vessel through Unimak Pass in the Aleutian Islands. During rescue operations, six *Selendang Ayu* crew members were lost at sea when a USCG helicopter crashed. Approximately 335,000 gallons of fuel oil and other miscellaneous machine oils were subsequently released to the environment. Most of the cargo was also released to the environment.

During the initial response, NOAA participated in aerial observations and mapping of floating and shoreline oiling, as well as provided on-scene weather information, including the establishment of an emergency remote weather station and the provision of a dedicated on-scene meteorologist. This expertise enabled focused operations during a severe weather time of the year. Without accurate, up-to-date, spot-

specific forecasts, it would not have been possible to safely conduct complicated operations in such an extreme environment. To give an example of the difficult nature of work involved, a special Chinook helicopter was used to remove the remaining 140,000 gallons of fuel on the *Selendang Ayu* in 2,000 gallon fuel canisters, one at a time, through the mountains 25 miles to Dutch Harbor.

The NOAA SSC also coordinated environmental issues for the Unified Command, including technical issues related to potential dispersant use; prepared short and long-term trajectory forecasts for the residual oil onboard; reviewed satellite data and remote sensing information for potential utilization; and responded to a USCG request for assistance in locating the flight recorder of their downed helicopter.

NOAA also worked with the local community to address subsistence and seafood safety concerns. The Port of Dutch Harbor on Unalaska Island processes the largest volume of fish of any port in the United States. Many of these vessels and fishermen come from the Puget Sound region, and concerns were widespread regarding the potential closure of fisheries, or potential market impacts if any seafood products were contaminated. There was particular concern for the Bering Sea crab and trawl fisheries. The crab fleet delivers its catch alive with constantly circulating sea water through the vessel holds, while the trawl vessels use large nets that could become contaminated during deployment and retrieval. Any real or perceived contamination of these fisheries products could cause world-wide marketing problems for Alaska seafood products. With a combination of trajectory analysis and advice on monitoring techniques, NOAA was able to provide assistance to the Seafood Safety Task Force. Similar concerns were expressed for the safety of the subsistence foods harvested from the sea and inter-tidal zones. As the result of information gained following the *Exxon Valdez* spill and other spills that NOAA has worked on, we were able to provide meaningful input, based on actual experiences, as a member of the Subsistence Foods Task Force.

NOAA continues to work with the other natural resource trustees (U.S. Fish & Wildlife Service and the State of Alaska) and the responsible party to conduct a natural resource damage assessment. The parties are conducting a preliminary assessment of potential injuries to natural resources and beginning to evaluate restoration alternatives. Categories of potential injuries include: shorelines (including inter-tidal habitat, wetlands, beaches, shoreline vegetation); aquatic resources (including crabs, salmon, and other anadromous fish species); birds (including seabirds, gulls, and shorebirds); wildlife (including sea otters and sea lions) and human uses (including impacts to subsistence, cultural, and recreational uses).

We have learned that the public has confidence in NOAA's ability to deal with the diverse issues that surround an oil spill. The public relies on our experience and knowledge to assist their local agencies that do not have the same level of spill response experience. NOAA and other trustees are committed to providing the public with up-to-date information and meaningful opportunities for review and comment during the preliminary assessment and restoration planning process. Public meetings will be held later this year on Unalaska Island to convey to the public the status of the damage assessment activities and to solicit input on potential restoration alternatives. Public review and comment of the draft restoration plan and environmental assessment report will also be sought later in the damage assessment and restoration planning process.

Foss Barge, Point Wells

On December 30, 2003, a transfer accident at the Point Wells Asphalt terminal in Shoreline, WA, resulted in a spill of approximately 4,600 gallons of heavy bunker fuel. The oil spread across central Puget Sound and much of the oil stranded between Point Jefferson and Indianola in Kitsap County. Unfortunately, a pristine marsh and shoreline area managed by the Suquamish Tribe was hard-hit. The Do-Kag-Wats marsh was heavily oiled and significant cleanup issues were raised in this culturally and biologically sensitive area.

NOAA provided several services to the response and on-going assessment, including tracking the floating oil, evaporation and dispersion predictions, systematic shoreline surveys, seafood sampling, and natural resource damage assessment studies. NOAA is currently working with the State, the U.S. Fish & Wildlife Service, and the Suquamish Tribe in the completion of a cooperative damage assessment.

Dalco Pass

On October 14, 2004, the USCG received a report of a mystery oil spill in the vicinity of Dalco Passage in southern Puget Sound. NOAA and Washington State conducted flights over the area the next day and estimated that 1,500–2,000 gallons of product had been released and was spreading, mostly around Vashon Island. Weather conditions were nearly calm during this time. As a result, the oil was able

to slowly spread over a large area giving the appearance that a large volume of oil had been released. Response teams treated the impacted beaches promptly and thoroughly, and the cleanup of all oiled beaches was signed-off as complete by the Unified Command only 2 weeks after the spill was first reported. Follow-up inspections indicated little to no apparent environmental impact. In total, one bird was killed and one was cleaned and released. Several dead harbor seal pups were collected during the spill but necropsy results found no link to the spill.

Whatcom Creek

Perhaps the most significant recent spill incident in the Puget Sound region was the 1999 Olympic Pipe Line Company spill into Whatcom Creek in Bellingham, WA. This spill highlights the fact that vessels are not responsible for all oil pollution events; land-based sources of oil can also invade the marine environment and have significant impacts. The restoration efforts for the June 10, 1999, gasoline spill illustrate NOAA's damage assessment functions at a spill, and highlight the benefits of NOAA regulations that encourage cooperative and restoration-based damage assessment.

The incident resulted in the release of approximately 236,000 gallons of gasoline into Whatcom Creek, Bellingham, WA. The spilled gasoline ignited, burning much of the riparian vegetation including a large section of mature forest in an urban park. Whatcom Creek and adjacent forests, parks, and open-space areas are important ecological and recreational resources for the City of Bellingham. During the past decade, a concerted effort by local governments, tribes, nonprofit organizations, and private citizens has lead to habitat improvements in and along Whatcom Creek. The creek also has important cultural and subsistence values. The creek falls within the 1855 Point Elliott Treaty Area for the Lummi Nation and Nooksack Tribe.

The fire that resulted from the Olympic Pipeline Oil Company spill killed three people, and the combination of the fire and toxic levels of hydrocarbons eliminated nearly all aquatic biota from the spill site to the mouth of the creek. Over 100,000 fish were killed. Affected biota included several species of juvenile salmonids, including chinook salmon. Most of the dead salmonids were fry and smolts. Over 26 acres of forest, including approximately 16 acres of mature riparian forest within the adjacent park, was lost as a result of the fire.

Shortly after the incident, NOAA and the State and tribal trustees entered into a cooperative assessment process with Olympic Pipe Line Company. NOAA was the lead administrative trustee and worked to develop both emergency and long-term restoration plans for the creek. This cooperative process reduced duplication of studies, increased the cost-effectiveness of the assessment process, increased sharing of information, and, most importantly, sped the restoration process. Because salmon would be returning to spawn in the creek in the months following the spill, a concerted effort was made to conduct early restoration in the stream. At the same time, data were collected for long-term restoration needs. A number of emergency projects were implemented and salmon successfully spawned in the fall after the incident. A long-term plan was prepared and finalized following a period of public comment. NOAA worked closely with Washington State, the City of Bellingham, the Lummi Nation, and the Nooksack Tribe, and successfully protected funding for the long-term restoration plan. This plan includes projects that are currently being implemented in the following areas: Land Acquisition and Park Enhancements, Fish Habitat Projects, and a Long-term Monitoring and Maintenance.

Conclusion

Thank you for the opportunity to talk about NOAA's important role under OPA. NOAA's expertise is critical to prevent further harm, restore adverse effects on natural resources, aid planning and response decisionmaking, and document damages associated with oil spills. I look forward to any questions that you may have.

Senator CANTWELL. Thank you, Mr. Helton. Mr. Jensen.

STATEMENT OF DALE JENSEN, PROGRAM MANAGER, SPILL PREVENTION, PREPAREDNESS, AND RESPONSE, WASHINGTON STATE DEPARTMENT OF ECOLOGY

Mr. JENSEN. Senator Cantwell, welcome to our beautiful state, and thank you——

Senator CANTWELL. You might have to turn on your mike there. There's a button there.

Mr. JENSEN. Oh, sorry. Senator Cantwell, welcome to our beautiful state, and thank you for this opportunity to testify today on the state of oil spill prevention, preparedness, and response in Washington. First, on behalf of the staff of the Ecology Spills Program I would like to thank you, Senator Cantwell, and other Members of the Senate for your leadership for including in the Energy Policy Act the fix for the Oil Spill Liability Trust Fund. I would also like to express the gratitude of the members of the Pacific States/BC Task Force. Your passage of the funding provision will ensure that oil spill cleanup actions will continue to be done in a timely manner, safeguarding our valuable natural resources. Again, thank you for your efforts on this issue.

Washingtonians demand that we are not only vigilant in our efforts to prevent oil spills, but that we are also prepared for a rapid and aggressive response in the event of a spill. Our citizens have a very high expectation for an active state oil spills program, and we are meeting those expectations.

As a leader in state oil spill prevention preparedness and response, we work closely with our Coast Guard partners, industry, and stakeholders to develop a comprehensive and innovative oil spill program. And I'm proud to report that these efforts have been successful. Over the past 2 years, Department of Ecology vessel inspectors have conducted over 2,500 inspections. In one case, an Ecology inspector identified a problem onboard an Evergreen International vessel and worked closely with the Coast Guard and Federal investigators, leading to a $25 million settlement with the company that led to greater worldwide focus on illegal waste while dumping.

We have also seen a decline in the number of spills in the 25- to 10,000-gallon range. We are now responding to 99 percent of all reported spills within a 48-hour period. These successes have come from the dedication of a highly skilled and trained staff at the Ecology Spills Program and from the commitment of many companies and stakeholders who all share a pride in ensuring the highest degree of prevention and preparedness possible.

But with these successes we still are faced with many challenges. Our experience in the Dalco Passage spill demonstrates the need to have the appropriate response equipment on the scene quickly. There's much that still needs to be done to ensure that we can respond quickly with the most effective spill containment and cleanup resources available.

Since the Dalco Passage spill we've partnered with the Coast Guard to create and work with the Oil Spill Early Action Task Force as Captain Boothe mentioned. We capitalized on the incident to approve our ability to assess and track spills in the dark. We are streamlining our access to aerial and on-water reconnaissance capabilities. We are updating local knowledge specific Geographic Response Plans, making sure all private-sector response resources can immediately be called upon to respond to an orphan spill. Growing from our lessons learned, we will continue to strengthen the critical functions provided by my Program's Incident Management Action Team.

We will continue to evaluate and test our spill response capabilities to ensure that we have the most effective program possible.

Congress can help in this effort by providing funding, particularly for capital needs as well as cleanup response.

Since 2001, the Coast Guard has been faced with increased demand for and participation in homeland security activities. In our region, the Coast Guard has stepped up to these new challenges with exceptional professionalism. However, the Agency is also facing budget constraints due to a declining Federal budget and increasing need in the various aspects of our National War on Terrorism. We're concerned that these new responsibilities and pressures on the Coast Guard will impact their activities in the area of oil spill prevention and response.

Currently the 13th District Coast Guard has done an outstanding job in balancing these demands; however, we urge Congress to provide more resources to the Coast Guard commensurate with the increased demands that are placed on the Agency.

We should also look to states as partners to help with these demands. We should remember that it was a talented Ecology Spills vessel inspector who first caught the problem leading to the penalty to Evergreen Shipping. This is a perfect example of how the state can assist our Federal partners in oil spill prevention, preparedness, and response.

Congress should consider methods by which they can support state actions on oil spill prevention, preparedness, and response. These actions don't necessarily have to be funding. Improved regulatory authority and flexibility for states can also provide for some relief for the Coast Guard, as well as increased cooperation with states.

One area that needs additional attention is salvage. I strongly encourage the Coast Guard to complete the salvage role. In response to an incident where fuel oil was spilled during a transfer from the facility to a tank barge, the Washington State legislature directed the spills program to report on the scope of oil and fuel transfers in Puget Sound and to develop standards for these transfers.

Our report will be completed in the next few months, but our preliminary assessment is that information on cargo and fueling volume, frequency, location, and practices is not consistently required and is often incompletely reported. We believe there are regulatory gaps that our standards can cover that will result in fewer spills to water. The next steps in this process will be to work with the Coast Guard and others on the specifics of the rule and the monitoring program that the state will develop.

In 2000, the U.S. Supreme Court issued their decision on *Intertanko* v *Locke,* a seminal case in Federal/State regulation of shipping. Prior to the decision, Washington had a very detailed and aggressive oil spill prevention program for oil tankers and tank barges.

In brief, the court ruled that many aspects of the state program are preempted by Federal law and historic Congressional action in the area of shipping. As a result, much of our state oil spill prevention, preparedness, and response program was struck down.

This has created a difficult situation where the people of Washington have very high expectations as to the degree of protection from the risk of oil spills that they would like to see for our State,

but Federal law limits the scope of an oil spill program. Congress can assist in reducing this legal tension by supporting joint cooperative opportunities between states and the Coast Guard.

Understanding the nature of shipping and the need for a certain degree of uniform standards, Congress should also consider allowing neighboring states to work together as a region to develop solutions and standards in the area of oil spill prevention, preparedness and response.

In conclusion, we must remember the proud tradition in our state of protecting our precious natural resources from the risk of oil spills. Residents of Washington demand that we maintain a high degree of vigilance and a rapid and aggressive response to all major spills. We must also remember that companies, including shippers and oil facilities of types, consider themselves residents of our great state. They too share in this desire to protect our resources.

We will continue to work collaboratively with the Coast Guard as we develop our oil spill prevention, preparedness and response program. And we are ready to provide support for the Coast Guard as they operate in an increasingly demanding and challenging atmosphere.

And finally, Congress can help by funding for oil spill prevention, preparedness and response activities. Again, thank you for this opportunity to testify, and I'd be happy to answer any questions.

[The prepared statement of Mr. Jensen follows:]

PREPARED STATEMENT OF DALE JENSEN, PROGRAM MANAGER, SPILL PREVENTION, PREPAREDNESS, AND RESPONSE, WASHINGTON STATE DEPARTMENT OF ECOLOGY

Senator Cantwell and members of the Subcommittee, welcome to our beautiful state, and thank you for this opportunity to testify today on the state of oil spill prevention, preparedness and response in Washington.

First, on behalf of the staff at the Ecology Spills Program, I would like to thank Senator Cantwell, and other Members of the Senate, for including in the Energy Policy Act the fix for the Oil Spill Liability Trust Fund. I would also like to express the gratitude of the members of the Pacific States/BC Oil Spill Task Force. The long-term sustainability of the Fund is a priority issue for the Task Force. Your passage of the funding provision will ensure that oil spill response and cleanup actions will continue to be done in a timely manner, safeguarding our valuable natural resources. Again, thank you for your efforts on this issue.

We have a proud tradition in our state of active citizen and state agency involvement in oil spill prevention. Washingtonians demand that we are not only vigilant in our efforts to prevent oil spills, but that we are also prepared for a rapid and aggressive response in the event of a spill. Our citizens have very high expectations for an active state oil spills program, and we are meeting those expectations.

As a leader in state oil spill prevention, preparedness and response we work closely with our U.S. Coast Guard partners, industry, and stakeholders to develop a comprehensive and innovative oil spill program. And I'm proud to report that these efforts have been successful.

Over the past 2 years, Department of Ecology vessel inspectors have conducted over 2,500 inspections. In one case, an Ecology inspector identified a problem onboard an Evergreen International vessel and worked closely with the Coast Guard and Federal investigators leading to a $25 million settlement with the company.

We have also seen a decline in the number of spills in the 25 to 10,000 gallon range. And we are now responding to 99 percent of all reported spills within the first 48 hours.

These successes have come from the dedication of a highly skilled and trained staff at the Ecology Spills Program, and from the commitment of many companies and stakeholders who all share a pride in ensuring the highest degree of prevention and preparedness possible.

But with these successes we still are faced with many challenges:

1. The need for adequate spill response capacity to stage an aggressive spill response in the event of a spill.

2. Concerns regarding new pressures on the Coast Guard—increased emphasis on homeland security and budget limitations—and how these will impact decisions.

3. New information on oil transfers and the risk they pose to our environment.

4. Limitations placed on the state in the *Intertanko* decision, while at the same time Washington's citizens expect an aggressive program to prevent spills, prepare for the potential of a spill, and a rapid and effective response in the event of a spill.

Spill Response Capacity

Immediately following the Dalco Passage spill in October 2004, then-Governor Locke and the U.S. Coast Guard established the Oil Spill Early Action Task Force. Consisting of representatives of environmental groups, industry, spill response organizations, local communities and local government, and tribes, the Task Force examined our spill response and planning procedures focusing on the first hours of response. Working in a very short time-frame, the Task Force produced eleven recommendations for improving our response capabilities. But they also recognized that "full implementation of the recommendations is outside the funding currently available to Ecology and the Coast Guard for these activities."

In a recent report for Ecology, Glosten Associates studied the possibility of utilizing commercial fishing vessels to assist in oil spill response. As part of this report, Glosten conducted a "scenario-based" approach to determine the adequacy of spill response vessels in the event of a hypothetical spill in the San Juan Islands in the amount of approximately 500,000 gallons of oil. The scenario identified the number of vessels for an ideal response to such a spill, and evaluated the actual number that would be available. This analysis revealed a shortfall of available response vessels for this scenario. The report concluded that although current Oil Spill Response Organizations (OSROs) could provide all the on-water resources necessary for them to meet their current basic obligations, they could not meet the shortfalls identified in the report in addition to their current obligations.

Our experience in the Dalco Passage spill demonstrated the need to have the appropriate response equipment on the scene quickly. This recent report emphasizes that there is much that still needs to be done to ensure that we can respond quickly with the most effective spill containment and cleanup resources available.

We learned many things as a result of the Dalco Passage spill:

a. We partnered with the USCG to create and work with the Oil Spill Early Action Task Force

b. We capitalized on the incident to improve our ability to assess and track spill in the dark;

c. We are streamlining our access to aerial and on-water reconnaissance capabilities;

d. Updating local knowledge specific Geographic Response Plans (GRPs);

e. Making sure all private sector response resources can immediately be called upon to respond to an orphan spill;

f. Growing from our lessons learned. We will continue to strengthen the critical functions provided by my program's Incident Management Action Team (IMAT).

We will continue to evaluate and test our spill response capabilities to ensure that we have the most effective program possible.

Congress can help in this effort by providing funding, particularly for capital needs as well as cleanup response. The Oil Spill Liability Trust Fund is critical to this effort, and I want to thank Senator Cantwell for her leadership in securing continued funding for this account.

Increased Coast Guard Responsibilities

Since 2001, the Coast Guard has been faced with increased demand for and participation in Homeland Security activities. In our region, the Coast Guard has stepped-up to these new challenges with exceptional professionalism. However, the agency is also facing budget constraints due to a declining Federal budget and increasing need in the various aspects of our national War on Terrorism.

We are concerned that these new responsibilities and pressures on the Coast Guard will impact their activities in the area of oil spill prevention and response. Currently the regional MSO has done an outstanding job balancing these demands.

However, we urge Congress to provide more resources to the Coast Guard commensurate with the increased demands that are placed on the agency.

We don't question the dedication and commitment to the women and men serving in the USCG, but we are concerned with these external pressures and demands. We must maintain our vigilance on spill prevention, preparedness and response. We should look to states as partners to help with these demands.

Again, we should remember that it was a talented Ecology Spills vessel inspector who first caught the problem leading to the penalty to Evergreen Shipping—this is a perfect example of how the state can assist our Federal partners in oil spill prevention, preparedness and response.

Another example of state/Coast Guard cooperation occurred on October 14, 2004, when the ConocoPhillips' Polar Texas spilled black oil at Dalco Passage, near Tacoma. At the time the spill was reported, the source of the spill was not known. This "orphan spill" required the close cooperation of our state inspectors and the U.S. Coast Guard. The response to this highly visible spill has triggered a new dimension in spill response in our state. Up to last year, our system for managing major oil spills relied too heavily on a Responsible Party being immediately identified, and participating in the spill response Unified Command. A lesson learned in the Dalco spill was that Ecology and the Coast Guard must be better prepared to immediately assess orphan spills at night and begin recovery operations during any weather conditions.

Congress should consider methods by which they can support state actions on oil spill prevention, preparedness and response. As I will discuss later, these actions don't necessary have to be funding. Improved regulatory authority and flexibility for states can also provide for some relief for the Coast Guard, as well as increased cooperation with states.

Increasing Risk From Oil Transfers

On December 30, 2003, a tank barge was taking on bunker fuel at a facility near Shoreline, Washington in the middle of the night. The tank was overfilled and 4,620 gallons of fuel was spilled into the waters of Puget Sound. In response to this incident, the Washington State Legislature directed the spills program to report on the scope of oil and fuel transfers in Puget Sound and to develop standards for these transfers.

Our report will be completed in the next few months, but our preliminary assessment is that information on cargo and fueling volume, frequency, location and practices is not consistently required and is often incompletely reported. We believe there are regulatory gaps that our standards can cover that will result in fewer spills to water. The next steps in this process will be to work with the Coast Guard and others on the specifics of the rule and the monitoring program that the state will develop.

***Intertanko* Limitations on State Activities**

In 2000, the U.S. Supreme Court issued their decision in *Intertanko* v. *Locke*, a seminal case in Federal/state regulation of shipping. Prior to the decision, Washington had a very detailed and aggressive oil spill prevention program for oil tankers and tank barges. In brief, the court ruled that many aspects of the state program are preempted by Federal law and historic Congressional action in the area of shipping. As a result, much of our state oil spill prevention, preparedness and response program was struck down.

This has created a difficult situation where the people of Washington have very high expectations as to the degree of protection from the risk of oil spills that they would like to see for our state, but Federal law limits the scope of an oil spill program.

Congress can assist in reducing this legal tension by supporting joint cooperative opportunities between states and the Coast Guard. Understanding the nature of shipping and the need for a certain degree of uniform standards, Congress should also consider allowing neighboring states to work together as a region to develop solutions and standards in the area of oil spill prevention, preparedness and response. We already have some examples such as the Pacific States/BC Oil Spill Task Force, where states and the province of BC coordinate and share information on oil spill activities in the region.

Congress and the Administration should support a structure where the Federal laws are a floor, and the states can implement a program to address the particular needs of the state or the region. The court in *Intertanko* allowed a degree of support for this approach when it acknowledged that there may be "peculiar circumstances" in a state that would allow for state specific regulation. Congress should codify this approach and expand it to regions.

Conclusion

In conclusion, we must remember the proud tradition in our state of protecting our precious natural resources from the risk of oil spills. Residents of Washington demand that we maintain a high degree of vigilance, and a rapid and aggressive response to all major spills.

We must also remember that companies, including shippers and oil facilities of types, consider themselves residents of our great state, and they too share in this desire to protect our resources.

We will continue to work collaboratively with the U.S. Coast Guard as we develop our oil spill prevention, preparedness and response program. And we stand ready to provide support for the Coast Guard as they operate in an increasingly demanding and challenging atmosphere.

And finally, Congress can help by continuing to provide funding for oil spill prevention, preparedness and response activities by both the Coast Guard and the states. Congress should also explore how to provide states and regions with more authority and flexibility to address risks in their areas.

Again, thank you for this opportunity to testify today.

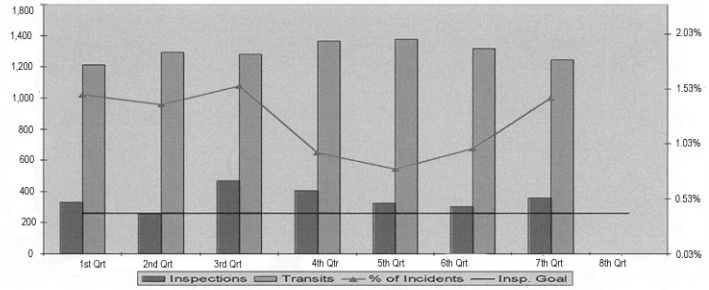
Indicator Data from the Washington Department of Ecology

All figures are for Washington State, fiscal years 04 and 05.

Target: Reduce The Number Of Commercial Vessel Incidents, Such As Loss Of Propulsion Or Steering, Which Can Lead To Spills.

Output: Increase The Number Of Commercial Vessel Inspections To 1,000 In FY-04 And FY-05.
Outcome: Reduce The Percentage Of Large Commercial Vessels Experiencing "Incidents" While Transiting Washington Waters To 2.1% In FY-04 And FY-05.

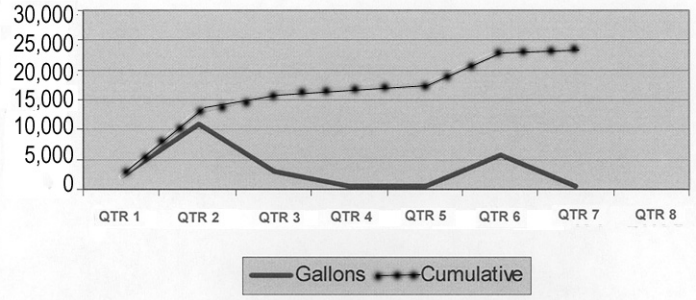
	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	Total
Transits	1,212	1,294	1,281	1,365	1,378	1,318	1,245		9,095
Inspection Goal	259	259	259	259	259	259	259	259	
Inspections	329	255	467	405	325	303	358		2,442
Transit Incidents in WA Waters	18	18	20	13	11	13	18		104
% of Incidents from Total Transits	1.48	1.39	1.56	.95	.80	.99	1.45		

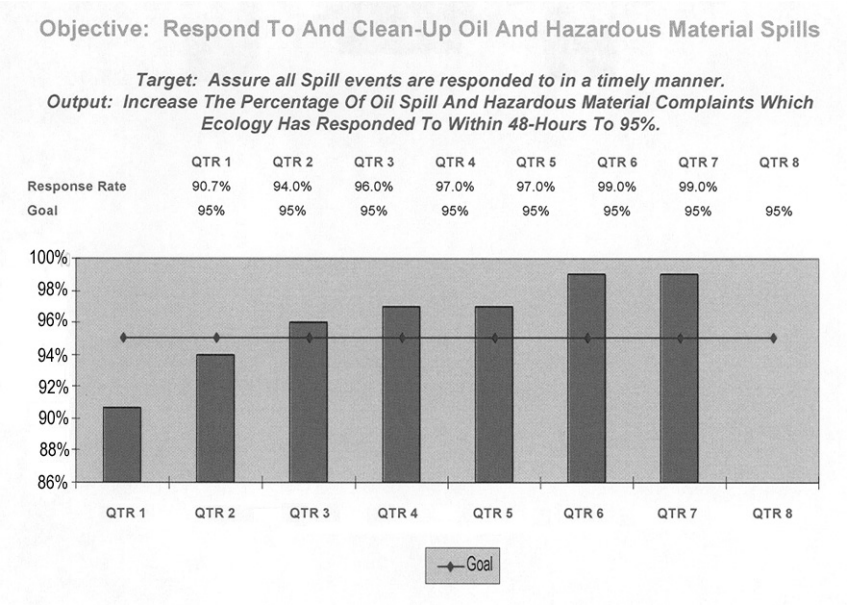


Target: Reduce The Total Volume Of Oil That Enters The State's Surface Waters From Spills In The Range Of 25 To 10,000 Gallons.

Outcome: Reduce The Volume Of Oil Spilled To 30,000 Gallons By FY-05.

	QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8
Gallons	2,229	10,885	3,068	607	554	5,740	435	
Cumulative	2,229	13,114	16,182	16,789	17,343	23,083	23,518	





Senator CANTWELL. Thank you, gentlemen, for your testimony. I should have said at the outset of this that I invited my colleagues to come join me today in Seattle and unfortunately I think our lateness in getting out of Washington, D.C. and our schedule made that difficult. So, you'll have to bear with me through these questions. I thought I'd start with just a few questions generally to all of you. First of all, I'm sure everybody would love to know the latest on the Dalco spill and where we are.

Mr. Helton, in your testimony you alluded to some of the challenges in terms of where we are from a technology perspective, for example, for spills that happen at night and things of that nature. Where are we in terms of improving this process, and what further information do we need?

Mr. HELTON. Well, on the Dalco Pass there are obviously lots of things going on in terms of changing the way Federal and State agencies are responding, looking at new technologies. There's also the ongoing investigation into the cause of the incident, which I would defer to the Coast Guard and the state.

But the third element that I'm aware of is the environmental assessment that has been going on and the—on any significant spill there is a natural resource damage assessment. The state and the Federal agencies have regulations for how to pursue those.

It looks like the impacts were relatively minor. There was a, I think one bird that was killed, one that was captured and released. There were several harbor seal pups that were collected. All of those, the chemistry on the oil spills did not match the oil from the spill, so they appeared to be oil from a creosote source or something else. So we're pretty confident that the environmental impacts are relatively benign, but I would defer to the state and the Coast Guard about the investigation.

Captain BOOTHE. Senator, I guess I can't really comment on the investigation at this point since it's with the U.S. Attorney and he has not yet decided whether to pursue criminal action, so we're awaiting that decision so that we may move forward on the civil case as well.

But related to your question on response technologies, and in particular remote sensing capability, I think the Dalco Passage spill presented a unique set of circumstances for us that fortunately highlighted a weakness in our system, or at least a weakness in our prior response strategies. The fact that it was a mystery spill where we didn't have a reporting source immediately tell us that they discharged oil, caused a bit of a problem in this particular case.

The U.S. Coast Guard probably responds within the Washington waters to in excess of 220 to 250 mystery spills each year, of which the Dalco Passage was one. Most of those spills, as Mr. Helton indicated, are small spills, and in particular, mystery spills are typically small spills that the person that discharges probably does it most often intentionally. We don't believe that to be the case in the Dalco Passage spill, but nonetheless, clearly we don't normally have a spill of the magnitude of the Dalco Passage spill as a mystery spill.

So the response in that particular case, I think, was perhaps colored by that experience in the past and the expectation that it might be a small spill, despite the fact that it had been reported as a heavy fuel spill. So we didn't respond to assess that spill magnitude quickly enough in my view, but nonetheless, there are other conditions that were involved in it since it occurred at 2 o'clock in the morning when we first got the report.

And so there was a gear up phase that the Coast Guard and the State went through, coordinating and communicating with one another, and establishing a game plan for the response. All that aside, it identified that maybe there is technology that we could use.

We have Coast Guard helicopters that are equipped with forward looking infrared capabilities that might have been brought to bear on that before fog set in. We did not employ that in the wee hours of the morning on October 14, and fortunately, but unfortunately perhaps, we haven't had another case like that to be able to exercise the system that we already have in place, or as we learned in the response to the Dalco Passage spill, other assets that exist within the community. King County has some remarkable infrared capabilities as well that we have added to our inventory of response capabilities.

I think that there are a number of things that we are working on to improve our response. I think the Dalco Passage spill makes us a lot more, if you will, "trigger happy" in the nature of our response, which is a good thing. We need alacrity in our response and we need to make sure it's both aggressive and appropriate. So——

Senator CANTWELL. Of those, excuse me, Captain, of those 250 mystery spills you were mentioning, how many of those happened at night?

Captain BOOTHE. Senator, I'm not aware of the percentage that occurred at night versus daytime.

Senator CANTWELL. So with respect to this infrared technology, I guess my question is, does this particular case point to the fact that we need better technology, or is it, as you say, just running our current system with a little bit better use of existing technology?

Captain BOOTHE. Senator, as is the case with computer technology, it is changing so rapidly that it's hard for me to assess whether or not the equipment that we have in current inventory is sufficient or is up-to-date enough to be able to give us the best tools. Obviously it's not cheap technology.

So one of the strategies we looked at in the aftermath of the Dalco Passage spill was, instead of having in-house capability in the Coast Guard other than for our multi-mission purposes, that we might look at employing outside contractors that have that capability and have trained observers in the use of that equipment for oil spills in particular, in lieu of using just our top notch professional Coast Guard aviators with potentially pollution investigators and observers from the various marine safety officer sector commands across the country. I think we probably need to explore more exactly what capability we have and how good it is before we decide what the next steps are in terms of new equipment procurement, ma'am.

Senator CANTWELL. Mr. Jensen, did you want to comment on this—on the Dalco case?

Mr. JENSEN. I think, you know, Captain Boothe and Mr. Helton covered most of it. I think just to add to that, as Captain Boothe alluded to a number of avenues, I think where we are now is how do we address these in the future. And so looking forward to the future, and looking at all the resources capable, we are going through assessment processes right now to see what additional resources are available within, you know, Puget Sound. And, you know, as technology changes, we want to take advantage of every opportunity to improve our system within Puget Sound.

Senator CANTWELL. Thank you. You all mentioned in your testimony, and I mentioned it in my statement, that we were very fortunate to get funding for the Oil Spill Trust Fund reauthorized. And it's probably a little known fact that this provision was buried in the Energy Bill, but at one of our first hearings with the Coast Guard it was clear that something needed to be done. There was some uncertainty about whether the trigger mechanism of the program just reinstated itself or whether we needed to reinstate it, and in discussions with Senator Stevens, we decided we needed to do something proactive and that's how we came to that legislation.

I don't think at the time we thought we would be having this hearing that we'd be so fast to move. Congress isn't always so fast, but in this particular case we're very thankful that it did move quickly so that we know that we have a resource to use for cleanup and prevention activities.

But, Captain Boothe, you mentioned in your testimony that there were some questions about funding or issues in which maybe the program liability or structure might be changed in the future?

Captain BOOTHE. You mean the management by the National Pollution Fund Center, ma'am?

Senator CANTWELL. Yes.

Captain BOOTHE. No, Senator, I don't believe there's any anticipation that they would change the structure of how the funding would be used and how they dispense those funds for the purposes of emergency response. The concern that I expressed in my statement, Senator, was that obviously OPA and the Federal Water Pollution Control Act require the President to respond to all spills, and that the United States has a "no discharge" or a "zero tolerance," if you will, for oil spills in that we have a mandate to go clean it up. If we don't have a viable funding source, then obviously that makes it a bigger challenge for the Coast Guard and the EPA and the states involved across the country in dealing with this threat to the environment.

It might mean that we would be faced with a situation similar to the *Exxon Valdez* where we really didn't have an adequate fund in place to be able to respond nimbly to such an emergency of that magnitude. With the Oil Spill Liability Trust Fund solvent I think, and for a continuing sustainable basis, I don't see any problem for us to be able to respond——

Senator CANTWELL. So you don't think the liability limits are too low?

Captain BOOTHE. Oh, yes, ma'am, I think that that's a different issue, and I think the premise or the tenet of OPA 90 was polluters should pay. And the liability caps were established on that premise that we expected that the responsible party would clean up and pay for that or finance that cleanup action.

Right now the cap probably doesn't address, as you mentioned in your statement, ma'am, that it didn't address the *Selendang Ayu* adequately or the *Athos I* spill, and so that means the Federal Government has to pick up the rest of that beyond the limit of liability. So I think there should be a raise to the liability caps.

Senator CANTWELL. Well, do you have a suggestion? Does the Coast Guard have a suggestion on that?

Captain BOOTHE. Well, as you know, I guess OPA 90 provided a mechanism by which the limits of liability could be increased based on the Consumer Price Index; however, that authority isn't vested with the Coast Guard, or has not been to date. So it hasn't been done since 1990. It's remained at the static level that it was at.

I don't know, I'm not a finance major so I'm not sure I have the best answer for how do we go about ensuring that we have adequate liability limits. I think, though, that the law currently would limit us. If we only used the Consumer Price Index, we're not going to get to the level of what the polluter pays that we need to be at.

Senator CANTWELL. Mr. Jensen, do you have any comments on that?

Mr. JENSEN. Well, I think——

Senator CANTWELL. As the State struggles for a more comprehensive program?

Mr. JENSEN. Well, I think from the standpoint of the Oil Spill Trust Fund, it's such an important fund for us. At the State level, we have a $9 million response fund at the state level and just even, you know, the two spills that we had this year, if the state would have been funding those spills it would have bankrupted that fund.

So in the event, it's a great opportunity for us at the State level to be able to kick in our response account because we feel that ag-

gressive and rapid response is very important. We want to be able to pool all the resources together, you know, to do that and then back off on resources when the spill starts, you know, winding, or recovery starts winding down.

So we're very appreciative of that fund being kicked in place, it provides a great safeguard for us in the State.

Senator CANTWELL. Well, I want to get to Mr. Helton on our unique marine sanctuary and traffic issues, but one more question on this point. I don't think the Coast Guard report addresses or makes a specific recommendation on this, on the liability issue.

Captain BOOTHE. No, ma'am, I don't believe the report——

Senator CANTWELL. But if you were going to venture a guess on how to adequately make sure that there are resources there in the future——

Captain BOOTHE. Well, I think——

Senator CANTWELL.—what structure would you look at for increasing liability that you think would be a fair way to look at the equation?

Captain BOOTHE. Are you talking about what should the limits of liability be or——?

Senator CANTWELL. Well, obviously the hearing today is to address this increase in spill volume that we've seen, and we're here because Washington State's probably one of the most aggressive, and the Coast Guard response probably is the most technologically sophisticated. Obviously we do have a lot of traffic in and out of here, so, we're probably where we have the best deployment so far. So, yes, I'm asking you what else do you think we should do to address the liability limits? Besides CPI, what else would you look at?

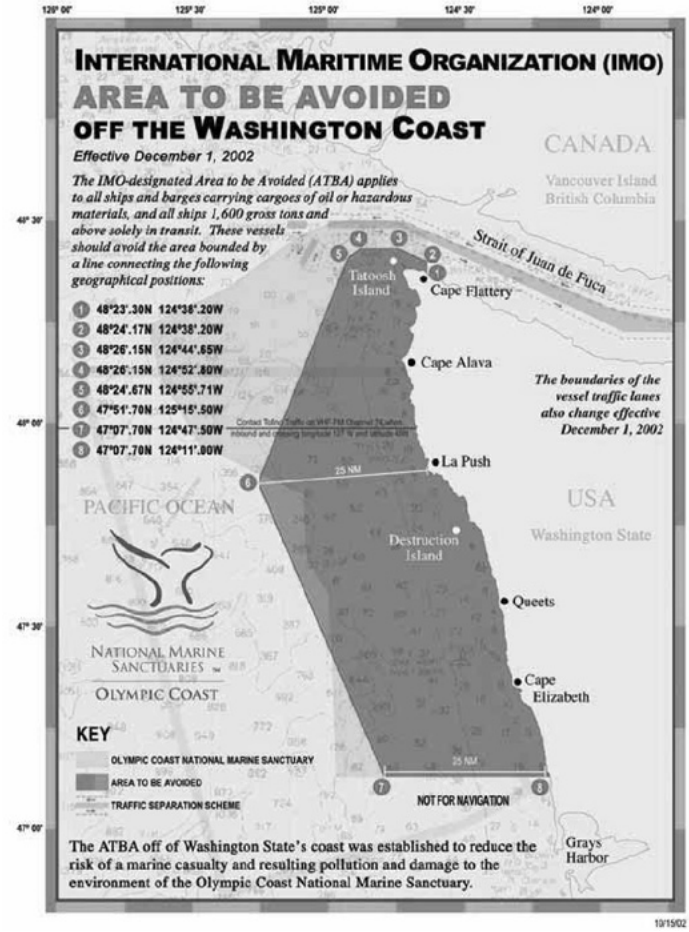
Captain BOOTHE. Well, I think one of the issues that we have to address, Senator, is the fact that I think a preponderance of the Oil Spill Liability Trust Fund expenditures are actually paid out to claimants for third-party actions that caused the spill. So, for example, in the *Athos I,* although I know the investigation has not been completed, but hypothetically let's presume that it finds that some third-party caused the spill, the company that owned *Athos I* which had paid $124 million to date—maybe it's more than that; I'm not sure I have the right figure—but in any event they're going to be seeking compensation from the Oil Spill Liability Trust Fund likely to recover their costs, or at least the P&I club or the insurers are going to be looking for that funding to come back to them.

So I think it's an important aspect that the Oil Spill Liability Trust Fund provides that we have to maintain that capability for the Federal Government to pay that out. I think somehow you have to look at the spiller as paying for the impacts that have been caused, and I'm not sure how you go about quantifying that exactly. I think OPA 90 did the best it could, I think so did the FWPCA in trying to establish what's a fair and reasonable value per ton of oil carried, or barrel of oil carried to establish a threshold that hopefully provides a reasonable gauge on how much is it going to cost to clean up this oil.

Senator CANTWELL. Thank you. Mr. Helton, you described our marine sanctuary off the coast of Washington, and I don't suspect anybody could possibly see this map but maybe you can. And this purple area represents the outline of the marine sanctuary area, I

believe. So you're talking about an additional rule that was implemented by NOAA up here at the top of Tatoosh Island or something of that nature; is that correct?

[The information referred to follows:]



Mr. HELTON. Let me clarify the graph that you hold. The purple is the area to be avoided. The marine sanctuary is actually slightly larger and extends out further. So vessels are allowed to transit through the sanctuary——

Senator CANTWELL. So they can transit through this purple area?

Mr. HELTON. No, the purple area is the area to be avoided for tank vessels——

Senator CANTWELL. OK.

Mr. HELTON.—and the blue/gray area that sticks out is the additional footprint of the sanctuary that's not within the——

Senator CANTWELL. This area here?

Mr. HELTON. Yes. So the boundaries of the area to be avoided are not the same as the sanctuary. But the idea is to keep vessels that are approaching the Strait of Juan de Fuca and ports in Vancouver

and Seattle, to keep them offshore until they have to make the turn into the Strait of Juan de Fuca.

The, and that was implemented about I think 10 years ago now and compliance has been very good. It applies to tank vessels and vessels carrying hazardous materials, so smaller vessels like fishing vessels can still transit the area. And it's a voluntary scheme, so if a vessel is in duress or for some reason they can transit it, but it's not, it's a voluntary compliance scheme. And our experience is that about 95 to 99 percent of the vessels comply with the regulation.

Senator CANTWELL. And how is that information translated to incoming vessels and to people who may be traversing for the first time into the Strait?

Mr. HELTON. There's, I believe that there's a, directly on the chart itself there, is a notation of the area to be avoided, and it's also, I think been placed in other documents that mariners use, notice to mariners and other sources of information. And that I believe that if a vessel does transit through the sanctuary, through the area to be avoided, and they are a tank vessel, we have a system in place to contact them afterwards and clarify that they understand what the regulations are.

So there is some follow-up for those vessels that do inadvertently transit the area.

Senator CANTWELL. And how has compliance been?

Mr. HELTON. It's, my understanding is that it has been very good. The Coast Guard, I think the, our sanctuary staff work with both the U.S. and Canadian Coast Guard on their vessel traffic information that comes into the Strait of Juan de Fuca, so they have vessel tracks for all the larger vessels that come through. And I believe it was in the 98 percent compliance rate.

Senator CANTWELL. I see on some information that was provided by the Olympic Coast National Marine Sanctuary that there are some noncompliance statistics that are below that, for tugs and oil barges and tugs and chemical barges.

[The information preferred to follows:]

VESSEL TRANSITS THROUGH THE OLYMPIC COAST NATIONAL MARINE SANCTUARY AND AREA TO BE AVOIDED (ATBA) DURING CALENDAR YEAR 2005

The International Maritime Organization (IMO), a specialized agency of the United Nations, has designated the Area to be Avoided (ATBA) off the coast of Washington to reduce the risk of marine casualties including oil spills, and the resulting environmental damage in the Olympic Coast National Marine Sanctuary (Sanctuary). Vessels advised to stay clear of this ATBA include all ships and barges carrying cargoes of oil or hazardous materials and all ships 1,600 gross tons and larger. The Olympic Coast National Marine Sanctuary, in cooperation with the U.S. and Canadian Coast Guards, monitors vessel compliance under this voluntary program. The Cooperative Vessel Traffic System (CVTS) collects data on all vessels entering and leaving the Strait of Juan de Fuca.

Vessel Type	Transits in and out of the Strait of Juan de Fuca recorded by the CVTS [1]	Transits passing through the Sanctuary [2]	Transits passing through the ATBA within the Sanctuary [3]	Estimated ATBA Compliance Rate [4]
	1	2	3	4
Container Ship	2,989	1,959	10	99.5%
Bulk Carriers	2,925	1,980	24	98.8%
Oil Tankers	898	636	5	99.2%
General Cargo ships	595	477	1	99.8%
Tugs with Oil Barges	582	570	100	82.5%
Vehicle Carriers	467	367	6	98.4%
Chemical Tankers	375	261	1	99.6%

Vessel Type	Transits in and out of the Strait of Juan de Fuca recorded by the CVTS [1]	Transits passing through the Sanctuary [2]	Transits passing through the ATBA within the Sanctuary [3]	Estimated ATBA Compliance Rate [4]
	1	2	3	4
Roll-on Roll-off Vessels (RORO)	362	222	3	98.6%
Cruise Ships	326	209	4	98.1%
Articulated Tank Barges	283	283	0	100.0%
Fishing vessels	194	114	26	77.2%
Heavy Load Carriers	33	28	0	100.0%
Refrigerated Ships	27	15	1	93.3%
Liquefied Petroleum Gas Carriers (LPG) and Liquified Natural Gas (LNG) Carriers	18	6	0	100.0%
Non-oil Tankers	16	10	0	100.0%
Cable Layers	14	11	0	100.0%
Ore-Bulk-Oil Vessels (OBO)	14	8	0	100.0%
Tugs with Chemical Barges	14	14	9	35.7%
TOTALS	10,132	7,170	191	97.3%

[1] The vessel transits in this column were provided by the Cooperative Vessel Traffic System (CVTS) and include commercial vessels greater than 1600 gross tons, or tugs with oil or chemical barges.f[2] This column includes a subset of the CVTS vessel transits through the Sanctuary.

[3] This column includes a subset of the Sanctuary vessel transits that also go through the ATBA. These are vessels potentially not complying with the provisions of the ATBA. This is not known with certainty. For example, in some cases fishing processors do not transit the ATBA, but are engaged in operations within the ATBA and are therefore not subject to ATBA provisions. In other cases tank barges may be transiting while in ballast and not carrying petroleum products or chemicals.

[4] This column shows the percentage of vessels transiting through the Sanctuary that stayed out of the ATBA {Column 4 = 1–(Column3/Column2)}. This is used as an estimate of compliance with ATBA provisions.

Mr. HELTON. So the target of the restriction is on vessels carrying oil and hazardous materials. And there are lots of other vessels that transit, and occasionally a vessel may, a tank vessel or a barge in transit, but it's not, if it's not loaded with fuel or——

Senator CANTWELL. So you just believe that those are lower threats as it relates to incidents, but why is the compliance lower for these vessels?

Mr. HELTON. I'd, I have to get back to you on that detail of explanation. As I said before, the rules apply to the larger vessels that are the larger threats. It's not meant to preclude fishing vessels and other vessels that transit the coast from having to avoid the area.

Senator CANTWELL. Capital Boothe, did you have a comment on that?

Captain BOOTHE. Yes, Senator. It is intended that all tank barges that are laden would also remain outside of the ATBA. I think historically on some occasions barges and barge traffic coming out of Grays Harbor would cut the corner, and those would still nonetheless be considered to be, if you will, in violation of the voluntary area to be avoided. Even though they typically, at least from my experience when I was Captain of the Port, in monitoring this, they predominantly try to abide by the outer edge of the area to be avoided, if not further offshore than that.

And I think another point that Mr. Helton mentioned as well is that the commercial vessels, deep draft vessels, cargo vessels of 1,600 gross tons or over, are also asked to voluntarily comply with, since they obviously have a great deal of bunker oil on board as well, and we would like to restrict as much traffic within the marine sanctuary as possible. And they had, I believe, committed an involuntary agreement by resolution of the then-Puget Sound Steamship Operators Association to remain outside of the ATBA as well.

Senator CANTWELL. I don't know the specific statistics regarding the percentages of spills related to vessels other than oil tankers in the last several years, but what we're trying to get at is that the

perception that spills come just from oil tankers is the wrong idea; correct? And that's part of why we're trying to implement a more cohesive system?

Captain BOOTHE. Yes, ma'am, Senator Cantwell. I think folks who interpret the equation of risk as probability times consequence, seem to ignore the fact that probability is a huge part of that. Even though you may have a significant consequence potential from a tank ship, if you have enough prevention strategies in place, potentially you can drive the probability down so low that it ultimately doesn't represent the highest risk.

I'm not suggesting that to be the case here, but I think looking at the various measures that we have in place in Puget Sound is a model for the rest of the country to view. I mean if I had about 5 minutes I could probably walk you through that safety net that is pretty substantial here.

Senator CANTWELL. Including this marine sanctuary and areas to be avoided and things of that nature?

Captain BOOTHE. Absolutely, Senator.

Senator CANTWELL. Does that exist in any other part of the country that you know of, like off the coast of Florida?

Captain BOOTHE. There are certainly other marine sanctuaries, whether they've actually established either state restrictions on transit or Federal, I don't know. Maybe Mr. Helton would know whether, who mans those.

Mr. HELTON. I believe that the Florida Keys National Marine Sanctuary also has a similar traffic avoidance scheme to keep deep draft vessels away from the coral reefs in that area. And that's a much more shallow, it's a coral area so it's much more critical that vessels stay well away from the reefs. About 25 miles off the Washington coast you're in lots of water, but 25 miles off the Florida Keys you may still be in, in that, several hundred feet of water.

Senator CANTWELL. I understand that member countries of the International Maritime Organization also agreed to speed up the phasing out of single-hulled vessels. Can I get your comments on that?

Captain BOOTHE. Well, in terms of the OPA 90 MARPOL similarities or differences, I think we would end up with a mixed effect. As it is right now, OPA has much more stringent phase-out period dates for single-hulled, pure single-hulled, whereas the MARPOL convention provides earlier phase-out of the double-bottom and double-side structure that is still a single-hulled vessel, but not purely single-hulled, meaning there's only one barrier throughout the whole envelope exposed to the sea.

So for us to implement the earlier phase-out associated with double-bottom and double-sided tank vessels, it would require an amendment to OPA, and probably would have some, obviously some impact on shipping within the U.S. as well.

Senator CANTWELL. Given the incidents you've seen, do you think that we need to do that?

Captain BOOTHE. No, ma'am, I don't believe so. From my personal opinion, now, I'm speaking predominantly from a Puget Sound perspective, and that takes into account the significant safety net that exists here. I mean in Puget Sound we start almost 2,000 miles from the coast when a vessel has to give us its ad-

vanced notice of arrival, and with that advanced notice we begin immediately getting the information about the vessel and determining what kind of risk they pose.

As they approach the coast they have, obviously, the area to be avoided, restrictions on the U.S. side, and Canada for tankers has a tanker exclusion zone that extends out 50 miles from Vancouver Island. So channeling from north and south vessels will come into the U.S. waters or the Strait of Juan de Fuca from a distance offshore.

We recently modified the, again IMO adopted a traffic separation scheme which could be likened to an interstate highway. It has essentially one-way traffic, or if you will, a fast and slow lane on each side, predominantly one-way, although there is some small traffic that's allowed to go opposite the flow, but well outside of the main traffic lines.

And the major shipping coming in the opposite direction is obviously separated from the inbound traffic by a several-mile wide separation zone typically. As they come in then they have to talk to the vessel traffic service, and here we have a jointly-operated Canadian and United States cooperative vessel traffic service that basically is a mandatory system. All deep draft vessels are obligated to participate in that, and the vessel traffic service, at least on the U.S. side, has intervened probably in excess of a hundred times in the last 5 years to prevent an accident from happening.

So then they get to Port Angeles, and if we've decided they need to be inspected, they get inspected there if it's a major deficiency that we've identified that needs to be addressed. And here in Puget Sound, where the rest of the Nation probably has a foreign vessel examination program averaging about 16 to 19 percent of the foreign vessel arrivals get inspected, here the number is up around 38 percent. And 80 percent, if you discount them for those that make repeat calls to the Puget Sound region.

So we've got just a myriad of measures and obviously many more that apply specifically to tankers as they come through our waters, ma'am.

Senator CANTWELL. Mr. Helton, any comments about single-hulled risks?

Mr. HELTON. Well, I guess as a resident of the Puget Sound area and as a sailor, I'm happy to know that vessels are coming in more and more with double-hulled construction. It's not a panacea, it's a design effort to prevent a leakage of a vessel after it's collided with other objects or grounded. And I think that at that point we're happy to know that it's a double-hulled tanker, and hopefully we can minimize a spill or prevent a spill just by rupturing the outer hull.

But all of these efforts to prevent the grounding and prevent the collision in the first place are very important and we shouldn't let the double hulls become a, "let us relax our confidence that we have solved the problem," because those other efforts are very important as well.

Senator CANTWELL. Mr. Jensen, any comments on that?

Mr. JENSEN. Yes, I think anything that we can do to minimize spills and make our Puget Sound waters safer I think is very much appreciated. I think that there are many companies that have been

ahead of the game. I know that some of the cargo industry vessels are beginning to move forward with designing their hull structures for double hulls.

And I think that we're very fortunate here in Puget Sound, to see some of those more aggressive, you know, moves from some of the companies and some of the actions. But safety is a big factor and I think that, you know, you can do a lot with hull designs, but I think the human factor is a big part of it, so the more that we can do to work with the crews, to work with the companies to prevent the spills, in the first place, are very helpful.

And I think that, just one comment too, is we're very fortunate here in this state to have a state-funded tug out at, located in Neah Bay, and I think that that certainly helps with minimization of risk and it helps our citizens to have some assurance that, you know, we're doing everything that we can to minimize risk here in Puget Sound.

Senator CANTWELL. Mr. Jensen, you mentioned the state and the limits that the Oil Pollution Act of 1990 has on the ability of states to implement further regulations. I know I see Representative Cooper here who's been very involved in this issue. Do you want to elaborate further on that as my colleagues and I look at this issue when we return in September? Are there things that you would recommend right now as changes to the 1990 Act?

Mr. JENSEN. Well, I think that, I don't have specifics to share with you right now. I think that when, when changes were made through the *Intertanko* case, our focus really was on the human factor, you know, part of it was, you know, really on the safe operation of waters. And I think that that's one area that if the state has more authority we can certainly work, you know, continue to work more closely with the Coast Guard. But that's, that's definitely one, you know, piece of it.

Senator CANTWELL. More authority, how would that manifest itself?

Mr. JENSEN. I think just access to, more access to vessels, which I think right now we look at complementing our programs, the Coast Guard and us, complement our programs through making sure that there isn't a redundancy, but I think that in areas of fishing vessels, cargo, that we can do more to work closely with those operators of those vessels to minimize risk.

Senator CANTWELL. So what would we need to change in the Act? If you have a good working relationship with the Coast Guard now, what would you like to see? Not to put you on the spot, but just to get a general sense. Again, part of today's field hearing is to learn of the good things that Captain Boothe and others elaborated on that we are doing in Washington State that can be somewhat of a model for the rest of the country.

Mr. JENSEN. I don't have a specific for you right now.

Senator CANTWELL. All right. I want to get on to the next panel but, just to make sure I'm understanding—Captain Boothe, you seem to be saying that of the recommendations from the Coast Guard report, the issue of resources, and the issue of cost of spills outpacing such resources, is the critical issue; is that correct?

Captain BOOTHE. Yes, Senator. I think the fact that you raised early in your statement, ma'am, regarding the cost potentially out-

pacing the actual funds that are available within the Federal domain apply toward oil spill response, or that is provided through the liability limits provided in OPA, probably need to be reexamined. And I'm not sure what the best mechanism to address that and the right size of that amount mean.

Senator CANTWELL. And then to the question of whether all the navigational tools are here and available, it seems that Puget Sound has a pretty safe system, and given that we've set aside certain regions to be avoided, or did I miss something there, Mr. Helton? Do you think we need more navigational tools?

Mr. HELTON. Oh, I think that we're, NOAA as the Nation's chartmaker, we're busy trying to update our charts and complete all of the surveys. There's still work to do there, but we are making progress, and most of the areas have been surveyed recently. So——

Senator CANTWELL. So are the charts out-of-date?

Mr. HELTON. Well, when you, if you're a boater, if you get a chart from the marine store, you'll see that the chart has an edition on it. That edition might be dated 1999 or 2004, that's the last time it was published. It doesn't necessarily refer to when it was last surveyed. So some of the, we are going through a survey backlog in trying to update all the critical areas, especially harbor areas and areas where they're may be shoaling, to update those base surveys so that the navigation information that goes to the mariners is as updated as possible.

Senator CANTWELL. So you'd say we're in good shape?

Mr. HELTON. Well, I think we're, my understanding is that there is a backlog that is being addressed. I'm sure that the agency would love to provide a list of other things that could be, could be done to improve navigation, but that's beyond my scope.

Senator CANTWELL. OK. And then, Mr. Jensen, I'm sure that you'll get back to us on whether there's adequate manning and inspection or if there's something else that the State would be interested in looking at this?

Mr. JENSEN. Yes.

Senator CANTWELL. Great, well, thank you, gentlemen, for your testimony, and we'll have the record open for 2 weeks if you want to add any additional comments to the record, but thank you for being here, and thank you for giving testimony. So we'll move to our next panel.

Captain BOOTHE. Thank you, Senator.

Senator CANTWELL. If our next panel would come up, and I don't know whether Mr. Sones made it yet or not. Okay, if you could come up and join this panel, that would be great.

[Brief pause in proceedings.]

Senator CANTWELL. Mr. Sones, we're going to, since you were supposed to be on Panel 1, we'll go ahead and start with you this morning, and we appreciate your time in being here to give testimony to the Commerce Committee field hearing. So thank you.

STATEMENT OF DAVID SONES, VICE CHAIRMAN, MAKAH TRIBAL COUNCIL; ON BEHALF OF THE NORTHWEST INDIAN FISHERIES COMMISSION (NWIFC)

Mr. SONES. Well, thank you. I had to catch a boat, I missed one, missed our canoe, as we Indians would say. We're at Tribal Journeys this week so we've really got a busy schedule, but we really appreciate you holding this hearing. And I'm fairly familiar with this group of people as the last panel we tried to sort of kind of, right in the middle of a lot of the issues that happen here and work with all of the groups, so I thank you.

My name's Dave Sones, I'm the Vice Chairman with the Makah Tribe and representing the Northwest, 20 Northwest Indian Fisheries Commission tribes. I want to thank the Senator for holding this hearing. We do appreciate that, and the Fisheries and the Coast Guard Subcommittee also. These are essential environment issues, sensitive issues for Washington State Treaty Tribes in protecting our natural resources from oil spills.

I'd also like to take this time to reaffirm the mutual trust responsibility that exists between the Federal and tribal governments to defend our treaty-protected resources from the long-term cultural, economic, and social impacts from an oil spill. Northwest Indian Fisheries Commission Tribes and the Makah Tribe recognize that it is a matter of when, not if, the next oil spill will occur in Washington waters.

Simply acknowledging this fact acknowledges at least a base understanding that an oil spill places a greater strain on an already strained marine environment. Makah has witnessed this firsthand from the devastating effects of an oil spill on our resources and our cultural way of life.

The Makah Tribe is involved and has been involved in tracking this issue, not only as a resource trustee and a, but as a co-manager with the State and Federal Governments, but we are also first responders contracted by major oil spill response organizations to assist in oil spill response efforts off the Olympic Coast and in the Strait of Juan de Fuca. Other Northwest Indian Fish Commission Tribes could offer the same oil spill response capability if properly trained by the oil spill response companies.

Other, we, other Washington tribes have experienced the devastating impacts of an oil spill. The Suquamish, Puyallup, and Muckleshoot Tribes were severely impacted by the Dalco Pass in the 2004 spill, while the Suquamish Tribe was particularly impacted by the December 2003 spill at Point Wells. Like the number of spills off of Cape Flattery, little oil was recovered from these incidents before the oil hit the beach.

Tribal notification and the opportunity for tribal involvement in the decisionmaking process during these incidents was difficult for us to establish. Northwest Indian Fish Commission Tribes need a more institutionalized solution to these shortcomings.

We believe the Washington State legislature has recognized the importance of tribal notification from the time a spill is detected, but there is still a need to assure tribal input in the Incident Command established, that is, established during the spill. For example, Tribal input in the Incident Command is crucial to the proposed U.S. Coast Guard's rulemaking aimed at requiring new ap-

plication capabilities for oil spill dispersants while maintaining response requirement levels for mechanical recovery.

Decisions relating to dispersant use need to be made on a timely basis, but need to consider long-term impacts on the ability of tribes to harvest shellfish, as well as impacts on the ability to recover undispersed oil through skimming or *in situ* burning.

Formal consultation when major rulemakings are undertaken such as the Coast Guard's proposed 2003 Removal Equipment Requirements and Alternative Technology Revisions, are critical for Tribal involvement. We concur with Washington State Department of Ecology that there continues to be a need to increase mechanical recovery equipment capabilities rather than decrease them. It is the Northwest Indian Fish Commission Tribal members' position that treaty protected resources cannot simply be calculated as a cost of doing business reflected in the cost of a barrel of oil retrieved scenario, but rather represents far-reaching cultural and economic implications.

We also believe that offering a credit to offset purchases of *in situ* burn equipment does not encourage the maintenance of a full response toolkit. To that end we are concerned that proposed DOE contingency planning standards that are more stringent than the proposed Coast Guard rules, will be interpreted by the Coast Guard to frustrate its purpose and overrule DOE's effort. In order to adequately protect the Washington waters from oil spills we must reconcile these political—or potential differences.

The Makah Tribe realizes that there is a greater, there is a need for greater tribal involvement in the oil spill arena as well as the limitations in our technical ability to review and comment on various state and Federal oil spill policy documents, and that becomes problematic. To address that shortcoming we solicited technical support from NOAA Hazmat in Seattle to assist us with navigating and clarifying issues of particular concern to the Tribe.

The Makah Tribe is currently analyzing the planning and response assets the NOAA Hazmat Response Division is able to provide the Makah Tribe during an oil spill and we are finding them quite capable. Our initial request highlighted the underlying necessity to develop a strong partnership between the Makah Tribe and NOAA's National Marine Sanctuary Program through Olympic Coast National Marine Sanctuary. We hope to develop similar collaborations with the EPA and the Coast Guard and the U.S. Navy over the next year.

While the Makah Tribe is part of the region's front line of defense on the outer coast, we believe equipment and training that is reconciled to ocean conditions can be further improved. It would be a considerable improvement if the on-the-water identification phase of an oil spill response were conducted as soon as possible after an incident occurs. We need to build the capacity to provide the Makah Indian Tribe and other Northwest Indian Fish Commission tribes with personnel trained in such procedures, and to have equipment post—pre-positioned to respond to the oil spill once it is detected.

There is also a need for expanding response infrastructure, i.e., dedicated response gear. When response to the Dalco Pass spill occurred, much of the spill response gear situated at Neah Bay had

to be redirected to other areas, and this action left our treaty-protected resources unprotected. The Makah Tribal Council, or the Makah Tribal Council fully supports the year-round positioning of a rescue tug in Neah Bay outfitted with multi-mission capability.

The outer coast of Washington State includes the Olympic National Park and three wildlife, national wildlife refuges, the Olympic Coast National Marine Sanctuary, numerous endangered species, and four tribal reservations that are located there.

The Makah Tribe believes that in order to adequately address these trust interests translates into increasing the salvage, rescue and towing capabilities for the outer coast. Two National Academy of Sciences reports on the state of U.S. salvage capability point out that there is an immediate need for improved salvage capability within the United States. The U.S. Coast Guard is tasked with completing the salvage and firefighting rulemaking as part of OPA 90.

The National Academy of Science has also sponsored two separate reports of knowledge regarding oil spill dispersants. We are reviewing this second study very carefully and are concerned to find that the unknowns are still unknown. The lack of solid conclusions about the efficacy and effects of dispersants in cold water and near shore environments raises concerns with the Makah Tribe and the Northwest Indian Fish Commission Tribes in regard to the appropriate application of dispersants in our waters and the rigor with which such information is being sought.

Finally, in order for the Makah Tribe and the Northwest Tribes to understand a real world picture of our state of readiness for oil spill response, we need to conduct an oil spill drill. We know how difficult it is to respond to an oil spill in our region from first-hand experience. We do not, however, have a clear understanding on how that overall capability has changed or improved over the years.

The Makah Tribe would like to do its part in assisting with the coordination of an oil spill drill to be conducted within the Olympic Coast National Marine Sanctuary, enabling us a realistic evaluation of our oil spill response capabilities. A goal of the original OCNMS management plan was to conduct an oil spill drill within the sanctuary boundaries.

In closing, we appreciate the Senator's leadership in reinstating the Oil Spill Liability Trust Fund and increasing its cap to $3 billion. We respectfully request that tribal governments be allowed to draw from this account in the same manner as the U.S. Coast Guard and EPA and other Federal organizations. This ability will increase our capacity to address the risks associated with the increasing volumes of oil transiting through our waters.

We see opportunities to improve our oil spill prevention and response capabilities at the Federal level through the finalization of the Salvage and Fire Fighting Rule, continued funding of a rescue tug in Neah Bay, oil spill drills being used to identify where to stockpile equipment appropriate to the operating environment, evaluation of the oil barge traffic moving through the ATBA, and the ability for State and tribal governments to exceed Federal response standards where appropriate.

We have a mutual trust obligation to protect the treaty resources of the 20 federally recognized Indian tribes in the Pacific North-

west. We appreciate Senator Cantwell's leadership in calling for this hearing and look forward to working with the Senator and the Committee to see that these recommendations are implemented. Thank you.

[The prepared statement of Mr. Sones follows:]

PREPARED STATEMENT OF DAVE SONES, VICE CHAIRMAN, MAKAH TRIBAL COUNCIL; ON BEHALF OF THE NORTHWEST INDIAN FISHERIES COMMISSION (NWIFC)

Senator Cantwell and Members of the Committee on Commerce, Science, and Transportation:

My name is David Sones. I am Vice Chairman of the Makah Tribal Council and I am speaking on behalf of the 19 other Washington State Treaty Tribes that make-up the Northwest Indian Fisheries Commission (NWIFC). We appreciate the opportunity to present to you our tribal interests and concerns in regard to the development and implementation of oil spill policy.

We would like to thank Senator Cantwell and the Fisheries and Coast Guard Subcommittee for holding this field hearing and for recognizing the mutual trust responsibility that exists between the Federal and Tribal governments to defend our treaty-protected resources from the long-term cultural, economic and social impacts of a major oil spill. The NWIFC Tribes and Makah Tribe recognize that it is a matter of when, not if, the waterways in the State of Washington will experience another oil spill. In fact, as we are preparing this testimony the Canadian fishing vessel, *Ocean Tor*, has been drifting capsized for over 24 hours carrying four thousands gallons of fuel oil and 350 gallons of hydraulic oil through our Usual and Accustomed fishing area.

In our case the Makah Tribe is not only a resource manager with the state and Federal Governments, we are first responders, contracted by major oil spill response organizations to assist in timely and capable responses to oil spills off the Olympic Coast and in the Strait of Juan de Fuca. These waters are transited by 10,000 commercial vessels annually carrying over 15 billion gallons of oil. Other NWIFC Tribes could offer the same oil spill response capability if properly trained by the spill response companies.

The Makah Tribe has first hand experience with three of the largest oil spills in Washington State (*General Meiggs*, 2,300,000 gallons in 1972; *Nestucca*, 231,000 gallons in 1988, *Tenyo Maru*, 400,000 gallons in 1991). However, the Makah Tribe does not have a monopoly on suffering the negative impacts of oil spills. The Suquamish Tribe, Duamish, Puyallup and Muckelshoot Tribes have recently been impacted by the October 2004 Dalco Pass spill while the Suquamish Tribe was particularly impacted by the December 2003 spill at Point Wells. Like the spills off Cape Flattery, little was recovered from these incidents before oil hit the beach and tribal notification and the opportunity for tribal involvement in the decisionmaking process was difficult to establish.

We believe the Washington State Legislature has recognized the importance of tribal notification from the time a spill is detected, but there is still a need to assure Tribal input in the Incident Command established during a spill. For example Tribal input in the Incident Command is crucial to the proposed USCG rulemaking aimed at requiring new application capabilities for oil spill dispersants while maintaining response-requirement levels for mechanical recovery. Decisions relating to dispersant use need to be made on a timely basis, but need to consider long-term impacts on the ability of tribes to harvest shellfish as well as impacts on the ability to recover un-dispersed oil through skimming or *in situ* burning.

The Makah Tribe has repeatedly supported the maintenance of a full toolkit of oil spill response options. We Tribes depend on the Federal Government to assist us in developing the assurances that our treaty-protected interests will be represented when policy decisions are being made. These decisions include not only having a seat at the Incident Command but also formal consultation when major rulemakings are undertaken, such as the USCG proposed 2003 Removal Equipment Requirements and Alternative Technology Revisions (USCG–2001–8661). The Draft Programmatic Environmental Impact Statement associated with this rulemaking has a written comment deadline of August 1, 2005. We concur with Washington State Department of Ecology that there continues to be a need to increase mechanical recovery equipment capabilities rather than decrease them. It is the NWIFC Tribal members position that treaty-protected resources cannot be simply calculated as a cost of doing business reflected in the cost of a barrel retrieved scenario but rather represents far reaching cultural and economic implications. We also believe

that offering a credit to offset purchases of in situ burn equipment does not encourage the maintenance of a full toolkit. To that end we are concerned that proposed DOE contingency planning standards that are more stringent than the proposed USCG rules will be interpreted by the USCG to "frustrate its purpose," this rule has implications for "federalism" which is explicitly allowed for under Executive Order 13132, but contradicted in the proposed USCG rule.

The Makah Tribe realized the need for greater tribal involvement in the oil spill arena as well as the limitations in its technical ability to review and comment on various state and Federal oil spill policy documents had become problematic. To address that shortcoming we solicited technical support from NOAA HAZMAT in Seattle to assist us with navigating and clarifying issues of particular concern to the Tribe. This initial request highlighted the underlying necessity to develop a partnership between the Makah Tribe and NOAA's National Marine Sanctuary Program through Olympic Coast National Marine Sanctuary. We hope to develop similar collaborations with the EPA, Coast Guard and Navy next year. This collaboration between the National Marine Sanctuary Program and the Makah Tribe is just beginning yet progressing well.

The necessity of stationing dedicated response gear became evident to the MTC when in order to respond to the Dalco Pass spill much of the spill response gear situated at Neah Bay had to be redirected to other areas. The Washington State DOE just released a study showing that 15 additional spill response vessels would be needed to respond to a 420,000-gallon spill in the San Juan Islands. If such additional assets are needed in close proximity to four oil refineries where the majority of our spill response assets are pre-positioned, the same or even more would be needed to address a spill in the more remote waters of the Olympic coast. We support the DOE's call for training fishermen to assist in spill response and believe that tribal fishermen may be particularly helpful in that they are more likely to be present in the State year round.

While the Makah Tribe is part of the region's front-line of defense on the outer coast, we believe equipment and training that is reconciled to ocean conditions can be further developed. It would be a considerable improvement if the on-water identification phase of an oil spill response were conducted as soon as possible after an incident occurs. We need to build the capacity to provide the Makah Indian Tribe and other NWIFC member Tribes with personnel trained in such procedures and to have equipment pre-positioned to respond to the spill once it is detected.

We recognize that the Strait of Juan de Fuca receives more vessel traffic bound to ports in British Columbia and Washington State than any other water body in North America. Further, we understand that current projections suggest trade volumes are expected to double or triple in the next 10 to 20 years. We understand these projections to affect an increase in the number and size of ships calling on our waters. These larger ships require larger tugs to tow them, especially off the coast where high winds and waves counteract a tug's ability to assist a vessel. The rescue tug stationed in Neah Bay is only available on a seasonal basis and only assured State funding for another 3 years.

The Makah Tribe fully supports the year-round positioning of a rescue tug in Neah Bay outfitted with multi-mission capability. The outer coast of the State of Washington includes the Olympic National Park, three National Wildlife Refuges and Olympic Coast National Marine Sanctuary, numerous species listed under the Endangered Species Act, and the four tribal reservations that are located there. While the Federal Government has a much vested interest in protecting the outer coast from the impacts of an oil spill, it makes sense for the Federal Government to support year round funding of a rescue tug. The Makah Tribal Council believes addressing these interests translates to increasing the salvage, rescue, and towing capability for the outer coast. According to the Olympic Coast National Marine Sanctuary Program's efforts to monitor vessel compliance with the Area To Be Avoided (ATBA) off the coast, 142 tugs with oil barges transited through the ATBA in 2004. While this represents a 75 percent compliance rate of the tugs and barges that avoided the ATBA, of the remaining 25 percent, just one accident with a laden oil barge can impact us for over 10 years. We therefore view near-shore transits of laden oil barges to be one of the greatest risks to our treaty-protected resources and our way of life.

Two National Academy of Sciences reports on the state of U.S. salvage capability point out the immediate need for improved salvage capacity in the United States. The U.S. Coast Guard is tasked with completing the Salvage and Firefighting rulemaking as part of OPA 90. During the December 6, 2004 incident involving the *Selendang Ayu* over 400,000 gallons of oil spilled in the waters surrounding the Aleutian Islands. The Coast Guard and the State of Alaska, despite expending considerable resources in responding to the incident were unable to prevent the

Selendang Ayu from grounding. Governor Murkowsky of Alaska has since called for Coast Guard vessels to be equipped with rescue towing capability. This option should be kept in mind for remote areas such as Neah Bay. Alternatively, uniquely capable Navy Powhatan Class salvage tugs could be strategically stationed in Neah Bay and operated by either private contractors, Military Sealift Command, the Navy, or the Coast Guard.

In our own waters during a November 11th incident with a cargo ship the Neah Bay Rescue tug had to travel 16 hours round trip from Neah Bay to Port Angeles and back in order to pick up salvage equipment and boom—resources that could reside in Neah Bay. The salvage master and dive crew could have been transited into Neah Bay rather than having the tug make the trip to PA. Fortunately the bulk carrier *Thrasyvoulos V* was well offshore when the call came in. Passage of a strong Salvage and Firefighting rule should be a priority of this year.

The National Academy of Sciences has also sponsored two separate reports on the state-of-knowledge regarding oil spill dispersants. We are reviewing this second study carefully, and are concerned to find that the unknowns are still unknown. The lack of solid conclusions about the efficacy and effects of dispersants in cold water and near-shore environments raises concerns with the Makah Tribe and the Northwest Indian Fish Commission Tribes in regard to the appropriate application of dispersants in our waters and the rigor with which such information is being sought.

Finally, in order for the Makah Tribe and the N.W. Indian Fisheries Commission to understand a real world picture of our state-of-readiness for oil spill response we need to conduct oil spill drills. We know how difficult it is to respond to a spill in our region from first-hand experience, we do not have a clear understanding on how that overall capability has changed or improved in recent years. The Makah Tribe would do its part in assisting with the coordination of a spill drill to be conducted off the Olympic Coast National Marine Sanctuary enabling us a realistic evaluation of our oil spill response capabilities. A goal of the original OCNMS Management Plan was to conduct an oil spill drill within the sanctuary boundaries.

In closing, we appreciate the Senator's leadership in reinstating the Oil Spill Liability Trust Fund (OSLTF) and increasing its cap to $3 billion. We respectfully request that tribal governments be allowed to draw from this account in the same manner as the USCG and EPA. This ability will increase our capacity to address the risks associated with the increasing volumes of trade moving through our shared waters.

To summarize, the Makah Tribe and the Northwest Indian Fisheries Commission Tribes stand ready to constructively contribute to the level of oil spill readiness in Washington State through our participation in the development of oil spill policy, the Incident Command System, and as spill response contractors. However, in order maximize our contributions, increased levels of consultation will be needed with the tribes before and during our next oil spill.

We see opportunities for improvements to our oil spill prevention and response capabilities at the Federal level through the finalization of the Salvage and Firefighting rule, continued funding of a rescue tug in Neah Bay, oil spill drills being used to identify where to stockpile equipment appropriate to the operating environment, evaluation of the oil barge traffic moving through the ATBA, and the ability for state and tribal governments to exceed Federal response standards where appropriate.

We have a mutual trust obligation to protect the treaty resources of the 20 federally recognized Indian tribes in the Pacific Northwest. We appreciate Senator Cantwell's leadership in calling for this hearing, and look forward to working with her and the Committee to see that the recommendations are implemented.

Thank you.

Senator CANTWELL. Thank you, Mr. Sones. Where did you start your morning?

Mr. SONES. In Port Angeles. And back there for the Journeys, the canoes are coming in today.

Senator CANTWELL. Even that's a distance, but I thought maybe you started on the reservation this morning.

Mr. SONES. Well, my staff did so they came and picked me up.

Senator CANTWELL. And that is a long journey to get here, so thank you very much for being here.

Mr. Holmes, did you want to go next?

STATEMENT OF FRANK E. HOLMES, NORTHWEST REGIONAL MANAGER, WESTERN STATES PETROLEUM ASSOCIATION (WSPA)

Mr. HOLMES. Sure. Good morning, my name is Frank Holmes, I'm the Manager for the Northwest region for Western State Petroleum Association, or WSPA. WSPA is the petroleum trade association for the six western states. Our members produce, refine, market, and transport petroleum and petroleum products.

Thank you for inviting us here today to participate in this panel on this very important topic of oil spill prevention response in the State of Washington. Our members are committed to oil spill prevention and timely and effective response in case of an incident. Washington State is a major refining center with five refineries located in the western portion of the state. These five refineries have a combined crude oil processing capacity of approximately 621,000 barrels per day.

Washington State does not have any oil and gas production so all the petroleum the state consumes needs to be transported in the state. Eighty-five percent of the crude oil refined in the state is transported to the refineries by tanker, with the remaining being brought in by pipeline from Canada. Thirty-eight percent of the petroleum products that are produced in Washington are transported by vessel. The remaining 50 percent is transported by pipeline.

The Puget Sound is a safe waterway and supports marine vessel activities from both the United States and Canada. This marine vessel activity includes a wide range of uses from transportation of goods and products to military operations to fishing to recreational boaters. The petroleum industry has always been supportive of a robust oil spill prevention and response program. We willingly pay the barrel tax that funds the Department of Ecology's oil spill prevention and response program.

The industry is a very active participant in the oil spill prevention and response actions within the State of Washington. The industry is engaged in every possible venue to consider improvements to the oil spill prevention and response, along with investing heavily at our facilities and in new vessels to protect the Puget Sound.

Here are some of the more recent and ongoing examples of this. Some of these you've heard in the previous panel. Through the Pacific States/British Columbia Oil Spill Task Force, the shipping routes were moved further offshore so that the tanker traffic of persistent oil is 50 miles or more offshore, along with tug and barge traffic being 25 miles offshore.

In cooperation with the Olympic Coast National Marine Sanctuary, the area to be avoided was established. Also the Coast Guard moved the entrance buoy to the Strait of Juan de Fuca ten miles further offshore, again to be more protected by moving all vessels off shore.

Under the OPA 90, the oil industry is spending billions of dollars to build the safest double hull redundant system tank ships in the world. The U.S. and Canadian industry jointly instituted the International Tug of Opportunity Systems, or ITOS, to track and identify tugs within the Puget Sound that could be called to support a vessel if needed. ITOS is now being enhanced by the installation

of the AIS, or Automatic Identification System, by the Coast Guard, which will in real-time track most vessels over 65 feet and towing vessels over 26 feet.

The petroleum industry is spending millions of dollars annually to fund oil spill response organizations, OSRO's, such as MSRC that is here today, which are located here in the Puget Sound. This funding provides for the acquisition of appropriate equipment and the continuous staffing of trained personnel. Individual companies have expended large amounts for dedicated equipment at their facilities, and have ongoing extensive training and drill programs to keep employees ready to respond in the case of an incident.

Industry participates in the Northwest Area Committee which developed the area contingency plan for the Puget Sound. The industry and the OSRO's have been instrumental in testing the protective strategies for the Geographic Response Plans for sensitive sites within the Puget Sound.

The petroleum industry provides the bulk of the funding for the program and the contingency fund. The State of Washington legislature has established an Oil Spill Advisory Council under the Governor's office that is currently being organized, and industry hopes to actively participate in the council's efforts.

The industry is also currently engaged in a number of regulatory efforts here in the State of Washington. The Washington State Oil Spill Contingency Plan regulation is in the process of a stakeholder work group. This effort will include a review of the responsive equipment requirements for the state. Also, there is a regulatory process to develop a rule for oil spill transfer regulations. This was instituted through a piece of legislation last year, and this regulatory effort focuses on the booming and manpower requirements for transfer operations.

Industry is also working very closely with the Coast Guard on the Outer—Outer Coast Logistics Project to develop an initial database identifying logistical and communication needs as well as local tribal and agency contact information. This effort is continuing. Another Coast Guard drill is planned for this fall.

This list is not a comprehensive list, but I hope this gives you an understanding of the serious attention that's being put forth by the industry regarding the issue of oil spill prevention and response. No one wants to spill oil. Industry is actively engaged in conducting the appropriate activities and practices to reduce the risk inherit in the transportation of oil and prevent spills from occurring. Industry is also trained and ready to respond to any incident that may occur in Washington. Thank you again for allowing me to participate.

[The prepared statement of Mr. Holmes follows:]

PREPARED STATEMENT OF FRANK E. HOLMES, NORTHWEST REGIONAL MANAGER, WESTERN STATES PETROLEUM ASSOCIATION (WSPA)

Good morning. My name is Frank Holmes. I am the Manager for the Northwest Region for Western States Petroleum Association (WSPA). WSPA is the petroleum trade association for the six western states. Our members produce, refine, market, and transport petroleum and petroleum products. We provide the transportation fuels that transparently move the entire economy of the Northwest, and we do so while responsibly managing virtually every drop of oil and product throughout the distribution system.

Thank you for inviting us to participate on this panel today to discuss the very important topic of oil spill prevention and response in the state of Washington. Our members are committed to oil spill prevention and timely and effective response in the case of an incident. We are surprised that the oil industry was not contacted to participate in today's Senate Hearing until last Wednesday evening.

Washington State is a major refining center with five refineries located in the western portion of the state. These five refineries have a combined crude oil processing capacity of approximately 621,000 barrels per day (in 2003 operated at 94 percent of capacity).

Washington does not have any oil and gas production so all of the petroleum the state consumes needs to be transported into the state. Eighty-five percent of the crude oil refined in the state is transported to the refineries by tanker, with the remaining being brought in by pipeline from Canada. Thirty-eight percent of petroleum products produced in Washington are transported by vessel, with 50 percent being transported by pipeline.

The Puget Sound is a safe waterway and supports marine vessel activities from both the United States and Canada. This marine vessel activity includes a wide range of uses from transportation of goods and products, to military operations, to fishing, to recreational boaters.

The petroleum industry has always been supportive of a robust oil spill prevention and response program. We willingly pay the barrel tax that funds the Department of Ecology's Oil Spill Prevention and Response Program.

The industry is a very active participant in the Oil Spill Prevention and Response actions in Washington State. The industry is engaged in every venue possible to consider improvements in oil spill prevention and response along with investing heavily at our facilities and in new vessels to protect the Puget Sound. Here are some of the more recent and ongoing examples:

1. Through the Pacific States/British Columbia Oil Spill Task Force, the shipping routes were moved further offshore so the tanker traffic of persistent oil is 50 miles or more offshore along with the tug and barge traffic being 25 miles offshore.

2. In cooperation with the Olympic Coast National Marine Sanctuary, an Area to Be Avoided (ATBA) was established which moved vessel traffic entering and leaving the Strait of Juan de Fuca further away from sensitive areas.

3. The Coast Guard moved the entry buoy to the Strait of Juan de Fuca 10 miles further offshore—again to be more protective by moving all vessels further offshore.

4. Under the OPA 90 the oil industry is spending billions of dollars to build the safest double-hull/redundant system tank ships in the world.

5. U.S. and Canadian industry jointly instituted the International Tug of Opportunity System (ITOS) to track and identify tugs within the Puget Sound that could be called for support if needed by a vessel. ITOS is now being enhanced with the installation of the Automatic Identification System (AIS) by the Coast Guard which, in real-time identifies most vessels over 65 feet and towing vessels over 26 feet.

6. The industry supported placement of an equitably-funded-dedicated tug at the entrance to the Strait of Juan de Fuca during the 9-month long Oil Spill Risk Management stakeholder process in 1999 and 2000 and subsequent legislative funding efforts.

7. The petroleum industry is spending millions of dollars annually to fund Oil Spill Response Organizations (OSROs) such as MSRC, located here in the Puget Sound. This funding provides for the acquisition of appropriate equipment and the continuous staffing of trained personnel.

8. Individual companies have expended large amounts for dedicated equipment at their facilities and have ongoing extensive training and drill programs that keep employees ready to respond in the case of an incident.

9. Industry participates in the Puget Sound Harbor Safety Committee, which has developed the Puget Sound Harbor Safety Plan and Standards of Care that focus on reducing the risks of spills.

10. Industry participates in the N.W. Area Committee which developed the Area Contingency Plan for the Puget Sound. Industry and OSROs have been instrumental in testing the protection strategies for the Geographic Response Plans (GRP) for sensitive sites throughout Puget Sound.

11. The petroleum industry provides the bulk of the funding for the Washington State Department of Ecology Oil Spill program and the state's contingency fund.

12. The Washington State Legislature has established an Oil Spill Advisory Council under the Governor's office that is currently being organized. Industry hopes to actively participate in the council's efforts.

13. Industry is currently an active participant in ongoing oil spill regulatory activities such as:

a. The re-write of the Washington State Oil Spill Contingency Plan Regulation through a stakeholders work group. This effort will include a review of the response equipment requirements for the state.

b. Participation in the stakeholder work group to develop Oil Transfer Regulations as required under legislation passed last year. This regulatory effort focuses on booming and manpower requirements during transfer operations.

c. Industry has worked very closely with the USCG on the Outer Coast Logistics Project to develop an initial database identifying logistical, and communication needs, as well as local tribal and agency contact information. This effort is continuing; another USCG drill is planned for this fall.

This is not a comprehensive list of activities, but I hope it gives you an understanding of the serious attention being put forth by the industry concerning the issue of Oil Spill Prevention and Response.

NO ONE wants to spill oil. Industry is actively engaged in conducting the appropriate activities and practices to reduce the risk inherent in the transportation of oil and to prevent spills from occurring. Industry is also trained and ready to respond to any spill incident that may occur in Washington.

Thank you for inviting us to participate.

Senator CANTWELL. Thank you, Mr. Holmes. Mr. Wright, do you want to go next? Thank you for being here.

STATEMENT OF RICHARD WRIGHT, PACIFIC/NORTHWEST REGION VICE PRESIDENT, MARINE SPILL RESPONSE CORPORATION (MSRC)

Mr. WRIGHT. Senator Cantwell, good morning. Thank you for this opportunity. My name is Richard Wright. I'm the Region Vice President of the Marine Spill Response Corporation, Pacific Northwest region, that encompasses Washington, Oregon and Hawaii. Prior to the merger last April of MSRC and Clean Sound Cooperative, Incorporated, I was the President of the latter response organization. I'm also a retired U.S. Coast Guard captain and was a member of the Governor's and District Commander Early Action Task Force.

The Marine Spill Response Corporation is the largest oil spill response and cleanup company operating in the United States. MSRC is a private, not-for-profit organization founded in 1990 by industry as a direct result of the Oil Pollution Act of 1990. MSRC is funded by the Marine Preservation Association, MPA, whose member companies include those involved in the transportation of petroleum products by water, refining companies, pipeline companies, energy companies, as well as various other types of shippers. Since the passage of OPA 90, MPA member companies have funded in excess of $1 billion to MSRC to develop and enhance oil spill response capability.

In April of this year MSRC merged with Clean Sound Cooperative, Incorporated, an Everett, Washington-based, industry-funded not-for-profit response organization, in existence since 1971 to provide oil spill response services to the oil industry in Western Washington. At the time of the merger both MSRC and Clean Sound independently had significant resources that greatly exceeded the U.S. Coast Guard planning capacities required to meet both Facil-

ity Response Plans as well as Vessel Response Plans under OPA 90 regulations.

This merger has enhanced the readiness and response capabilities in the State of Washington by making a larger inventory of responses—resources available as well as access to the broader resource base of MSRC on the West Coast and nationally. Importantly, the merged organization provides the ability for a member or the U.S. Coast Guard to call out and manage all of the combined resources with a single telephone call.

As we all know, in an emergency situation, minimizing the interfaces and simplifying decisionmaking is critical to the success of the response, particularly in the earliest hours. The merger combines the talents of both MSRC and the former Clean Sound, who together have responded to over 500 spills throughout the United States. In addition, a Memorandum of Agreement between MSRC and Burrard Clean Operations of British Columbia, Canada, affords MSRC access to the considerable assets of that response organization.

Nationally, MSRC has 400 dedicated personnel and 88 equipment sites along the U.S. Coastline including the U.S. Caribbean and the Hawaiian Islands. MSRC's entire inventory includes 15 multi-million dollar state-of-the-art "Responder" class oil spill response vessels and over 100 additional supporting oil spill response vessels and storage barges. We have 600,000 feet of boom, 240 skimming systems, and mobile emergency telecommunications capability. In addition to our own inventory, MSRC has contracts with approximately 90 environmental service providers at over 200 locations nationwide to provide additional resources at the time of a spill.

In Washington State alone, at manned sites in Tacoma, Port Angeles, Anacortes, Bellingham, Seattle, and Everett, MSRC has over 60 full-time people managing the most comprehensive inventory of response resources and equipment in any one area in the entire United States. This includes 16 dedicated primary response vessels, over 40 support vessels, approximately 120,000 feet of boom, 44 skimming systems, and four large barges, with a total capacity of over 94,000 barrels or almost four million gallons, to ensure that recovered oil and water do not constrain a cleanup action.

While the above information may seem to be mere facts, please allow me to put this level of resource base into a perspective. Guidelines developed by the United States Coast Guard for a classification of oil spill removal organizations, OSRO's, are based on the OSRO's ability to bring quantities of resources to various locations within certain time frames. These resources include skimming capacity, booming capacity, and storage capacity examination.

MSRC has received the highest rating available under the system, which was developed as part of OPA 90. Further, through industry commitment and funding, MSRC's resource base is far in excess of what the regulatory guidelines require, even for those with the highest ratings. For example, depending on which location in the Puget Sound area is selected, our skimming capacities exceed such guidelines for initial timeframe requirements by at least five-fold.

Similarly, our storage and booming capacities exceed the Federal guidelines by over more than double, and in some cases by as much as ten-fold. The above are calculated only referencing MSRC-owned and dedicated equipment and not contractor resources which would greatly supplement this capability.

Obviously, the above demonstrates the commitment on the part of MSRC and the funding companies of MPA to exceed Federal requirements, thereby ensuring a strong and robust response capability in the event of an incident in Washington State. Furthermore, all the MPA member companies operate a significant exercise and drill program on a regular basis with MSRC to ensure that not only the resource base is constantly tested, but also to ensure that the management processes are in place to successfully respond to any discharges.

We all know prevention's the key. Like firemen, the response community would like nothing better than to never have to respond to a spill. Thank you for the opportunity to testify here today. I'm available to answer any questions.

[The prepared statement of Mr. Wright follows:]

PREPARED STATEMENT OF RICHARD WRIGHT, PACIFIC/NORTHWEST REGION VICE PRESIDENT, MARINE SPILL RESPONSE CORPORATION (MSRC)

Good morning. My name is Richard Wright. I am the Region Vice President of the Marine Spill Response Corporation Pacific/Northwest Region that encompasses Washington, Oregon, and Hawaii. Prior to the merger last April of MSRC and Clean Sound Cooperative, Inc., I was the President of the latter response organization. I am also a retired U.S. Coast Guard Captain.

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In April of this year, MSRC merged with Clean Sound Cooperative Inc., an Everett, Washington-based, industry-funded not-for-profit response organization in existence since 1971 to provide spill response services to the oil industry in western Washington. At the time of the merger, both MSRC and Clean Sound independently had significant resources that greatly exceeded the U.S. Coast Guard planning capacities required to meet both Facility Response Plans as well as Vessel Response Plans under OPA 90 regulations. This merger has enhanced the readiness and response capabilities in the state of Washington by making a larger inventory of resources available as well as access to the broader resource base of MSRC on the west coast and nationally. Importantly, the merged organization provides the ability for a member or the U.S. Coast Guard to call-out and manage all of the combined resources with a single phone call. As we all know, in an emergency situation, minimizing the interfaces and simplifying decisionmaking is critical to the success of the response—particularly in the earliest hours. The merger combines the talents of both MSRC and the former Clean Sound, who together have responded to over 500 spills throughout the United States. In addition, a Memorandum of Agreement between MSRC and Burrard Clean Operations in British Columbia, Canada, affords MSRC access to the considerable assets of that response organization.

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In Washington State alone, at manned sites in Tacoma, Port Angeles, Anacortes, Bellingham, Seattle, and Everett, MSRC has over 60 full-time personnel managing the most comprehensive inventory of response resources and equipment in any one area in the entire United States. This includes dedicated 16 primary response vessels, over 40 support vessels, approximately 120,000 feet of boom, 44 skimming systems, and four large barges (with a total capacity of over 94,000 barrels or almost 4,000,000 gallons) to ensure that recovered oil/water product does not constrain the clean-up.

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Obviously, the above greatly demonstrates the commitment on the part of MSRC and the funding companies of MPA to exceed federal requirements, thereby ensuring a strong and robust response capability in the event of an incident in Washington State. Furthermore, all the MPA member companies operate a significant exercise and drill program on a regular basis with MSRC to ensure that not only the resource base is constantly tested, but also to ensure that the management processes are in place to successfully respond to any discharges. I am available to answer any questions the Committee may have.

Senator CANTWELL. Thank you, Mr. Wright, for being here. Doctor, is it Leschine?

Dr. LESCHINE. Leschine.

Senator CANTWELL. Thank you for being here.

STATEMENT OF PROFESSOR THOMAS M. LESCHINE, DIRECTOR, SCHOOL OF MARINE AFFAIRS, UNIVERSITY OF WASHINGTON

Dr. LESCHINE. Thank you very much. I'm very pleased and honored to be invited to speak at this hearing, Senator Cantwell. I'm a Professor and Director of the School of Marine Affairs at the University of Washington, not an oil spill professional per se, so my remarks will be a little more general, broader, and reflective.

I've been in and out of the oil spill business over my career. I worked in the late 1980s to help develop the Washington Compensation Schedule that the state now uses for oil spill damages. I developed the *Federal On-Scene Coordinator's Report* for the *Exxon Valdez* spill for the Coast Guard, and most recently I've been a member of a scientific advisory panel of an organization at the University of New Hampshire, joint between them and NOAA, the Coastal Response Resource Center, that is dedicated to promoting independent research. So I said all that just as background because I'm going to reflect in my testimony on my experiences in those arenas.

I've got four basic points to make, first of all, a comment on overall safety in the system and how we're maintaining it. Second, I'll address social conflict, because I'm a social policy scientist, and I think it's ever-present and doesn't tend to get spoken to in discussions that are primarily technical. Third, I'll address the nature of

the risk. I've had a fair amount of experience as a risk assessment practitioner, commenter. And last, being a professor it's only right I should address research, so I'll do that.

First of all, with respect to the overall safety, it's very clear that improvements in the system have been enormous since *Exxon Valdez* occurred. At the same time this risk will never be reduced to zero and that's why we're all still here. And I guess I'll just comment that what we were doing before *Exxon Valdez* was relying on government to provide the ability to respond to spills. What we're doing now is relying on the private sector, or maybe I should say non-governmental organizations such as Mr. Wright just spoke to.

And I guess I just want to say that there are some inherent difficulties here because just the extent, to the extent that one must maintain profitability in private sector operations, for example, there's a difficulty in maintaining readiness. You know, we have a Fire Department and we have, and the Fire Department is there if we need it, and firemen oftentimes are growing the best tomatoes in town because they've got lots of time to tend their gardens. It's difficult to make money in that kind of a system.

So I note that a recent report to the State of Washington by Glosten Associates made reference to the need to incorporate vessels of opportunity such as fishing vessels into the response system, and it seems that the State Department of Ecology is interested in doing, and maybe in spite of all the resources that we obviously have available, things like this are, potentially, still needed.

Let me go to my second point, social conflict. I think it's inherent in this kind of situation because of many, many reasons. People don't really expect oil spills, neither do the experts. The experts assure us they won't happen. They do everything they can to ensure they won't happen, but inevitably one does and sometimes anger, disappointment, and other sorts of reactions are the result. And there are always the questions of liability that seems to split people right down the middle when the lawyers get involved.

So I think it's worth noting that the arenas in which we talk about oil spills and oil spill prevention are really dominated by professionals. This has been the experience my whole career. And the citizen voice is often fairly weak, in the background, sometimes totally absent. So I think a heartening advance I see is that Governor Gregoire signed legislation in May to create an Oil Spill Advisory Council. Social scientists that have looked at this problem often end up looking at the Prince William Sound Regional Citizens Advisory Council as a model for really engaging stakeholders into the arena in which safety improvements are made.

I participated in a National Academy study that reviewed a risk assessment that was commissioned by the Prince William Sound RCAC, and it was really interesting in our briefings with members of that organization how much industry and citizens and representatives of industries like tourism were able to come together and talk constructively about what needed to be done under that mechanism.

So if you're going to do things like that, you need time to let relationships develop. You really need adequate resources to make sure the organization can function, and people really have to be willing to come to an agreement. Those are sort of necessities.

Let me go to the nature of the risk and I think I'll just reinforce some of what I heard Captain Boothe say in Panel Number 1. The sources of risk in Washington waters I think are extraordinarily complex in their distribution. As I mentioned, I was part of an evaluation of a big risk assessment study that cost more than a million dollars that was conducted in Prince William Sound in the late 1990s.

The panel that I was on came to the conclusion that Prince William Sound was actually relatively simple as a problem of risk analysis compared to Puget Sound. So what this says to me, and I should add my background's in mathematics, but I'm going to say I don't think technical analysis is as useful as we make it, and really it's deliberation where you're constantly talking about, "what are the sources of risk" that is important.

I think the Sound is very different in the sense that spill risk on the outer coast is dominated by the prospects of a large tanker spill, but when you get into the interior parts of Puget Sound, it's the bunkering operations, it's the wealth of different craft on the water. The fact that it is a pleasure craft can precipitate a major accident just by misbehaving. I was a Commissioner of Pilotage in this state for 7 years, and it was amazing how many times vessels were forced to leave the lanes, or actually collisions occurred with passenger vessels that were anchored in the sea lanes, despite all of the prohibitions against that.

So these are real difficulties, and it tells you we've really got to keep looking at the whole system. I think there was a period that I hope we've gotten past where we were being forced to consider this "either/or" choice, a tug in Neah Bay or times of opportunity. I don't think we should be looking at risk reduction as an either/or measure. I think we should look at all the sources of risk and address each in proportion to its reality of occurring.

As Captain Boothe said, it's the probability times the consequence, and the things that happen over and over again may be relatively low consequence but they are higher probability events.

My last point about research, I think research is really essential to not only improving the technology, the ability to respond, but also to understanding what it is that people are looking for to head off social conflict. So to me a proper research agenda is technology and engineering, it's natural science and it's social science, it's dealing with the human dimensions of oil spill risk.

I don't think that happens very often. I think there's a real problem in the kind of responses that happen to major spills like *Exxon Valdez* where the nature of the research that's done is injury determination, and when you look at what the ecologists have to say 10 or 15 years later, such as Charles Peterson in an article in *Science* that appeared last year, it turns out there can be long-term effects that really are the issue and the, you know, kind of immediate acute toxicity and lethality is still being debated as to whether, how consequential it was.

So we have to be mindful of asking the wrong questions. And when you use an incidence of a spill as the basis for launching research, you're never in a very good position for that research to do as well as it could. So you need other mechanisms and I think the CRRC mechanisms that I mentioned—which I think was set up by

Senator Judd Gregg; is that right? New Hampshire?—is very interesting because it is independent and it is a group. I'm a member of a panel of natural and social scientists. We meet annually. We have a lot of feelers out and we look at what we think needs to be done and then we try to convince people to apply for funds to do it.

It's a competitive grants program, everything is peer-reviewed, and as a result we're taking on now with the research project something that the American Petroleum Institute has been urging be done, that is, to try to come up with agreed performance standards for oil spill response and prevention.

And yes, prevention systems can be evaluated too. How do we know they're really ready to go? It's a difficult question, and part of the major difficulty is that we have to really get everybody's perspective on this. There isn't some magic set of indicators that are the right indicators to assess readiness of the system. We can quickly spew out all kinds of numbers on how much of this and that equipment we've got, but what does readiness really mean? As we are learning more and more we need to really ask that question very broadly, and you can't do that if you don't have social scientists, I would argue, as part of the group that's doing that kind of thing.

So I think also more could be done with organizations like the National Sea Grant program. Even institutions like my own, we get officers from the Coast Guard who come and collect our master degree in marine affairs, and while they're there, they often take on a research project, something the Coast Guard asks them to do. A recent graduate of our program developed a system to evaluate responsive response preparedness for the Coast Guard, developed a framework for it. He was then passed to Washington, D.C.. to put that system into operation. So I think that ability to step outside the formal mechanism sometimes is very useful.

I guess my last comment is just, you know, thoughts on learning because that's what this is all about, that's what I stand for. You have a choice. Are you going to, you know, learn from disaster, which is trying to recoup after some catastrophe occurs, or do you want to really learn by design and be more conscious about it? I think the fundamental problem in this arena is that we tend to get all excited and pour money into problems in the event of major spills, and then we let our guard down and we don't do much in the interregnum between events, and that's when we really should be putting together our Citizen's Advisory Councils, deliberating about safety, and not pretending like just because nothing's happened for 5 years, the problem is solved.

Thank you very much, I'd be happy to answer any questions.

[The prepared statement of Dr. Leschine follows:]

PREPARED STATEMENT OF PROFESSOR THOMAS M. LESCHINE, DIRECTOR, SCHOOL OF MARINE AFFAIRS, UNIVERSITY OF WASHINGTON

My name is Tom Leschine. I am Professor of Marine Affairs at the University of Washington where I have been since 1983. I became Director of UW's School of Marine Affairs in 2003. My academic training is in mathematics, and my research career has been in ocean policy studies with an emphasis on environmental decision-making, especially with regard to pollution policy and management. A considerable portion of my work has emphasized the conduct and application of risk assessment

studies in support of public policy decisions affecting the environment. I'm a longtime member of the Society for Risk Analysis.

Oil spill prevention, preparedness and response have been among my academic pursuits since the late 1980s, when I received a grant from the Washington State Legislature to provide research support to the Department of Ecology in the development of more effective approaches to oil spill damage assessment. The resulting Washington Oil Spill Compensation Schedule, adopted by the state legislature in 1989, has greatly facilitated Ecology's ability to assure the public is adequately compensated for damage to public resources caused by oil spills. In the early 1990s I served as Historian for the U.S. Coast Guard, leading the team that prepared the *Federal On-Scene Coordinator's Report* for the *Exxon Valdez* oil spill. I served as a Commissioner of Maritime Pilotage in the state for 7 years during the 1990s, and currently I'm a member of the Scientific Advisory Board of the Coastal Response Restoration Center (CRRC). The CRRC is a joint center of NOAA's Office of Response and Restoration and the University of New Hampshire whose mission is to support research aimed at improving oil spill preparedness, response and restoration capabilities through a competitive grants program. I've also served on numerous National Research Council Committees, one of which examined the quality of risk assessments being conducted to identify effective risk reduction measures for Prince William Sound oil transport, in the wake of the *Exxon Valdez* spill.

I am honored to be invited to testify at this field hearing on vessel-source oil pollution being held by the U.S. Senate Committee on Commerce, Science, and Transportation's Subcommittee on Fisheries and the Coast Guard. I wish to address four points in my testimony. These points are summarized in bulleted paragraphs below.

- Significant improvements have been made in the safety of oil transport since the *Exxon Valdez* spill, both nationally and in Washington State.
  - —Oil spill risk will never be reduced to zero however, and additional improvements in the total system that deals with oil spill prevention, preparedness and response for Washington waters remain necessary. Reliance on the private sector for provision of response resources—the current approach—is inherently problematic due to the necessity of maintaining profitability.
  - —The recommendation of the June 2005 report by The Glosten Associates (*Oil Spill Response Vessel Capabilities in Washington*) to increase reliance of fishing vessels and other vessels of opportunity offers an innovative way to address this problem, though non-specialized vessels may not prove equally useful or available in all circumstances, suggesting the need for additional specialized assets as well.
- Social conflict is inherent in the arena of oil spill prevention, preparedness and response. Historically little has been done to address this problem directly, despite the high costs it can impose on efforts to deal with spills and safety improvements.
  - —The arenas in which oil spill safety is deliberated have been overly dominated by government and industry, with the public voice absent or weak, and this has been true in Washington State.
  - —The public is vulnerable to "hindsight bias" a psychological heuristic that colors public reactions when the fact of an oil spill on the water belies earlier assurances by experts, public officials, and industry representatives that everything was under control.
  - —Studies suggest that the Prince William Sound Regional Citizens Advisory Council is an effective model for citizen participation (G. Busenberg, Innovation, learning and policy evolution in hazardous systems, *American Behavioral Scientist* 44(4) 679, 2000.) Legislation signed by Governor Gregoire in May creating an oil spill advisory council (ESSB 5432, Chapt. 304, Laws of 2005) could produce a similar body for Washington, a major advance in my view. Time, sufficient resources, and commitment by all parties to negotiate an agreement will be necessary for the new council to work effectively.
- The sources of oil spill risk in Washington waters—particularly in Puget Sound—are numerous and interconnected in difficult-to-understand ways. This seriously complicates the task of finding a few key remedies that convincingly reduce the overall risk of spills. The whole maritime transport and oil-handling system needs to be examined critically for sources of risk and reexamined frequently.
  - —Spill risk on the outer coast and Strait of Juan de Fuca is likely dominated by different threats than risk in more inland waters, especially central and southern Puget Sound, where risk is likely most associated with non-tank-

ship traffic and operations—for example, fueling operations. Pleasure craft or other non-commercial or non-oil transport vessels can easily emerge as proximate causes of oil spills, or themselves be directly involved in incidents that lead to significant spills. The 1991 *Tenyo Maru* spill resulted from a collision between a Japanese fishing vessel and a Chinese freighter in Canadian waters, but close enough to Cape Flaherty to cause considerable environmental damage in its vicinity.

—Much rhetoric over the past several years has suggested the region needs to make "either/or" choices on protection, an unrealistically oversimplified proposition in my view. Resources need to be invested in each aspect of the oil spill risk problem in proportion to the risk each poses, and in ways that effectively address identified risks. The challenge is to know when we've done enough or done the right things.

—Approaches dominated by technical analysis, like that of the major Prince William Sound risk assessment study evaluated by the National Research Council several years ago (*Review of the Prince William Sound, Alaska, Risk Assessment Study,* National Academies Press, 1998), are likely less useful in Puget Sound, meaning more reliance needs to be placed on open, active, and transparent deliberation among all parties on the likely sources of risk and what can be done to address them. This reinforces the value of a Prince William Sound RCAC-like model for Washington State in my view.

- Research is vital to understand how better to avoid major oil spills and to deal with their aftermath. But opportunities and funding for research are too frequently tied to oil spill incidents, where social conflict and questions of legal liability make it difficult for the right research to be done, or for research to be sustained to the point where real understanding emerges. Moreover, oil spill research has historically been dominated by the natural sciences and engineering, at the expense of understanding important "human dimensions" of oil spill prevention, preparedness and response.

—Marine ecologists have argued that oil spills set researchers up to ask the wrong questions, focusing on quantifying wildlife injury rather than trying to understand how best to help the areas affected by a spill get on the road to recovery (R. Paine and others, "Trouble on oiled waters" *Annual Review of Ecological Systems,* 27:197–235, 1996). A recent radical, new (and much discussed) view on how difficult recovery from a spill like *Exxon Valdez* can be given the continued presence of hydrocarbon contaminants in sensitive environments—propounded by Charles Peterson of the University of North Carolina and colleagues—emerged only after more than a decade of monitoring results were available for analysis (C.H. Peterson and others, "Long-term ecosystem response to the *Exxon Valdez* oil spill", *Science* 302: 2082–2086, 2003).

—Important "human dimensions" of oil spill prevention, preparedness and response have received much less attention than natural scientific and engineering aspects.

—Human factors that can influence profoundly the real level of safety in risky technologies like marine oil transport are receiving increasing attention, but data is difficult to come by due to the relative rarity of spill events and factors like legal liability. Information on "near misses" is crucial, and the airline industry has been very successful in developing good data, while efforts to do the same thing in the maritime domain seem to remain beset by difficulties.

—Developing accurate and sensitive indicators of "what counts for success" in the performance of preparedness, prevention, and response systems—as judged from the perspective of all interests potentially affected by spills—is an especially important task that has to include researchers from the social sciences to be done properly. A 1999 issue paper of the American Petroleum Institute, underscores the importance of this problem (*Judging Oil Spill Performance: The Challenge of Competing Perspectives,* API Technical Report IOSC–008, prepared by June Lindstedt-Siva, 1999).

—A potentially useful and innovative model for bolstering research quality and scope is the Coastal Response Research Center (CRRC), a partnership between NOAA's Office of Response and Restoration in Silver Spring, MD, and the University of New Hampshire. The CRRC operates through a peer-reviewed competitive grants program. It uses its Scientific Advisory Panel—of which I am a member—to make an independent assessment of research

needs, and to encourage researchers to develop proposals to address under-researched questions.

—The National Sea Grant College Program could, with encouragement, also become an effective conduit of research in these areas, and the practice of the U.S. Coast Guard to select promising junior officers for graduate training in schools like the School of Marine Affairs has also been effective in developing fresh perspectives on problems of preparedness, prevention and response that then get carried back to the parent organization. A recent student of mine at the School of Marine Affairs, USCG Lt. Cdr. Drew Tucci, devoted his master's thesis to developing understanding of impediments to evaluating oil spill response readiness, and his work proved so useful that the Coast Guard tasked him with the further development and implementation of his own recommended approach to evaluating response readiness upon his assignment to Coast Guard headquarters following graduation.

As a final thought, opportunities for learning about the nature of risk and what to do about it, as well as for learning how best to cope with the environmental and social costs incurred as a result of a major oil spill should one occur, are essential. The kind of learning I'm talking about includes robust organizational design such as the Prince William Sound RCAC seems to represent, as well as research and development. The key is to take advantage of opportunities to learn *outside* the situation of being in the midst of a major oil spill. I alluded earlier to the work of Prof. George Busenberg of the University of Colorado at Denver, in reference to the PWS RCAC. To paraphrase what he said in his article, do you want to try to *learn from disaster* with a major oil spill already on your doorstep and with passions running high and the likelihood of genuine learning low, or would you rather *learn by design,* through considered and ongoing deliberation among all parties potentially affected by a major oil spill should one occur, in an environment defined by the *absence* of a spill disaster and with the prospects of useful learning much more likely to be high?

I sincerely thank the distinguished Senator and her staff for this opportunity to present my thoughts on ways to address the risks that oil spills from vessels pose to Washington waters, and ways to reduce those risks, at this hearing.

Senator CANTWELL. Thank you, Doctor Leschine. Let's let Mr. Felleman go next and then we have questions for all the panelists. But thank you for being here.

STATEMENT OF FRED FELLEMAN, NORTHWEST DIRECTOR, OCEAN ADVOCATES

Mr. FELLEMAN. Thank you, Senator Cantwell and members of the Subcommittee, wherever they may be. I appreciate this opportunity to testify and want to tell you that Ocean Advocates is a small national non-profit NGO that specializes in maritime safety. Our Executive Director Sally Lentz often goes to the IMO and goes often on behalf of other environmental organizations. We're also a member of the Shipping Safety Partnership, a coalition of Alaska Natives, commercial fishermen, recreation, science and community interests formed in response to the December 2004 *Selendang Ayu* incident in the Aleutian Islands, specifically addressing maritime safety in the Great Circle route.

There is certainly no question that a major oil spill here would be the straw that breaks the ecosystem's back. And the last time this sort of question was addressed was in this newspaper clipping I have from June 17, 1989, "Big Oil Spill Here, Are We Unprepared?" We are unprepared. This is when the Merchant Marine Fisheries Committee held a hearing here on the heels of the *Exxon Valdez* and this archival photograph is for you to keep and should be part of the record. You'll see Jolene Unsoeld, and John Miller, and Congressman Dicks and other familiar faces.

[The information referred to follows:]

The Associated Press

Members of a House subcommittee hear testimony about the Puget Sound's readiness for a major oil spill during a Seattle hearing. At the table, from left, are Washington Democrats Norm Dicks and Jolene Unsoeld; Bill Tauzin, D-La.; and Washington Republican John Miller.

Seattle Post—Intelligencer, June 17, 1989

BIG OIL SPILL HERE? WE'RE UNPREPARED

By Mike Merritt

The Coast Guard, state officials and oil-industry groups told a U.S. House Subcommittee yesterday that Washington State is unprepared for an oil spill as large as the one that fouled Alaska's Prince William Sound.

The Nestucca barge spill off Washington's coast in December dumped 231,000 gallons of oil into the sea, and the spill "stretched our resources to the limit," said Christine Gregoire, Director of the Washington State Department of Ecology.

More than 11 million gallons of oil spilled from the *Exxon Valdez* when it ran aground on March 24.

"It goes without saying we are not prepared, nor could we respond, to a *Valdez* spill in Washington State," said Gregoire.

Gregoire and other officials painted a bleak picture of the consequences of a major spill in Puget Sound during day-long testimony in Seattle before the House Coast Guard and Navigation Subcommittee.

Yesterday's hearing was the first in a series across the country on oil spills. Rep. Bill Tauzin, D–LA., Committee Chairman, has sponsored legislation to create a nationwide $500 million fund to clean up oil spills.

"The issue is not if another spill will happen, but when and where it will happen," said Tauzin.

Coast Guard and industry authorities came under tough questioning from members of Washington's Congressional delegation, including Democratic Reps. Norm Dicks, Jolene Unsoeld, and Jim McDermott and Republicans Rod Chandler and John Miller.

McDermott and Sen. Brock Adams, D–WA, are sponsoring legislation requiring all new oil tankers be built with double-bottoms as a safety measure, a measure the industry opposes as unnecessary.

Dicks said Alaskan officials and oil companies had 14 years to plan for an oil spill in Prince William Sound. "Sadly, after 14 years, that system, when it was called on, failed," he said.

The Coast Guard's regional commander, Rear Adm. Robert Kramek, conceded that a spill in Puget Sound the size of the *Exxon Valdez* disaster had never been contemplated in contingency planning. If a spill that large occurred today, "there is not enough equipment existing in Puget Sound" to clean up the oil, Kramek said.

In the case of a spill, Kramek has authority to take over the cleanup if the spiller fails to respond or acts too slowly. Kramek said, however, that the oil industry in Washington has been cooperative in planning and carrying out cleanup efforts.

But Miller, citing the disarray among government and industry groups after the Alaska spill, asked whether the Coast Guard should not have immediate powers to clean up a spill before it spreads too far.

Dicks, while praising the Coast Guard's efforts, said the Puget Sound Vessel Traffic Control System's radars are outdated, can't see ships in key locations and don't extend to Tacoma.

He noted that the Coast Guard cannot order industry to keep oil-containment booms, oil skimmer vessels and other equipment ready for a spill.

"I think that is a gap, yes, I do," replied Kramek.

Petroleum industry speakers told lawmakers the *Valdez* spill has prompted a re-evaluation of plans for coping with a much more massive spill than they now can handle.

An industry cleanup organization, Clean Sound Cooperative. has $9 million in equipment on hand to respond to spills.

"Clean Sound and its member companies are committed to ensuring the protection of Puget Sound and making sure that a *Valdez* spill never happens here," said John Wiechert, a former Coast Guard officer and Clean Sound Manager.

Only since the Valdez spill, Wiechert said, has the industry begun a study of how much and what kinds of equipment would be needed to handle a "worst-case" spill of 7 million to 8 million gallons of oil in Puget Sound.

Wiechert declined to predict how much more equipment would be needed for such a spill, but he said the industry group should make decisions within a month.

Industry authorities rejected charges from environmental groups that, their oil-spill contingency plans have been kept secret. They offered to make available the computer databases that would guide a response in the event of a spill.

Environmentalists called for tough new regulations requiring each oil tanker and barge, and each oil-handling facility. to have its own emergency cleanup plan.

But I greatly appreciate the fact that your leadership has reduced the likelihood that this incident would be happening here in the tradition of the late Senator Magnuson. Not only are we pleased that this hearing addresses issues that we normally only see or hear about when dead birds are on TV and there's oil in the water, but I'm particularly thankful for your effort in drafting the energy bill—three provisions are worthy of note and recognition.

Specifically, taking the Arctic National Wildlife Refuge out of the bill shows that we can't drill our way to energy independence; second, the inclusion of the $500 million in subsidies for biofuels will make a substantial contribution to our reduction in our regional energy needs and hopefully reduce the amount of tanker traffic; and third, the passage of Senate Bill 1222 certainly makes a large step toward filling the gap in our Nation's ability to respond to and prevent oil spills.

I'm of the belief, at the time and still of the belief to this day, that a contributing factor to the slowness of the response to the Dalco Pass spill had to do with concerns about the money in the bank. The fact is we should no longer need to worry when you don't have a responsible party, that's when you have to open the bank account. Your leadership on S. 1222 makes that so.

The Dalco Pass mystery, there was no mystery. We knew there was a black oil spill in the Sound, a mariner reported it, but we didn't know who was going to pay the bill. Any sort of question that our responding agencies have that there won't be somebody to pay the bill should not be on their mind. Having the money in the bank is a great thing.

The fact that we had low impact to wildlife, people say is a good thing. I suggest to you it's perhaps because there isn't that much wildlife to impact anymore and it's quite concerning that we could have a spill of that size, without more noticeable impact. Having spent a lot of time on the water, doing my graduate work on marine wildlife, I conclude the fact that we didn't hit more wildlife is because it's harder to find sea birds on the sea, and this is a not a good thing.

One promising technology for both preventing and responding to oil spill is salvage. Salvage includes a wide range of technologies from firefighting, spill response, pulling a ship off the beach,

dewatering a sinking ship. Salvage tugs can also assist in spill response and lifesaving exercises, but despite the fact that Congress called for a salvage and firefighting rule in OPA 90, the Coast Guard still has not implemented such a regulation. The distraction associated with homeland security should not be seen as an excuse, but actually a further reason for implementing this law, because in fact the potential risks for environmental terrorism or impacts to cruise ships or ferries associated with post-9/11 concerns is only heightening the need for increased salvage posture in the United States.

The cost effectiveness of salvage can only be best articulated when you look at incidences like the *New Carrissa* or the *Selendang Ayu*. *New Carrissa* cost over a hundred million dollars when you include fines, and the ship's still on the beach. *Selendang Ayu* is expected to cost three times that amount, and it's unlikely that they're going to get the ship off the beach—not to mention the endangered plovers that were impacted off of Oregon and the thousands of marine mammals, sea birds, and subsistence lifestyles that were impacted in Alaska.

In 2002, the U.S. Coast Guard and the Navy hosted a Maritime Salvage Conference in Seattle. The Admiralty Counsel to the U.S. National Supervisor of Salvage, Richard Buckingham, presented a paper and I would like to quote a very brief section. "The problem of inadequate domestic marine salvage capacity is well documented and recognized by both the government and commercial sectors; furthermore, the situation is not getting any better. Because of the Nation's overriding interest in the protection of the environment/economy/marine transportation system, as well as meeting homeland security needs, we need a cohesive Federal national savage policy."

This has been reiterated by numerous reports, and in fact one of the ways in which to address this need could be through the rebuilding of the Coast Guard's Deepwater fleet. The Coast Guard doesn't put towing winches on their cutters, but in fact when, oftentimes when the Navy surpluses cutters to the Coast Guard, they take the towing winches off. In fact we could have probably kept the *Selendang Ayu* off the beach if one of those Coast Guard cutters hadn't been de-towed when it was up in Alaska. We didn't have enough towing capacity up there to deal with the sea state at the time.

The other alternative as proposed by the National Academy of Sciences is to surplus the Navy's T–ATF, the Powhatan class tugs, to the Coast Guard or to the private sector to have really robust salvage capacity around the country.

Some others, the State of Washington obviously has taken on this burden to have a salvage tug in Neah Bay or a rescue tug in Neah Bay. It is not salvage capable, doesn't have firefighting or spill response capacity on it, and it's only funded for three more years. This is an opportunity, I think, for the Federal Government to match the state in this exercise.

In particular, you've heard a lot about the efforts on the Olympic Coast, but the fact of the matter remains the first 70 miles of the Strait of Juan de Fuca, there are no tanker size limits, there are

no speed limits, there are no pilots, there are no tug escorts, and that's a long distance to go before you get to Port Angeles.

Similarly, as you saw with the ATBA, all the ships are allowed to cut the corner of the sanctuary, and every ship entering the Strait of Juan de Fuca comes within two miles of Duntze Rock, so even with the ATBA we still have a close approach to the Olympic Coast National Marine Sanctuary.

Furthermore, there are 142 tugs that cross through there. We're not sure how many of them were laden with their tows. This is an easy question. We know from the nature of the trade the southbound traffic is loaded, the northbound traffic is usually empty coming back from San Francisco or the Columbia River. We should know by now whether or not those tugs and tows are laden or not.

So some suggested Federal actions, we need, now that we've tapped the Oil Spill Liability Trust Fund, we need to remove the sunset date. There's no reason to revisit this again in the future, as long as there are ships sailing on the sea we're going to need that account.

We should amend OPA creating a cargo account, because as we know, tankers are not the only ships on the sea that spill oil, and there should be an account to draw for non-tank vessels. We can amend OPA to make it easier for the Oil Spill Liability Trust Fund to be used for preventative purchases. Jolene Unsoeld was able to get a sum of money drawn from the Oil Spill Liability Trust Fund for setting up a marine firefighting association in the Columbia River. It's one of the few times I've ever heard it drawn from when it was not during a spill or not for standard administrative purposes of the Coast Guard, the EPA, or NOAA.

Have the Coast Guard either include towing capability in their new deep water fleet or have the Navy Powhatan class tugs brought to bear to help our Nation's salvage posture. Conduct a review of the tow boat lanes in the Strait of Juan de Fuca with tows passing through the area to be avoided.

Captain Boothe made mention to the fact that we have two-way lanes. The fact of the matter is, the reason why we have tugs and tows cutting through the Olympic Coast sanctuary is because we allow these tugs to go outbound on the inbound lanes. Following along the shoreline of Clallam County, so when you come to Cape Flattery and you're going to California, the first thing you want to do is head south. So instead of going outbound like the other outbound traffic along the Canadian coast and you're way off shore when you're coming down the coast, these guys are hugging the corner and in fact going outbound in the inbound lane. It's a practice that is traditional, but I don't think it is sensible.

A couple of more recommendations. Provide Congressional oversight of the Coast Guard's Salvage and Firefighting rule assuring that it's adequate and completed this year. Have the National Academy of Sciences evaluate the Coast Guard's cost benefit analysis methodology. They use factors like the cost per barrel not spilled for prevention studies and the cost per barrel recovered for response studies, but neither of these analyses look at the cost to the marine environment or the economy from a spill. And I think this frustrates the purposes of NEPA. We're only looking at the cost of the industry, not the benefits to the environment. So it

strikes me as a one-sided equation that makes it hard to advance the score.

I mentioned to you about the need to review the Strait of Juan de Fuca, first 70 miles, there's a gap in our protection, otherwise very robust network that I'm very proud of. We have a long tradition up in the State of Washington.

And then, I think, finally, there was mention made by Mr. Wright of the consolidation of the maritime response community. Like the oil and shipping industry we have great consolidation occurring. We know mergers often are for cost savings and it results in downsizing that occurs when you merge organizations.

Right now MSRC is like the only game is town because they bought Clean Sound, and the National Response Corporation bought Foss Environmental, so we actually have two organizations, before we used to have four organizations in this town. In the Dalco Pass spill, MSRC didn't respond at all, but we had to go labor-ready, for a thousand gallon spill. We had to have labor-ready workers on the beaches for a simple thousand gallon spill. What's going to happen when we have a really big spill?

In closing, the late Senator Magnuson oversaw the great transition from when Washington State received its crude oil primarily from Canadian pipelines to U.S. tankers. This change in risk in our waters required proactive leadership and enabled us to maintain a relatively good oil spill record to this date. For example, Senator Magnuson made it clear that he wanted to limit the size and amount of tankers transiting through the San Juan Islands and passed several laws fulfilling his vision.

The one constant in the maritime world is change, and we need constant vigilance to keep up with these changes. We appreciate Senator Cantwell's proactive efforts and look forward to working with her office and this Committee on these matters in the future. Thank you for your time.

[The prepared statement of Mr. Felleman follows:]

PREPARED STATEMENT OF FRED FELLEMAN, NORTHWEST DIRECTOR, OCEAN ADVOCATES

Senator Cantwell and members of the Committee:

Thank you for the opportunity to provide testimony to you this morning. My name is Fred Felleman. I am the Northwest Director of Ocean Advocates, a small national non-profit environmental organization specializing in maritime safety. My offices are based in Seattle and San Juan Island. I have a Masters of Science degree from the University of Washington's College of Ocean and Fishery Sciences and have been involved in the study and conservation of our resident killer whale population since 1980.

My involvement with oil spills began in 1988 when I moved to Washington D.C. to help Congressman Lowry develop the legislation creating the Olympic Coast National Marine Sanctuary. Since then I have conducted damage assessment on the *Exxon Valdez* oil spill and have served on numerous state and Federal oil spill committees. Ocean Advocates is also a member of the Shipping Safety Partnership (SSP), a coalition of Alaska Natives, commercial fishermen, recreation, science, and community interests formed in response to the December 6, 2004 grounding of the *Selendang Ayu* in the Aleutian Islands to advance the safety of cargo shipping through the Great Circle route.

There can be no question that a major oil spill would wreck havoc on the biological, economic and cultural environments that are so closely tied to Washington's waters. This is especially true now. The marine environment is showing many signs of stress, from elevated sea surface temperatures region-wide, to depleted oxygen levels in Hood Canal, and a lack of upwelling on the outer coast, making the recov-

ery of our remnant populations of herring, salmon, and killer whales all the more difficult. A major oil spill would end up being the straw that broke the ecosystem's back, undermining many years and millions of dollars of investment in recovery efforts.

We are encouraged by Senator Cantwell's leadership to help reduce the likelihood of such a fate in the tradition of the late Senator Warren Magnuson. Not only are we pleased by the attention this field hearing brings to an issue that seems to only get addressed when there is oil in the water and dead birds on TV, but we are particularly thankful for the Senator's efforts in drafting the energy bill. Three provisions in particular deserve recognition. First, removing the provision that would have opened the Arctic National Wildlife Refuge to oil exploration recognizes that we will not be able to drill our way to energy independence. Second, the inclusion of $500 million in subsidies to encourage the development of biofuels makes a substantial contribution to our regional energy needs, and will hopefully serve to reduce the amount of tanker traffic calling on our waters in the future. Finally, the introduction of S. 1222, the Oil Spill Liability Trust Fund Maintenance Act, reinstating the 5 cent/barrel fee and raising the cap to $3 billion is an essential step toward filling the gap in our Nation's ability to respond to and prevent oil spills.

Our concern about oil spills is not theoretical. According to the Department of Ecology there were more than 80 spills exceeding 1,000 gallons in Washington waters between 1986 and 2004. Ocean going vessels are the Nation's primary vehicles of trade. The Strait of Juan de Fuca is the busiest commercial waterway in North America serving both Canada's and the U.S.'s busiest ports, and it is only getting busier as Pacific Rim Trade has eclipsed that with Europe. While the number of oil spills has declined since the passage of OPA 90 the volume of oil spilled varies widely each year depending on whether one large ship has had an accident or not. Therefore, we cannot be lulled into complacency by these spurious statistics. Of particular concern are the 142 tugs with oil barges that passed through the Area To Be Avoided within Olympic Coast National Marine Sanctuary in 2004. While there was a 96.3 percent overall compliance with the ATBA in 2004, it only takes one laden oil barge to break its tow as recently happened off the Columbia River to cause long-term damage. It is also important to note that even ships that comply with the ATBA come within 2 miles of shore as they enter the Strait of Juan de Fuca. It is also worth noting that laden oil barges are allowed to transit near shore of the inbound shipping lanes, putting the shoreline of Clallam County at unnecessary risk and setting the tugs up to cut through the ATBA. This practice needs to be reevaluated.

Our ability to respond to even relatively small spills has been called into serious question of late. The responses to both the 4,700 gallon December 2003 Foss spill at Point Wells and the 1,000 gallon October 2004 Dalco Pass spill were lackluster at best. There has also been a series of recent transfer spills at refineries in Ferndale and Tacoma that have unnecessarily spread into the marine environment because vessels are not required to pre-boom before conducting such transfers. It is my understanding that the State of Washington has a task force studying this issue. The State Department of Ecology just released a report documenting that there would not be enough response equipment in the San Juan Islands to respond to a 420,000 gallon spill, despite the fact that some of the State's largest caches of equipment are stored at the four refineries surrounding the islands. This bodes poorly for our state-of-readiness in more remote locations such as the Olympic Coast where the State's largest spills have occurred in its most pristine and productive environment. In a Congressional field hearing held June 17, 1989, then Ecology Director, Christine Gregoire, said in reference to the 231,000 gallon 1988 *Nestucca* spill that we "stretched our resources to the limits." Unfortunately, very few additional resources have been brought to bear on the problem since 1988, and there has not been a drill in the Olympic Coast Sanctuary evaluating our response capacity in the 10 years since its creation.

Another issue affecting our ability to respond to oil spills has been the unprecedented mergers that have been occurring in the oil and shipping companies, as well as their spill response contractors. We can only speculate on the political impact of the consolidation of the world's largest corporations, but the downsizing that commonly occurs during mergers can reduce the capacity of our spill response contractors. This past year the National Response Corporation bought Foss Environmental and MSRC bought Clean Sound, leaving the state with just two primary spill response contractors.

Rather than react to the growing threat of oil spills posed by increased vessel traffic through our waters with increases in the levels of spill response capability, the Coast Guard has been urging the liberalized use of dispersants and capping our currently inadequate spill response posture. While dispersants have been shown to be

effective in reducing impacts to sea birds at the surface in warm waters, no such demonstration has been made in the cold waters that characterize our situation. Furthermore, sinking the oil allows it to be taken up into the food chain that makes near shore applications problematic. Rather than trading off one spill response capacity for another, the Coast Guard should be calling on the maritime industry to expand their ability to respond to spills. This should include additional mechanical on-water recovery, dispersants for offshore spills when the sea state makes skimming impractical and dispersants more effective, and *in situ* burning which removes oil from the water at even higher rates than skimming.

Of particular concern is the Coast Guard's assertion of Federal preemption in their 2003 Notice of Proposed Rulemaking on Vessel and Facility Response Plans for Oil Removal Equipment Requirements and Alternative Technology Revisions. Unlike the case involving prevention efforts, the state's response authority is not subject to Federal preemption, and the Coast Guard should not be trying to suggest otherwise.

One promising technology for both preventing and responding to an oil spill is salvage. Salvage includes a wide range of capabilities from rescue towing, firefighting, and patching to dewatering a sinking ship. Furthermore, salvage tugs can assist in oil spill response efforts and lifesaving exercises. Unfortunately, despite Congress calling for a salvage and firefighting rule in OPA 90, the Coast Guard has yet to complete such a measure. The Coast Guard's added responsibilities for homeland security should not be used as a reason for this delay, but rather as an additional reason for completion given the potential for acts of environmental terrorism or the need to respond to a cruise ships or ferry in distress.

We only have to look at the impact and expense of not having adequate salvage capacity to see how cost-effective it is. In 1999, when the *New Carrissa* broke in half off the Oregon coast because there was not adequate tug support available, the resultant oil spill impacted a threatened population of plovers, cost over $100 million (including fines) and ended with the wreck left on the beach. Similarly the 2004 grounding of the *Selendang Ayu* in the Aluetian Islands has already cost $100 million, and cost is expected to triple while thousands of sea birds and marine mammals have been killed and subsistence lifestyles impacted.

The need to enhance our Nation's salvage capacity has been acknowledged for many years, but has taken on particular urgency since September 11. In 1994, the Marine Board's Committee on Marine Salvage Issues of the National Research Council wrote, "Congress should update the national salvage policy to ensure that an adequate level of salvage capacity is present in U.S. waters. The policy should clearly delineate the following goals: to protect national security, to minimize or prevent environmental impacts due to pollution from marine casualties, to protect public safety, and to ensure minimal disruption to the U.S. economy resulting from marine casualties in the Nation's port and waterways (p. 4)."

While the 1989 *Exxon Valdez* disaster will be forever remembered by the general public for 11 million gallons of oil spilled, among salvors it will be remembered for the vast majority of oil that was safely transferred to another ship. In contrast, the relatively small, *New Carissa,* that grounded off the Oregon Coast in 1999 is the poster child for what happens when adequate salvage capacity is not readily available.

The Federal On Scene Coordinator (FOSC) in the *New Carissa,* Captain Mike Hall, summed up the problem when he stated:

> [W]e are essentially an island nation with over 47,000 miles of shoreline; approximately 85 percent of all Americans live within 100 miles of these shorelines; and 90 percent of all international commerce enters the United States by vessel. One can see from these facts that our Nation's ports and waterways are the backbone of the U.S. intermodal transportation system. This system must include a national salvage plan. We need a salvage plan more capable than that demonstrated during the initial stages of the *New Carissa* casualty. It was my belief on 4 February 1999, and it remains my belief today, that adequate and timely salvage capability would have significantly mitigated this crisis on the coast. There are currently only two salvage vessels on the Pacific Coast capable of refloating a large grounded ship, and neither was readily available to respond in this case.

In January 2002, the U.S. Coast Guard and Navy hosted the National Maritime Salvage Conference in Seattle. The Admiralty Counsel to the U.S. Navy Supervisor of Salvage and Diving, Richard Buckingham presented a paper entitled, "Toward a National Salvage Policy." The abstract to his paper states:

> The problem of inadequate domestic marine salvage capacity is well documented and recognized by both the government and commercial sectors; furthermore, the situation is not getting any better. Because of the Nation's overriding interest in the protecting the environment/economy/marine transportation system (MTS), as well as meeting homeland security needs, we need a cohesive Federal national salvage policy. The first step, however, will be identifying a Federal agency to take the lead in forging such a policy. Should it be the Coast Guard, the Navy, or perhaps some other agency? Who appears best suited for the role? Once the appropriate agency assumes (or is tasked with) this leadership responsibility, what are some of the likely issues to be initially confronted? Also, this pressing need for a national salvage policy should really be a high profile issue on the agenda of the newly created U.S. Commission on Ocean Policy, as well as a specific focus of the Department of Transportation's MTS policy and SEA–21 maritime infrastructure funding initiatives.

The Marine Board of the National Academy of Sciences wrote to the Ocean Commission in June 2002 on the issue of national salvage capacity. They wrote:

> Within the maritime community, as well as government agencies, it is recognized that the Nation's domestic salvage capacity is inadequate to meet basic and emergency needs. This inadequacy jeopardizes environmental, transportation, and homeland security objectives. There is a need for a cohesive, Federal national salvage policy and a designated lead government agency to implement that policy.

While the Coast Guard and Navy try to resolve this longstanding problem, the Makah Tribe have sought to have the U.S. Navy provide one of their uniquely qualified T–ATF tugs for dedicated rescue tug service in and around Neah Bay. The National Research Council found in their 1994 report on salvage that surplus assets, particularly the T–ATF class of ships, if operated by the private sector and strategically deployed, could go a long way to restoring the traditional salvage capacity of the United States, particularly in rescue towing. The operation of these vessels by the private sector would require substantial subsidy, as it has been demonstrated in the United States and elsewhere that salvage revenues cannot cover the costs of operating and maintaining the vessels and their crews. The excess costs could be covered, as they were in the past, through the Salvage Facilities Act, and the plan could be implemented through the arrangements in place for Navy contracting for commercial salvage services." (pp. 55–56). The Coast Guard's Deepwater Program as well as the environment could be benefited by such Naval assets. Alternatively, the Coast Guard should consider including towing capability in the construction of their deepwater fleet.

The State of Washington has public funding for just three more seasons of the Neah Bay rescue tug. This tug, while having provided a significant amount of additional protection to the Olympic Coast and entrance to the Strait over the past 6 seasons, is still only seasonal, and is not equipped for salvage, firefighting, or spill response.

Suggested Federal Actions:

> 1. Reinstate the OSLTF and raise the cap to $3 billion and remove any sunset clause, for the account will be needed as long as there are ships sailing on the sea.
>
> 2. Create a Cargo account within the OSLTF that would be drawn from when non-tank vessels are the cause of the oil spill.
>
> 3. Amend OPA 90 making it easier for the OSLTF to be drawn from for preventative measures, not just spill response. Such funds could be used to help station salvage tugs in high-risk, remote places such as Unimak Pass and Neah Bay. Other potential uses of the Fund could be for improved vessel tracking technology or additional aids to navigation. Tribal governments should be able to draw from the Fund as the EPA and Coast Guard do.
>
> 4. Have the Coast Guard either include towing capability in their new deepwater fleet or get the Navy to provide their T–ATF Powhatan class tugs to the Coast Guard to improve our Nation's salvage posture and their deepwater capability.
>
> 5. Conduct review of towboat lanes in Strait of Juan de Fuca and 142incidents of tugs with tows passing through the ATBA in 2004.
>
> 6. Provide Congressional oversight on the status of the Coast Guard's Salvage and Firefighting rule assuring that it is adequate and completed this year.

7. Have the NAS conduct an evaluation of the Coast Guard's Coast benefit analysis methodology. They use factors such as cost per barrel not spilled for prevention studies and cost per barrel recovered for response studies, but neither of these analyses includes the cost to the marine environment and economy when a spill does occur. These selective studies appear to frustrate the goals of NEPA.

8. Conduct a no-notice, equipment deployment drill in the Olympic Coast National Marine Sanctuary to evaluate our level of readiness off the coast.

9. Provide federal funds for year round Neah Bay Rescue tug for first 70 miles of Juan de Fuca Strait lack tanker size limits, speed limits, and tug escorts while being exposed to increasingly high volumes of traffic from Canada and the US.

10. Review impact of consolidation of oil spill response organizations on readiness.

11. Amend OPA 90 increasing liability caps on tankers and freighters.

In closing, the late Senator Magnuson oversaw the great transition from when Washington State received its crude oil primarily from Canadian pipelines to U.S. tankers. This change in risk to our waters required proactive leadership that enabled us to maintain a relatively good oil spill record to this date. For example, Senator Magnuson made it clear that he wanted to limit the size and amount of tankers transiting through the San Juan Islands and passed several laws fulfilling his vision. The one constant in the maritime world is change, and we need constant vigilance to keep up with these changes. We appreciate Senator Cantwell's proactive efforts and look forward to working with her office and this Committee on these matters in the future.

Thank you for the opportunity to present these issues before you, and I would be happy to answer any questions.

Senator CANTWELL. Thank you, Mr. Felleman, for your testimony, and to all the panelists, thank you for being here this morning and giving us input for the record. As I said with the other panel, any questions or comments or additional things that come up as part of your testimony, you have 2 weeks to submit to the record.

Captain Boothe, I know you might be leaving. I hate to put you on the spot, but I was wondering if you could come up for a couple of questions—you can sit right there next to Mr. Sones. If you can manage. Thank you.

Captain BOOTHE. We'll see. I don't think this is on.

Senator CANTWELL. Is there a button there? Maybe you have to move to a different spot.

Captain BOOTHE. Looks like it's on now.

Senator CANTWELL. OK. In Mr. Sones' testimony he was talking about this issue of chemical dispersants versus equipment. Could you comment on that, and where you think we are and do we have the right equipment, or are we using these dispersants in ways that we shouldn't be? Are we measuring their environmental impact?

Captain BOOTHE. Senator, I think from a response perspective, and I've been in the business for quite a while, certainly not as a responder like Mr. Wright and his organization, but I think as a Coast Guard marine safety professional, I never want to be in a position where I don't have all the tools in my tool bag. And right now dispersants have been in debate between the science and biologists for a long, long time. I think from a Coast Guard perspective we believe dispersants are a necessary part of the inventory of response capability.

For high-energy environments, dispersants can be effective in protecting sensitive ecosystems, wetlands, etc., off the coast. And we know that we have very limited mechanical recovery capability. I think some, I don't know what the exact figures are, but somewhere between 10 and 20 percent of oil spilled on the water is going to be able to be recovered by mechanical means. So to the degree that dispersants might keep that oil from getting on the beach and from affecting the sensitive ecosystem on that side of things, it might be better.

It's always a trade-off. You're going to either potentially affect waterfowl and marine mammals, or you're going to affect the fish and crabs, or et cetera, that might live on the bottom.

Senator CANTWELL. So you're in the process, right, in continuing on this rule that's required by OPA to determine what vessel equipment requirements would be?

Captain BOOTHE. Right.

Senator CANTWELL. And, Mr. Sones, you have some concerns that they're over-focusing on dispersants; is that the case?

Mr. SONES. No, I think our position has been that, you know, we want all the tools in the toolbox, and because of the conditions of the Pacific Ocean, there are a lot of variables that we deal with out there. Sometimes mechanical equipment will work very efficiently if the weather conditions allow. So where our concern has been is using certain tools in lieu of other tools.

Senator CANTWELL. What would you like to see in the Coast Guard's rule?

Mr. SONES. I think we would like to see all of those resources being able to be utilized depending on the conditions and the effectiveness of those particular tools. There are still questions I guess that we don't have enough information about, is, what does happen to the oil, how does it affect the other resources when a dispersant is used, it's breaking down the oil and just moving it to the ocean floor rather than on the surface. So we're interested in seeing more research and really what the effects of using dispersants, and how the long-term impacts of that tool might affect our resources on the ocean.

And we may find that just simply letting it come ashore might have less impacts. We don't know. So we want to look at all of the opportunities, tools available to us, but not use one over another I guess would be our biggest concern.

Captain BOOTHE. Senator, might I offer one other point? Related to the rulemaking that's underway, the adjusted caps for, or the issue of adjusting mechanical recovery and removal caps will not be impacted by the decision to require plan holders to actually have a response plan that includes a dispersing capability. They are not trading off. Usually we're——

Senator CANTWELL. I think it's more that Mr. Sones is worried that you're going to lessen the requirement on equipment.

Captain BOOTHE. No, the point I'm trying to make, Senator, is that it will not. We do not allow a substitution or credit for dispersants for mechanical recovery equipment because they actually operate at opposite ends. If the conditions are ripe for mechanical recovery, dispersants won't work. And where dispersants are intended to be used, mechanical recovery typically will not work.

Senator CANTWELL. When are we expected to have the final rule?

Captain BOOTHE. That particular rulemaking I believe has now been placed back on the fast track and hopefully will be completed by the winter of 2006, Senator.

Senator CANTWELL. Thank you. And to Mr. Felleman's point about cranes and ability to remove ships and the Coast Guard is the Deepwater Program, since we're reviewing the Deepwater Program right now since the Committee just passed out authorizing language, and since the Deepwater Program is going to be a huge investment by taxpayers in the Coast Guard capability, is there a point here about the ability to remove vessels?

Captain BOOTHE. Well, all of our assets, Senator, are multi-mission assets, whether or not we have the same capability as a salvage tug is clearly no question. We do not. We don't, our cutters aren't designed for that purpose. Typically if we're going to impose a requirement for marine salvage and firefighting, we would look for that to be established through regulation and impose upon the industry to provide a separate mechanism other than the Coast Guard cutter fleet to do that.

However, the Coast Guard is Semper Paratus, we're going to respond to all search and rescue cases, and we will tow where we have that capability.

Senator CANTWELL. Mr. Felleman, it sounds like the Coast Guard is saying they want to have a good public/private sector partnership on salvage.

Mr. FELLEMAN. And if they implemented the salvage and firefighting rule, that's possible, but this has been in development since OPA 90, so the question is, what's the status of that rule and will it be robust enough to really require the industry to invest in the salvage capability necessary to protect this Nation's burgeoning shorelines. You know, Pacific Rim trade has eclipsed that with the East Coast, so we are on the forefront of, you know, a growth of doubling and tripling of trade volume, and the question is whether we're going to have salvage capability to match that.

Captain BOOTHE. Well, I hope we do, Senator. Obviously the rule is still in progress and I think part of the problem or part of the suspension associated with that was an impact registered that it might have on the small business side of the house. We pulled it back for reconsideration, making sure we had all of those things addressed in the environmental and economic assessment, and unfortunately the Maritime Transportation Security Act requirements kind of overwhelmed the Coast Guard's regulatory processes, and everything was kind of shelved to enable us to address those rulemakings.

Now we're back on focus, hopefully we can address this within the next year, Senator.

Senator CANTWELL. What do you mean the impact on small business, in terms of the Coast Guard being a competitor?

Captain BOOTHE. In terms of, yes, ma'am, in terms of being able to provide some of those services as well.

Senator CANTWELL. Well——

Captain BOOTHE. Salvage businesses.

Senator CANTWELL. No, I understand, but I mean our efforts in Iraq have not stopped us from using contractors; right?

Captain BOOTHE. No, ma'am.

Senator CANTWELL. So why not do the same? I mean why not have everything, why not have a salvage rule that basically gives the ability to do salvage whether you use a ship in the Deepwater Program or a contract? Is that not possible?

Captain BOOTHE. Yes, ma'am, I believe so.

Senator CANTWELL. OK. So how would it have an impact on small business? If, yes, we've built 10 ships from the Deepwater fleet to do salvage only, yes, I get that point. I just want to make sure that the Coast Guard, in its oversight for salvage, has the authority now to use your existing vessels or contract with the private sector?

Captain BOOTHE. Yes, ma'am, we do.

Senator CANTWELL. OK.

Captain BOOTHE. And we do contract with salvors using the Oil Spill Liability Trust Fund in many cases. And if I might have a little bit of license here, Senator Cantwell, the Coast Guard response to the Dalco Passage spill in no way was delayed because of concern of funding. We spent over $2 million cleaning up the oil from the Dalco Passage spill and we used the Oil Spill Liability Trust Fund to do that. It had nothing to do with our hesitancy to access the fund to be able to respond.

As I mentioned, we respond to mystery spills hundreds of times a year and we access the fund more in Puget Sound probably than any other ports in the nation.

Senator CANTWELL. I don't want to speak for Mr. Felleman, but I think his, the point, is that a healthy fund makes everybody be aggressive.

Captain BOOTHE. Yes.

Senator CANTWELL. And so, and we certainly have taken part of that step last Friday, and hopefully the President will sign that legislation.

But let me turn to Mr. Holmes. As you know, with the passage of this legislation we're back on track, so to speak. Do you worry about the liability caps? Do you think that we should look at that issue?

Mr. HOLMES. Well, again, Western States Petroleum Association really focuses on the local and State issues, and that would be handled through our sister organization API, American Petroleum Institute. But I know that they supported the continuation of the trust fund. I think there were concerns about raising the cap and felt that the $1 billion would be an adequate amount. And also, we would have liked to have seen some auditing provisions added into the provisions which were not. But——

Senator CANTWELL. So you don't support or oppose changes to the liability caps?

Mr. HOLMES. No, I'm not ready to comment on that.

Senator CANTWELL. OK. And what about this issue off the coast in the marine sanctuary area where there were 142 tugs with oil barges that, as Mr. Felleman stated—I liked his way of describing that, ships are going outbound in the inbound lanes.

So in the area to be avoided, it seems like there are a certain number of vessels there that we don't have very good compliance

rates for. What do you think is occurring there, and what should we do about that?

Mr. HOLMES. Well, I'm a member of the Advisory Council for the Olympic Coast National Marine Sanctuary as an alternate, and the sanctuary staff presented a presentation I believe three meetings ago regarding that topic. And my recollection of the presentation that the sanctuary staff made was that there was very good compliance, similar to the numbers that the past panel quoted which was 98 percent or something like that overall.

So from, my understanding from the overall program, it's very successful, and the staff was very careful to say that they didn't really have all the answers where there were tracks going through the system, and the staff was very careful not to make any conclusions on that and required further research to get the proper answers. But I know from our members' perspective, they're making every effort to comply.

Senator CANTWELL. If you'll look at the sheet and document that I was given, it looks like the overall numbers for vessels are pretty good.

You know, oil tankers have a 99.8 percent compliance rate, but then you look at some of the other categories—tank barges with oil, 75 percent compliance; chemical barges, 43 percent. So I don't know if it's a communication issue or whether we have people taking a different path or there's a different economic issue there.

Mr. HOLMES. Right, and again I don't want to speak for the Olympic Coast National Marine Sanctuary staff, but my understanding is that there were some questions that needed to be researched on that line item, tug and barges, to see whether they were loaded or not.

Senator CANTWELL. Well, whether they were loaded or not wouldn't really matter, though; right? You'd want them to stay out of that area?

Mr. HOLMES. If they're empty they can pass through there with no problem. This is to protect the sensitive areas within the Olympic Coast National Marine Sanctuary from the threat to sensitive areas for spill. And if there's an empty tank going through there that's not a threat and I believe that's allowed.

Senator CANTWELL. So you think that 43 percent isn't an accurate statistic because——

Mr. HOLMES. I don't know, I just know that I saw a presentation by the sanctuary staff saying that there's more research needed to answer that question.

Senator CANTWELL. OK.

Captain BOOTHE. Senator, I think Mr. Felleman's comment in his statement was accurate. We ought to be able to at some point be able to ascertain which direction they were going and whether they were laden or not, and then address that with the particular companies involved if indeed we find that they were laden because, I think, as Mr. Holmes has pointed out, the Western States Petroleum Association has agreed with the ATBA in concept and in practice, and they endorse it completely and expect their member companies to comply. And so I know when I was Captain of the Port here I would co-sign letters with the sanctuary manager to all those companies, saying, "Hey, we can't really tell from the data

that we have because we don't have, VTS does not have radar coverage off the coast there typically, so we can't really tell which way you were going and whether you were laden or unladen, but if you were laden, here are what the ATBA rules are all about and we would expect and ask for your voluntary compliance.

Mr. FELLEMAN. Senator Cantwell, I just ask that you keep in mind that because we have 10,000 transits going on our waters, when people present to you statistics in percents that you recognize that even a small percent is a lot of transits, and it only takes one laden barge to really wreck your decade.

Senator CANTWELL. Thank you. I think we will work with the organization to try to further shed light on these statistics, and it may be that as we attack the problem, as Doctor Leschine was saying, going from the highest incidence before to now developing a system, that it continues to need development.

One of those issues, Mr. Wright, is the commissioning of fishing vessels to assist in response. I know that the Department of Ecology found that maybe there may be insufficient vessel capacity to respond to spills. So do you agree with that?

Mr. WRIGHT. Well, the study was commissioned by the Department of Ecology, Senator, just came out mid last week. I actually have it in front of me because I've been studying it since it came out, and of course it's a very direct effect on us. MSRC has a fishing vessel program which is not as robust as it once was, and we were in the process long before this study was even commissioned of breathing life back into that program.

And additionally, we don't want to limit ourselves to fishing vessels because there are other vessels of opportunity in our waterways that could be very helpful and we are looking at them as well, such as tugboats, or work boats, or small dredges, those kinds of things that folks are more, more likely to be around than the fishing vessels which are quite nomadic in their, by their very nature, and their crews being even more nomadic than the vessels themselves.

Additionally, one thing that was overlooked in that study was that we have a Memorandum of Understanding that I mentioned in my testimony, with Burrard Clean Operations which brings significant resources to bear if we have a major spill, especially the one that was envisioned in the study which is a 10,000 barrel spill in Rosario Strait. So those things put together really, I think we could benefit from it. There are a lot of good points made in the study, the study was very well done, and we are taking it right to heart.

Senator CANTWELL. So you would say then, in general, let's look at a program for getting assistance from other vessels?

Mr. WRIGHT. Yes, ma'am. In any kind of a large response there's always going to be a "more is better" look at things. Can we get geographic response plans in place quicker? Can we tend those that are in place better? And this is all the kinds of things that we're looking at right now.

When you get into actual contact with the oil, the cost of doing business rises dramatically because of the training requirements that are in place through the, through OSHA and through the Washington equivalent. So keeping people trained to be in the oil

is a really difficult process, and it's something that we've done in the past and are looking into doing again.

However, to train people to be at the fringes when they're not likely to be in the oil is a lot easier.

Senator CANTWELL. Do we need additional research on cleanup technology?

Mr. WRIGHT. The cleanup technology itself really hasn't changed dramatically over the years. I think earlier on we heard testimony that remote sensing is something that might be advantageous to look at considerably more closely. It's very difficult to find oil on the water. The vision of putting a whole drum of oil in a bathtub is not what it looks like when you're out there on the water. It spreads out very quickly, it gets into stringers, it becomes very difficult to see from the water. So normally we spot it from the air as best we can. Of course at night that becomes problematic.

So, we heard Captain Boothe talk about the infrared technology capabilities of the Coast Guard and of the King County Sheriff's Office. Also, there has been some considerable research done by the Canadians by Transport Canada and the Canadian Coast Guard into the use of lasers as detection devices. So these are the kinds of research things that could bear very big benefits.

Finding the oil, especially at night, is the key. If you're going to pick it up, very obviously you have to find it first.

Senator CANTWELL. And so you would say if there are improvements such as lasers and other solutions, we should look at these, but otherwise you think no more research is needed?

Mr. WRIGHT. Well, I would never, I would never say that there shouldn't be more research in all the areas. There may be a breakthrough out there that's possible in mechanical pickup, but as I say, folks have been looking at this for quite some time and there just, there haven't been many breakthroughs. Certainly there should be a segment of the research community looking at these kinds of things. And we will work with them as we do with everyone else in partnership, and of course in the State of Washington partnerships are the name of the game with the response industry, with the oil industry, and with the State and Federal Government.

Senator CANTWELL. Doctor Leschine, you talked a lot about partnerships. Do you think that this new Citizen's Advisory Committee will solve some of the issues you raised?

Dr. LESCHINE. It's hard to read legislation and know exactly what it will mean in practice, but it, I did read the legislation and it seems like the ingredients are there. A couple of things that I see that are there very positive are, first of all, very broad participation by a large group of people, both from the industry technical side and the environmental community.

I also see something in the way of marching orders, in other words, we're not just meeting to have an open, free-form ongoing dialogue, but we really have a serious charge I believe every two or 3 years to kind of revisit the oil spill safety question. I think when I was a Pilotage Commissioner one of the things I learned is the situation changes more rapidly than you might think. You know, you get a different kind of vessel showing up all of a sudden because there's a new kind of trade or you have a different kind of, you know, jet skis, a whole new idea, a group of people with a

whole new sense of themselves and what they're doing out on the water. And things like that can happen overnight.

So I see the ingredients in place to all that. I guess where I might ask a question—which is not the same as criticism—is whether the resource provision through time will be adequate. I think the state has tended to fund things initially and then the gases kind of run out of the balloon. This has certainly happened to the Office of Marine Safety. We've tried to use barrel taxes and things like that, and the legislature seems to sort of lose its incentive to keep those kinds of funds going.

So, you know, I suppose, I've heard around the fringes of the discussion over this Oil Spill Advisory Committee whether some kind of Federal funding, or more guaranteed funding, and the state might be willing to provide would in fact be necessary to make this a full equivalent to the, to Prince William Sound's model. Which I believe is funded directly by the Congress, because at least it got an initial appropriation through OPA 90, and I think they're being, continuing appropriations since then. So if you don't have the resources, then you don't have——

Senator CANTWELL. Yes, I think the Prince William Sound Advisory Group gets money from the Trust Fund.

Mr. HOLMES. May I correct you? The Prince William Sound RCAC is funded through Alyeska.

Mr. FELLEMAN. It was actually set up before OPA passed. It's a model that was, that happened before. Any future RCAC's are to be funded through the trust fund. This one was set up beforehand.

Senator CANTWELL. Committee staff is telling me that it's taken out of the Fund—is authorized by OPA, and the last time Committee staff told me something about this in the Committee, they proved to be right and that's how we got to reauthorizing the Trust Fund. But we'll get to the bottom of how the money flows because it is important and we certainly want the resources to be there and we should look at this question, how the advisory committees are set up, what resources they have, and what role they play.

The state issue, Mr. Felleman, did you want to add any comments? You mentioned something about the first 70 miles and——

Mr. FELLEMAN. Right. The gaps that I've identified after looking at this issue for many years has been in our inability to provide the adequate protection for the Olympic coast in particular, open ocean skimming is a challenge, and I would suggest if there's R&D money to be spent, my colleagues in Alaska have a design that they would like to see be put to a tank test that's basically using a trimaran type vessel. Instead of using the boom that has all the problems of deployment, you have the rigid hulls of a vessel, you create a very wide swathe that can move through an oil spill in large sea states because the vessel has much better stability than most of the smaller type skimmers than we have. And this would actually, the vessel's hull itself would be able to be used to skim. This is something that I think in order to have the full toolkit as the Makah spoke to, we need to have ocean capable skimming. That's one.

But for the entrance to the Strait of Juan de Fuca, one of the problems that I believe is that the Coast Guard's demarcation line for where the ocean starts in our state, they consider up to Port

Angeles open ocean. The Coast Guard has a line of demarcation, the Captain of the Port line says basically that the open ocean begins in Port Angeles. So the first 70 miles of the Strait of Juan de Fuca is treated as open ocean environment.

And so all the protective measures that Senator Magnuson and others have put into place, the tanker size limits, the speed limits, the pilotage, the tug escort requirement, none of that begins until vessels clear Port Angeles.

So I really believe that our maximum risk is going to be through the entrance to the Strait to Port Angeles because that's where all the wonderful things that we do in this state are not present. And so, tugs of opportunity were introduced to address this problem in part, but the fact of the matter is the majority of the tug trade, the tugs with availability are in the Sound where they're moving back and forth. Tugs that are going out the Strait of Juan de Fuca are typically encumbered with a laden oil barge, they're doing business.

So we don't have a lot of loose tugs hanging around in the Strait of Juan de Fuca. And so keeping a year-round rescue tug in Neah Bay is part of the solution, but it doesn't address the questions of pilotage or speed limits or size limits and many other things that are still a gap in our safety net. So I really see that that's where some additional specific attention needs to be drawn.

Senator CANTWELL. Well, I want to thank you all for testifying today and for your input, and again, the record stays open for 2 weeks for you to give additional comments and testimony or submit information that was brought up in some of the Q and A. I think we have a tour that we're going to go on that we were scheduled to start about 5 minutes ago, so unless there are any other comments from panelists, again I want to thank everyone here for not just your testimony today but for your hard work as a community in addressing the security and safety of Washington waters.

On the one hand we can say that we may well be the model, given our unique geography and pristine area and incredible trade and traffic. At the same time I think the challenges continue. So thank you for stepping up to them and thank you for today's testimony, and we'll look forward to keeping you abreast of the Subcommittee's work and potential legislation. So this Committee hearing is adjourned. Thank you.

[Whereupon, at 12:20 p.m., the hearing was adjourned.]

A P P E N D I X

STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY
Olympia, WA, August 15, 2005

Hon. MARIA CANTWELL,
Ranking Member,
Senate Subcommittee on Fisheries and the Coast Guard,
Commerce, Science, and Transportation Committee,
Washington, DC.

Dear Senator Cantwell:

Thank you for the opportunity to provide additional comments relating to your recent field hearing of the Subcommittee on Fisheries and the Coast Guard. At that hearing, you asked if I had any recommendations for changes to the Federal Oil Pollution Act of 1990 (OPA 90). I've discussed this question with my staff at the Ecology Oil Spill Preparedness, Prevention and Response Program and our recommendations can be found in the attached document.

Thank you again for co-sponsoring the portion of the recently passed energy bill that reauthorized the Oil Spill Liability Trust Fund (OSLTF). The OSLTF is critical for the rapid response and clean up of oil spills. This fund will now continue to enhance our ability to protect Washington's natural resources and economy.

Washington State has an excellent working relationship with the Coast Guard. We work closely with them on all aspects of oil spill prevention, preparedness and response. However, as I mentioned in my testimony, we are concerned that Coast Guard homeland security activities are competing for resources with other important missions, including marine environmental protection.

The Thirteenth District U.S. Coast Guard Sectors Seattle and Portland are doing an excellent job meeting this challenge within limited resources, but we believe there is an opportunity to enhance our partnership with the Coast Guard in some of these activities. A stronger partnership may require changes to the traditional and statutory responsibilities between the Coast Guard and the state. I hope that as you consider changes to OPA 90, that one possible outcome might be to make the OSLTF eligible for use on prevention and preparedness work at both the Federal and state level.

Thank you again for your leadership. If you have further questions or if I can be of assistance on these issues, please contact me.

Sincerely,

DALE JENSEN,
Program Manager,
Spill Prevention, Preparedness, and Response.

RECOMMENDED CHANGES TO OPA 90 AND FEDERAL OIL SPILL PREVENTION, PREPAREDNESS, AND RESPONSE ACTIVITIES

State/Coast Guard Cooperation on Oil Spill Prevention, Preparedness, and Response

Congress recently reauthorized the Oil Spill Liability Trust Fund (OSLTF) to provide for continued funding of the account up to $3 billion. The Coast Guard utilizes the OSLTF to reimburse for spill response costs, and these funds are of critical importance to the states.

Since 2001, the Coast Guard has been faced with increased responsibility in critical homeland security activities. In our region, the Coast Guard has stepped up to these new challenges with exceptional professionalism even as it faces significant budget constraints.

We are concerned that these new responsibilities and pressures on the Coast Guard will impact their activities in the area of oil spill prevention and response. Fortunately, the Thirteenth District U.S. Coast Guard's Sectors have done an out-

standing job balancing these demands. However, we urge Congress to provide more resources to the Coast Guard commensurate with the increased demands that are placed on the agency through their many important missions.

Washington and other states that have robust oil spill prevention, preparedness and response programs can relieve some of the pressure from the Coast Guard by picking-up more responsibility in the area of oil spill prevention, preparedness and response.

Recommendation: The Coast Guard should continue work with states to develop cooperative oil spill prevention, preparedness and response programs. In Washington State, Ecology and the Coast Guard have developed protocols pursuant to a Memorandum of Understanding regarding oil spills which is an excellent example and foundation for such cooperative programs. Such programs can assist the Coast Guard by engaging states in oil spill prevention, preparedness, and response, while allowing the Coast Guard to continue to focus many of their resources on the homeland security mission.

Under such cooperative programs, the OSLTF could be used to provide additional resources for oil spill prevention and preparedness activities, as well as continuing with the traditional spill response funding.

Olympic Coast National Marine Sanctuary, Area To Be Avoided (ATBA)

The Olympic Coast National Marine Sanctuary is a federally protected area of Washington's northwest coast. A catastrophic discharge of oil or hazardous materials remains one of the greatest threats facing the Olympic Coast National Marine Sanctuary

The 10-year-old Area to Be Avoided (ATBA) covers a large portion of the Sanctuary. The ATBA helps to protect the coast from the risk of vessel collisions, drift groundings, and powered groundings by providing additional time for assistance to arrive prior to a drifting vessel grounding along this rocky and environmentally sensitive coast. All ships and barges carrying cargos of petroleum or hazardous materials, and all ships 1,600 gross tons and above solely in transit are advised to avoid sailing through this area. The provisions of the ATBA are voluntary.

Recommendation: Cargo vessels measuring less than 1,600 GT, tugs, and commercial fishing vessels (of 400 GT or more that are transiting the area and not engaged in fishing operations in the area) are not covered by the ATBA. These vessels can carry significant volumes of fuel. Should there be a major or catastrophic event, this fuel could be disastrous to the sensitive ecosystem of the Sanctuary. By extending the application of the ATBA to these vessels it would give rescue vessels more time to reach a stricken vessel. Also, the ATBA is voluntary. When a vessel violates the ATBA, the owner/operator is sent a letter explaining the purpose of the ATBA and asking that the vessel operator avoid the area in the future. We recommend that Congress give the Coast Guard and the Olympic Coast National Marine Sanctuary the authority to penalize repeat violators of the ATBA. The Coast Guard and Sanctuary should also be given sufficient resources to accomplish this task.

Pre-Booming During Fuel Transfers From Vessels

On December 30, 2003, approximately 4,500 gallons of fuel oil was spilled into Puget Sound during a fuel transfer. Recent data provided to the Department of Ecology indicates that in a 6-month period, 4,700 transfers were reported, which covers approximately 80 million barrels total (excluding refineries and Navy transfers). Of this total, 7.9 million barrels are transfers between entities that aren't fully regulated. One practice to protect water resources in the event of a spill is to "pre-boom" oil transfers. This involves placing oil spill boom around a vessel prior to transferring fuel. In the event of a spill, the boom would prevent the spilled product from spreading.

Recommendation: Currently the Coast Guard Captain of the Port has the authority to require pre-booming of transfer operations. The Coast Guard, in cooperation with the Department of Ecology, should identify certain high-risk transfers and require pre-booming of these operations.

Coast Guard Salvage Rule and Rescue Tug

On May 10, 2002, the Coast Guard announced that it was seeking comments on the Notice of Proposed Rulemaking published in the *Federal Register*. The proposed rule would revise the salvage and firefighting requirements for tank ships and tank barges transporting oil in bulk as cargo. The revisions clarify the salvage and marine firefighting services that must be identified in a vessel response plan to ensure an effective response to an incident. The proposed rule would also establish specific response time requirements for those salvage and marine firefighting services. General requirements for salvage and firefighting services were first published in 1993

as part of the U.S. Coast Guard's tank vessel response plan regulations under the Oil Pollution Act of 1990. To date, the Coast Guard has not finalized these rules.

Since 1998, Washington State has paid for the stationing of a rescue tug at Neah Bay. This pre-positioned tug is ideally situated to assist vessels transiting through the Straits of Juan de Fuca. The tug has also assisted vessels off the Washington coast. The tug is based in Neah Bay for a period of six to 9 months depending on the available funding. Winter storms present a higher risk of oil spills from the nearly 10,000 cargo ships and tanker transits traveling through the Strait each year. Fifteen billion gallons of oil are carried through the Strait each year via cargo and passenger vessels, oil barges, tankers and fishing vessels. Bad weather that is often experienced along the outer coast and in the western Strait presents an added risk to vessel traffic.

Recommendation: The Coast Guard should complete the Federal salvage regulations. Once the regulation has been completed, we can evaluate the current capability of the Neah Bay rescue tug and other salvage requirements under the rule. Also, the state has consistently provided the bulk of the funding for the tug. This should also be a Federal responsibility, and the Federal Government should provide funding for a year-round rescue tug presence at Neah Bay. The U.S. Government should ask Canada and British Columbia to provide matching funds for tug operations since the tug provides assistance to all vessels transiting the Strait, including those bound for British Columbia ports.

Regulation of Tow Vessels

Currently all tank vessels must meet various Coast Guard regulatory requirements for their operations. However, each year millions of gallons of petroleum products are carried on barges, Articulated Tank Barges (ATBs), and Integrated Tank Barges (ITBs). These vessels are all classified as towed barges and are less stringently regulated, even though some of the largest barges can carry as much product as a small tankship.

Recommendation: OPA 90 should be amended to require the regulation of tugs towing oil barges, Articulated Tugs and Barges (ATBs), and Integrated Tugs and Barges (ITBs). Such regulations should be similar to the requirements for tank vessels.

State Damage Claim Models for Natural Resources Damages

To meet the burden of proof for small damage claims the present OPA rules do not consider the use of state damage claim models for estimating natural resource damages. Although the D.C. OPA office has begun to consider Florida model cases and has offered to look at the Washington model, it would be useful to memorialize this in OPA to assure that all claims for damages receive compensation.

Recommendation: OPA 90 should be amended to allow the use of the Washington State Compensation model as a method of establishing damages. The amendment could also allow the use of models developed by any other state that have a proven alternative way to establish damages. The amendment could consider standards of approval and conditions for use when the fund would accept alternative assessment procedures to compensate for damages that a state could not recover from a responsible party that didn't pay or could not be located.

PEOPLE FOR PUGET SOUND
Seattle, WA, August 1, 2005

Hon. MARIA CANTWELL,
Ranking Member,
Senate Subcommittee on Fisheries and the Coast Guard,
Commerce, Science, and Transportation Committee,
Washington, DC.

Dear Senator Cantwell and Members of the Committee:

Thank you for your interest in the pressing need to enhance the Federal Government's vigilance in preventing oil spills and for providing us with the opportunity to make recommendations for the Committee's consideration. People For Puget Sound, a citizens' organization striving to protect and restore the Sound, has long recognized the Sound's vulnerability to oil spills and has been actively involved in many policy deliberations on oil spill prevention and response.

First, we would like to heartily thank Senator Cantwell for her hard work on the energy bill to reinstate the Oil Spill Liability Trust Fund, the tax that supports it, the cap increase to $3 billion, and fund's extension to 2014. This is hugely important

to Puget Sound, and we greatly appreciate Senator Cantwell's efforts to be sure this issue was addressed in the bill.

Despite years of effort, Puget Sound remains at an unacceptably high risk from oil spills. One major spill would destroy the Sound, and with it the enormous economic and cultural values Puget Sound provides to Washington State and the nation. The Sound is a fjord, with many narrow channels in which oil can slosh back and forth from beach to beach with the tides. Clean up of spills has historically been nearly impossible in Puget Sound primarily due to this convoluted geography. We desperately need help from the Federal Government to increase vigilance and prevent spills, as we simply cannot clean them up.

Thank you for considering the following enhancements to the Federal role in preventing spills:

1. Instruct the U.S. Coast Guard and other appropriate Federal agencies to implement those sections and subsections of OPA 90 that have not yet been implemented.

2. Fully fund a permanent, year-round, fully-equipped and staffed rescue tug at Neah Bay and other high-risk areas in Puget Sound, such as Haro Strait.

3. Include tank vessels, raise the cap to $4 billion, remove the sunset, and authorize the Oil Spill Liability Trust Fund to be used for prevention programs.

4. Require all fishing, cargo, passenger, and tank-ships and barges to report casualties (as defined in the CFR), malfunctioning propulsion, navigation, steering systems, and other incapacities that threaten marine waters.

Thank you again for the opportunity to provide these comments. We look forward to working with you and the Committee to provide better protection for Puget Sound and all of Washington's marine waters from the threat of oil spills.

Sincerely,

NAKI STEVENS,
Director of Programs.

PREPARED STATEMENT OF THE PRINCE WILLIAM REGIONAL CITIZENS' ADVISORY COUNCIL (PWSRCAC)

Introduction

Thank you for the opportunity to provide written testimony for the field hearing held in Seattle on August 1, 2005.

The Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) is an independent non-profit corporation whose mission is to promote environmentally safe operation of the Valdez Marine Terminal and associated tankers. Our work is guided by the Oil Pollution Act of 1990 (OPA 90) and our contract with Alyeska Pipeline Service Company. In language introduced by then-Senator Frank Murkowski, OPA 90 designates citizens' advisory councils in Prince William Sound and Cook Inlet, Alaska, as "Demonstration Programs." We believe that designation implies that, if successful, the Alaska councils could be replicated in other areas; however, that has never been done with the exception of the recent creation of a citizens' council by the Washington State Legislature. While Washington's council is similar to the Alaska councils in some respects, there are some significant differences such as the level of funding and the perceived independence of the councils. Therefore, we recommend that Congress replicate the OPA 90 councils in other areas of the country.

Our core principle is that citizens must have a direct voice in ensuring the safety of oil transportation. Citizens have the most to lose when the system fails as it did in 1989 in Prince William Sound, and as it did last year and again earlier this year in Puget Sound. As memories of the *Exxon* spill fade, we provide the constant vigilance necessary to prevent a resurgence of the complacency that Congress identified in OPA 90 as one of the spill's causes.

PWSRCAC's 18 member organizations are communities in the region affected by the 1989 *Exxon Valdez* oil spill, as well as commercial fishing, aquaculture, Native, recreation, tourism, and environmental groups.

As we describe our group, we'd like to address a common misconception about us: That we are an environmental organization. That's not accurate. We are not an environmental organization, at least not in the sense of Greenpeace and the Sierra Club.

Our board has 19 seats, only one of which is held by a traditional environmental organization. The others seats include:

- two representatives for Alaska's tourism industry;
- various cities, boroughs and unincorporated villages;
- Alaska Native tribes;
- Native-owned for-profit business corporations; and
- commercial fishing organizations.

In fact, one of our member organizations is the Alaska State Chamber of Commerce, which participates in PWSRCAC because of the damage suffered by the tourism industry in the *Exxon Valdez* spill. Indeed, the motives of most of these organizations for participating in PWSRCAC are not primarily environmental in character. Rather, those motives are economic and social, a reflection of the enormous damage that a catastrophic oil spill inflicts on the economy, people, and communities of the affected area.

Principles of Citizen Oversight

Over our sixteen-plus years of existence, we've learned a lot about how to be effective in promoting safer oil transportation. The oversight we provide, like that adopted in the Washington legislation, is not regulatory in nature. It is purely advisory, buttressed by the scientific and technical research we commission. Following are some key points for effective citizen oversight:

Point One: Avoid Confrontation. Instead, Work Toward Partnership

We've teamed up with many companies and agencies on many projects to improve safety in Prince William Sound. Our world-class tanker escort system is one example of industry, citizens, and regulators working together to achieve success. The iceberg-detection radar system now operating near the site of the *Exxon Valdez* grounding is another.

But a meeting that took place recently in our Anchorage office is perhaps the most telling example of how we've learned to work closely with companies that many people would assume to be our natural adversaries.

At that meeting, our staff sat down with Houston-based officials of a major oil company to plan a large-scale spill drill that will take place this fall in Prince William Sound. That oil company is giving our council a major role in the drill, perhaps a bigger and more tightly integrated role than we've had in any other company's drills.

And the name of that oil company? Exxon Mobil. That's correct. The Prince William Sound Regional Citizens' Advisory Council is now working hand-in-hand with the company responsible for North America's largest oil spill to make sure nothing like it happens again.

We believe that if citizens' councils are created in other areas of the country, they would be able to provide regulators, industry, and the public the same kind of advice, information, and support to promote the best prevention measures for their waters and that they could operate in a collaborative, non-adversarial, non-regulatory fashion that would be of great value to all stakeholders.

Point Two: Information Is the Most Valuable Thing We Can Provide

We spend hundreds of thousands of dollars each year on scientific research and technical analysis to formulate and support the positions we take in our advice to industry and regulators. It's all very well to appear at a public hearing and say, "We think the Sound should be protected." But we've learned that, to make a real difference, we must produce credible technical information on why a given protective measure is needed, and why the option we favor is better than the alternatives. This kind of scientific analysis is very expensive, so much so that we sometimes provide regulators with research they could not have commissioned on their own. That is why adequate funding is essential if a citizen oversight group is to make a meaningful contribution to preventing oil spills, and to ensuring a fast, effective response if prevention fails.

Point Three: Independence Is Vital

We operate in a highly-charged atmosphere where investments of hundreds of millions of dollars ride on regulatory decisions. The industries involved have ready access to agency personnel and elected officials. We are under constant pressure to bend our views and advice to the prevailing political and regulatory winds. We are able to set our own course only because of our independence.

That independence rests on two main pillars. One is the fact that our member entities choose their own representatives to our board.

The other pillar is guaranteed funding. In our case, it comes from a contract with Alyeska Pipeline Service Company that will stay in effect as long as the trans-Alas-

ka pipeline has oil in it. In this, we are different from regulatory agencies. Their budgets may be at risk because of cost-cutting by the government as a whole, or because the political winds, temporarily at least, blow against vigorous oversight.

Point Four: Judge Us By Our Effectiveness

Since 1989, nothing remotely resembling the catastrophe of the *Exxon Valdez* has happened in Prince William Sound. Industry and regulators deserve much credit for this safety record, of course, but so does the PWSRCAC, as attested by the numerous kudos we've received from the industry and regulatory agencies we work with. The clearest example: We've twice received the Legacy Award from the British Columbia/Pacific States Oil Spill Task Force.

What have we done to deserve the recognition we've received? Here's a partial list:

- We helped perfect the contingency plans that govern spill prevention and response in the Valdez trade.
- We've introduced and helped develop Geographic Response Strategies, similar to the Geographic Response Plans used in Washington State.
- We were instrumental in securing double-hull requirements in Federal law, and in creating the world-class fleet of escort tugs serving Prince William Sound.
- We spearheaded and largely financed the project to obtain ice-detection radar for Prince William Sound.
- We conducted extensive research and published a comprehensive community guidebook on dealing with the socioeconomic impacts of oil spills.
- We developed and promoted near-shore response plans.
- We have conducted extensive research into the causes of and cures for the problem of invasive species reaching Alaska in tanker ballast water.
- We have established procedures and relationships to provide us with clear access to industry and regulators.
- We have assisted in developing and training a fleet of fishing vessels for oil-spill response.
- We have a permanent drill monitor on staff to oversee drills and recommend ways to improve response readiness.
- We are a source of peer reviews for technical reports utilized by regulatory agencies.

Our final point in this list of lessons we've learned and things we've accomplished in Alaska has to do with the importance of longevity and continuity. Citizens stay in place and maintain vigilance as regulators and industry personnel come and go. The companies and agencies that we work with now include very few people who were around at the time of the *Exxon Valdez* spill. By contrast, virtually everyone on our board and our staff was in Alaska in 1989, and many were actually involved in some way with the spill or its aftermath. Consequently, it now often falls to PWSRCAC to provide the institutional memory needed to make sure the lessons of the *Exxon Valdez* figure into today's decisions.

Conclusion

In closing, we would like to revisit history one final time. We had calls for a citizens' council in Prince William Sound long before 1989, but it took the *Exxon Valdez* to make it happen. Other areas of the country are now in somewhat the same position we were back then. We just hope that they are luckier and wiser than we were, and that it won't take a disaster to bring about citizen oversight in preventing oil spills.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. MARIA CANTWELL TO DOUGLAS HELTON

Question 1. In your testimony you mention that NOAA has identified the navigable approaches to Puget Sound as one of the critical areas in the national hydrographic survey backlog. When is the new survey for the Puget Sound region slated for completion? What is the schedule for completely updating these surveys nationally?

Answer. The majority of work on the NOAA hydrographic survey project at the "Northern Approaches to Puget Sound" (internally known as OPR–N372–RA) was completed in 2004 and 2005. The remaining portion of the Puget Sound project (excluding the traffic separation zone) is scheduled for completion this fall (FY 2006) by the NOAA Survey Ship *Rainier*.

The projected completion date for the "original" 43,000 nm^2 of critical backlog is 2018. NOAA continues to track the Critical Area remaining on the original 43,000 nm^2 identified as the critical backlog in 1994. However, because this category of critical survey miles is not static, NOAA no longer reports its performance against the 43,000 nm^2. As areas become more or less critical to survey for reasons such as changing navigation patterns, shifting vessel type and use, weather/natural incidents reconfiguring depths, resurvey needed, etc., NOAA has sought a better way to capture its performance and reflect the larger pool of national survey needs. NOAA now reports its hydrographic survey performance relative to all 537,000 navigationally significant square nautical miles. The newly updated NOAA Hydrographic Survey Priorities, which can be found at *http://nauticalcharts.noaa.gov/staff/NHSP.html,* describes NOAA's priority categories and criteria.

Question 2. The conversion of NOAA's nautical charts into digital format is an excellent example of the potential for new technology to enhance navigational safety. However, I understand that the completion of this conversion in not slated until 2010. Is this correct? What percentage of NOAA charts have currently been converted? How much is this effort expected to cost?

Answer. Yes, completion of conversion of all U.S. and territorial waters charted by NOAA will occur by 2010. Approximately 50 percent of NOAA's nautical charts have been converted into digital format; 506 Electronic Navigational Charts (ENC) are currently available for use. However, NOAA has completed 100 percent of its priority one charts, which include all major ports. NOAA is currently working to provide seamless coverage between ports. By 2007, when the U.S. Coast Guard is slated to promulgate electronic chart carriage regulations, NOAA will have 90 percent of its chart suite of U.S. commercial waters covered by ENCs. For the Puget Sound area, only two additional charts are needed in order to provide 100 percent coverage of that area.

The Fiscal Year 2006 President's Budget Request includes an increase of $1.89M for Electronic Navigational Charts. At the total requested funding level of $6.19M for Fiscal Year 2006, NOAA will achieve complete Electronic Navigational Chart coverage by the end of Fiscal Year 2008.

Question 3. Is there any promise of developing improved detection, response, and other technologies aimed at reducing the risk from oil spills, or is what we have now about the state-of-the-art? What is the status of NOAA's research program for such technologies? How much funding was requested for these activities in Fiscal Year 2006?

Answer. NOAA, the U.S. Coast Guard, the Environmental Protection Agency (EPA), and the Minerals Management Service continue to conduct and support research to reduce the risk from oil spills. Improvements continue to be made in spill modeling and trajectory, as well as in alternative technologies such as dispersants and *in situ* burning. Also recent U.S. Coast Guard research and development efforts have been aimed at developing the capability to identify, detect, track, contain, and recover heavy oils on or below the surface, oil in extremely cold conditions and oils from submerge wrecks at extreme depths.

One such mechanism is through the Coastal Response Research Center (CRRC), which is a partnership between NOAA and the University of New Hampshire. The goal of the CRRC is to reduce the consequences of spills and other hazards that threaten coastal environments and communities. The Center conducts research, develops new response and restoration methods, and transfers technology to practitioners. Some of the projects the CRRC has worked on include: (1) creating a modeling program that will provide the capability to simulate deepwater oil and gas spills; (2) developing an oil spill response cost-effectiveness analytical tool; and (3) updating fate and transport forecasting models of oil released through deep well blow-outs and pipeline failures.

Efforts aimed at developing improved detection, response and other technologies aimed at reducing the risk from oil spills is spearheaded by the Office of Response and Restoration within the National Ocean Service. The Fiscal Year 2006 request for this office is $22.1 million, not including funds for the continuing clean-up of the Pribilof Islands.

Question 4. Is the Interagency Coordinating Committee on Oil Pollution Research still an active, effective vehicle for guiding research efforts at the Federal level?

Answer. While the Interagency Coordinating Committee on Oil Pollution Research (the Committee) continues to provide a forum for sharing the work of individual agencies, its level of activity has decreased in recent years. The Committee is charged with coordinating a comprehensive program of research, technology development, and demonstration among Federal agencies in cooperation with industry, universities, research institutions, state governments, and other countries. This re-

sponsibility includes preparation of an Oil Pollution Research and Technology Plan. The last plan was published in 1997 with revisions based recommendations made by the Marine Board of the National Research Council.

The Committee had been active in coordinating international research and development (R&D) efforts. The Committee helped organize the first and second International R&D Fora on oil spill response issues, which were held in McLean, VA (1992) and London, UK (1995). In 2002, a third international forum was held in Brest, France, and focused on High Density Oil Spill Response. The International Maritime Organization and the European Commission were the primary sponsors of these international meetings; NOAA was a meeting cosponsor.

Question 5. You testified that if a vessel transits through the boundaries of the Olympic Coast National Marine Sanctuary and the IMO-recognized Area To Be Avoided (ATBA), you have a system in place to contact such vessels to ensure that they are familiar with the guidelines in place. Why doesn't NOAA also know whether tank vessels engaged in such transits are carrying oil? Are oil-laden vessels in fact "cutting-the-corner" of the ATBA and entering into its boundaries, and if so, what can be done to end this practice?

Answer. The Olympic Coast National Marine Sanctuary (OCNMS) ATBA Education and Monitoring Program has been greatly aided by the availability of radar data, and the cooperation of industry and the U.S. and Canadian Coast Guard. Since 2002, when the provisions of the ATBA were expanded to include all vessels over 1,600 gross tons, the highest priority of the program has been outreach to this new population of vessels. Many of these vessel classes, including containerships and oil tankers, have better than 99 percent compliance rates.

The reported compliance rates for tank barges are lower and this segment of the industry has not, to date, been a target for our outreach efforts. Improving compliance rates for tank barges will be a priority for the program in 2006, and this effort will require a different approach than has been used with larger vessels. OCNMS and the U.S. Coast Guard (USCG) evaluate two factors before deciding whether or not to contact a vessel owner: (1) if the vessel entered the ATBA; and (2) size or cargo of the vessel (i.e. ships and barges carrying cargoes of oil or hazardous materials, and all ships 1,600 gross tons).

Tank barges regularly transit just outside of the ATBA boundary. Positional accuracy and frequency of fixes of the radar data makes it difficult to determine if they are violating the ATBA, or transiting just outside the boundary. Another challenge is the status of the barge's cargo. The data used does occasionally indicate if the oil barge is "loaded" or "empty;" however, in most cases it does not. Since this is a voluntary program, OCNMS and the USCG have taken a conservative approach of only sending letters to those vessels for which a violation is obvious. OCNMS plans to consult with the USCG and marine industry to identify an alternative approach to improving ATBA compliance within this segment of the industry. In addition, OCNMS hopes that improved access to vessel track data and Automatic Identification System (AIS) reports will help improve the accuracy of our monitoring program.

Question 6. You also mention in your testimony that NOAA has been "participating in other initiatives reviewing additional measures to improve maritime and environmental safety in the region." What are some of the additional measures and initiatives?

Answer. NOAA provides products and services that aide mariners in safe navigation through the waters, including:

- Charting products that indicate shipping lanes, aids to navigation, and shoals or other hazards to navigation.
- Tidal current information and weather forecasts, all essential information used by mariners to safely navigate their vessels.
- A Navigation Response Team is on hand 365 days a year to perform emergency response surveys to locate potential obstructions, at the request of the U.S. Coast Guard.
- The Port of Tacoma is the location of one of twelve NOAA Physical Oceanographic Real Time Systems (PORTS®) established around the country. PORTS provide quality-controlled real time oceanographic and meteorological data.
- NOAA computer modeling offers insight into the risks and consequences of a spill in a particular location.
- NOAA is an active member of the Harbor Safety Committee in Puget Sound and the Ports and Waterway Committee in Portland. These committees work to prioritize charting requirements.

- Critical backlog survey—NOAA works with the United States Power Squadron on the Committee to work on charting for the West Coast.
- NOAA is working with the U.S. Coast Guard, Washington State, the Pilots Association, and others on access to vessel track data.
- Tsunamis—NOAA has a system of Deep-Ocean Assessment and Reporting of Tsunamis (DART) buoys in place on the West Coast, in addition to a mapping system for the coast and inland, which facilitate the planning effort and emergency warning system.
- NOAA's All-Hazards Weather Radios will begin to include all types of hazards warnings, not just those that are weather-related.
- NOAA is also active with the Region 10 Regional Response Team, which works to coordinate efforts for responses to significant oil and hazardous substance incidents and works toward preparedness for such events.

Question 7. You testified, and we've heard previous testimony in the Committee from others, that double-hull tankers are not a "panacea," in that even a double-hull tanker could be involved in a major spill were it to be involved in a collision. That being the case, won't navigational measures continue to be necessary? What are some additional steps that could be taken in this regard?

Answer. Double hulls are a feature designed to reduce the potential for spillage from a low velocity grounding or collision. Because double hulls would not prevent a grounding or collision from occurring, navigational measures that aid in reduction and prevention of groundings and collisions will continue to be necessary.

In addition to up-to-date surveys, accurate chart products, and real-time environmental information such as water level, currents, winds, etc., the best way to enhance navigation safety is to provide a reliable system of aids-to-navigation to assist mariners in determining their position and a safe course to steer, and to alert them to dangers. Additional precautionary steps that could be taken include: (1) implementing routing measures supported by Port Access Route Studies, (2) completing the modernization of the Federal Vessel Traffic Service (VTS) in the Puget Sound area, (3) establishing hydrological/meteorological monitoring stations, and (4) placing additional current and weather environmental data buoys that will help with navigation and response to spills.

Question 8. Are there other areas of the country that could benefit from some of the navigational and other prevention measures that are in place in the Washington area?

Answer. All navigable waters of the country benefit from reliable aids to navigation. Additional routing measures and new or improved VTSs could provide additional benefits in some areas. However, they should only be implemented after a careful risk analysis and consultation with expert waterways users. All areas of the country would benefit from expanded implementation of the Automatic Identification System (AIS). Weather and environmental monitoring stations likewise provide added benefits wherever they are applied.

NOAA's Physical Oceanographic Real Time System (PORTS®) is a cost shared partnership program that places water level stations, current meters, meteorological packs, salinity meters, air gap (bridge clearance) and other environmental sensors in locations identified in concert with the local user community that most benefit safe and efficient navigation.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. MARIA CANTWELL TO CAPTAIN MYLES BOOTHE

Question 1. Captain Boothe, can you tell me how many tank vessels coming into Washington waters from the U.S. and overseas are still single-hull vessels or have only double-sides or double-bottoms? When will these ships be phased-out?

Answer. The Coast Guard does not maintain statistics on the double/single hull status of tankers entering Washington State's waters. All tankers operating in U.S. waters must be double-hulled by 2015. As a matter of domestic law (per the Oil Pollution Act of 1990 (OPA 90)) most single hull tank vessels will be phased out by 2010. The International Convention for the Prevention of Pollution from Ships (MARPOL) shares a similar scheme which assures that single-hull tankers that are subject to the Convention are phased-out not later than 2010. In some cases, MARPOL permits the extension of single-hull tanker phase-out dates if a Condition Assessment Scheme indicates the vessel is in a satisfactory condition for continued operation. Domestically, vessels equipped with a double-bottom or double-sides may

operate beyond 2010 up until 2015 based upon a tiered phase-out schedule outlined in OPA 90.

Question 2. How has Washington State law on the use of single-hull vessels affected the phaseout schedule?

Answer. There is no data that indicates Washington State law has affected the phase-out schedule of single-hull tankers. However, the Revised Code of Washington, Section 88.16.190, may be influencing vessel owners to build propulsion and steering system redundancy into many of their new double-hull tankers constructed for the Puget Sound trade.

Question 3. Can you tell me how many ships carrying oil—either as cargo or large ships carrying oil as fuel—simply transit through U.S. waters, including waters in the State of Washington, on their way to foreign ports? Does the U.S. impose any safety regulations on such ships? How many of these ships are single-hull tank vessels or have only double sides or double bottoms? To the extent that such ships include such tank vessels, when will they be phased out?

Answer. The U.S. Coast Guard does not maintain statistics on the number of vessels that engage in innocent passage through U.S. waters bound for foreign ports without calling upon a U.S. port. Vessels engaging in innocent passage through U.S. waters are not required to comply with U.S. laws or regulations, however these vessels are expected to comply with international standards (applicable to the vessel), such as the International Convention for Safety of Life at Sea (SOLAS), MARPOL, etc.

Vessels calling on U.S. ports are required to meet certain U.S. laws and regulations including the OPA 90 for tank vessels. OPA 90 phases out single-hulled tank vessels based on a codified schedule. MARPOL shares a similar scheme which assures that most single-hull tankers that are subject to the Convention are phased out not later than 2010. In some cases, MARPOL permits the extension of single-hull tanker phaseout dates to 2015 if a Condition Assessment Scheme indicates the vessel is in a satisfactory condition for continued operation.

Question 4. I understand that member countries of the International Maritime Organization (IMO) recently agreed to amendments that would apply more rigorous inspections to single-hull vessels, yet the U.S. is not intending to implement this requirement. Is that true, and if so, why is this the U.S. position?

Answer. OPA 90 governs double-hull requirements for vessels operating in U.S. waters. In December 2003, the International Maritime Organization (IMO) amended Annex I to the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), modifying MARPOL Regulation 13G which includes a Condition Assessment Scheme (CAS). A CAS is an enhanced survey system which verifies the structural integrity of single hull tankers. If satisfactory, a CAS may be used to extend single hull tanker phaseout dates. Since CAS was included in [amended] Regulation 13G, it couldn't be adopted domestically, as the regulation would have required the United States to implement a single hull tanker phaseout schedule which is inconsistent with the existing schedule required by Congress through the OPA 90. Further, the Coast Guard already adopted and codified IMO's enhanced survey requirements in 1996 for single hull tankers. This regulation aligns with the SOLAS requirement to employ an Enhanced Survey Program (ESP) to assure structural integrity. Some of the more significant features of CAS will be incorporated into the ESP under SOLAS (which does not conflict with domestically mandated single hull tanker phaseout dates). These updates to the ESP will become effective on January 1, 2007.

In addition to the above regimes, the Coast Guard has developed and implemented a voluntary CAS program. Currently, six vessels are seeking voluntary CAS compliance documentation through this program. Moreover, U.S. vessels transporting Alaskan North Slope Crude oil from Alaska also participate in the Coast Guard-led Critical Area Inspection Program to monitor structural integrity for vessels engaged in that trade.

Question 5. When will the Coast Guard complete the upgrade of the Vessel Traffic System in Puget Sound, and what kind of changes do you expect will be made as part of this upgrade, particularly as they may relate to improving the safe transport of oil?

Answer. The Coast Guard has completed upgrades of the Vessel Traffic Service (VTS) in Puget Sound. Under the Ports and Waterways Safety System acquisition project, the core VTS operating system and 13 Automatic Identification System (AIS) base stations were installed. In addition, two radars were replaced with upgraded components.

The notable improvement resulting from the upgrade is the introduction of AIS coverage. AIS allows for highly accurate tracking and identification of all commer-

cial vessels greater than 65 feet in length. It also provides the VTS operator with information on a vessel's cargo so that additional attention may be paid to oil or hazardous material transports.

Question 6. Is the Coast Guard actively considering the use of a traffic separation scheme or other navigational measures to lessen the risks of oil spills in other parts of the country?

Answer. The Coast Guard is not currently considering the use of any new traffic separation schemes or other routing measures to specifically lessen the risk of oil spills in any other port or waterway. The Coast Guard has, in the past, established recommended routes to isolate tanker and hazardous material traffic from other vessels and thus reduce the risk of collision. As an example, these recommended routes are being used off the coast of California for vessels carrying certain types of cargo.

Question 7. In a report to Congress dated May 12, 2005, the Coast Guard indicated that it is more likely to recover claims for an oil spill against a responsible party that has a Certificate of Financial Responsibility (COFR). However, only vessels greater than 300 gross tons have to have these certificates. Should this requirement be extended to smaller vessels, particularly smaller vessels that transport oil as cargo?

Answer. The Coast Guard has not taken a position that the COFR requirement should be extended to small vessels (*i.e.,* 300 gross tons or less). The vast majority of small vessel spills requiring a Federal response with OSLTF funding involve non-tank vessels, including some cargo and towing vessels, but primarily consisting of commercial fishing vessels and pleasure craft. The following are limited cost recovery statistics for non-COFR'd vessel spills in which the OSLTF was accessed.

Vessel Type	Number of Incidents	Incident Costs ($Million)	Percent Collected
Fishing Vessel	593	8.2	29
Pleasure Craft	210	2.1	18
Cargo Vessel	180	4.0	32
Tug and Towboat	44	1.0	45

In enacting OPA, legislators intended that the Oil Spill Liability Trust Fund would in many cases be the ultimate insurer when liable polluters do not pay. Whether to expand the COFR requirements to all small vessels, or a class of small vessels, as a means of improving cost recovery for the Fund is in essence a reconsideration of how the cost risk should be shared between the public's fund and individuals. Any analysis in this regard would likely require data on the number of vessels affected, the availability and cost of insurance to meet new financial responsibility requirements, and the cost to administer the expanded program.

Question 8. With respect to its ongoing rulemaking on improving response equipment, what has the Coast Guard done to evaluate the potential environmental impacts from use of dispersants or *in situ* burning of oil? Do uncertainties remain?

Answer. Dispersants and *in situ* burning as oil spill response methods have been used for many years throughout the world and in the United States. Dispersant pre-approved zones and *in situ* burn policies have been established for all coastal areas of the United States except Oregon, Washington, and some areas of Alaska. A pre-approved zone is one in which the Federal On-Scene Coordinator can deploy dispersants (after employing a dispersant-use decision matrix) without seeking immediate approval from the environmental and natural resource trustees (Federal and state). These pre-approved zones have been developed by the Regional Response Teams (the Environmental Protection Agency (EPA), the Coast Guard, the Department of the Interior, and state and other Federal agencies). Many factors are considered in developing these zones, including the potential negative impacts of dispersant use. Between 1985 and 2005, the National Academy of Sciences published 5 different studies on oil spills and the various methods to respond to them, including a separate report on dispersants (1989). The conclusion reached is that dispersed oil's short term negative impacts to near surface plankton is far less then the contamination of coastal habitats and natural resources. It should be noted that all dispersants used in the United States are tested (toxicity and performance) and approved for use by the EPA (National Product List), in accordance with National Contingency Plan regulations. EPA maintains a schedule of dispersants, known as the National Contingency Plan Product Schedule, that may be authorized for use on oil discharges by the Coast Guard On-Scene Coordinator with the concurrence of both the EPA representative to the Regional Response Team and the state with jurisdiction over the waters impacted.

The Coast Guard views dispersants as a critical component to a successful oil spill response when mechanical recovery is limited in its ability to recover oil. Mechanical recovery has significant limitations when deployed in open water areas and is often times overwhelmed in large scale off shore oil spills. These limitations can have far reaching negative impacts on the environment. Dispersants, when used as per the regional pre-authorizations, can significantly reduce oil impacts on the near shore and shoreline environments.

Question 9. Given the recent Washington Department of Ecology report which indicates a shortage of vessels for providing mechanical response equipment to the site of an oil spill, is the Coast Guard addressing this gap?

Answer. The Washington Department of Ecology report indicates that the response system in Washington State could benefit from additional vessels of opportunity to augment existing response resources within the region.

The Puget Sound area has more dedicated response vessels than any other region in the nation, and the oil spill response organizations' equipment caches exceed the Federal requirements for the region. The Federal requirements for response equipment do not include a specific requirement for vessels used to assist in deploying spill response equipment such as skimmers and boom. The source data used in the Washington State Department of Ecology report indicated that there were approximately 200 dedicated vessels of various types in the State of Washington. There are 74 dedicated oil skimming vessels in one oil spill response company alone. This past year the Coast Guard added 3 oil skimmers to its Puget Sound inventory and completed modifications on two of these skimmers so that they may be used on Army Corps of Engineers or Coast Guard vessels as vessels of opportunity skimming systems (VOSS). Additionally, the Coast Guard has recently added one of its newest vessels, USCGC FIR, complete with a Spilled Oil Recover System, to the Port Angeles area.

Mandating an increasing in the number and type of vessels capable and available for oil pollution response would require a change to the Federal requirements for oil spill response equipment. This effort would need to include a cost benefit analysis on a nationwide scale for justification.

Question 10. The recent Washington Department of Ecology report suggested using commercial fishing vessels to augment the insufficient response vessel coverage. What would be involved in ensuring proper training and safety for fishing vessel responders? Would the Coast Guard be responsible for this new training?

Answer. Proper safety and response training of any vessels, including fishing vessels, used as vessels of opportunity would be the responsibility of the oil spill response organization hiring the vessels.

Under existing programs, such as those in Alaska (*e.g.,* Ship Escort Response Vessel System (SERVS) for Prince William Sound and the Cook Inlet Spill Response Inc. (CISPRI) for Cook Inlet), each response organization funds their own training and develops their own curriculum. These training programs are not subject to U.S. Coast Guard requirements or standards. Review of the training and safety programs for both SERVS and CISPRI indicate that 24-hour and 8-hour Hazardous Waste Operations and Emergency Response training and fishing vessel safety training, as well as training in Incident Command System; Response Strategies and Tactics; and Wildlife Hazing, Capture and Stabilization are all part of the general curriculum for these "vessels of opportunity." This recurring training usually takes one week a year.

Question 11. Please describe the status of all rulemakings required by OPA 90, including rules on drug and alcohol testing of crew and salvage, the issues that have caused delays in these rules, and when the Coast Guard plans to complete these rules.

Answer. All but three of the forty regulations OPA 90 required have been issued. The remaining projects are not complete because of technical or jurisdictional complexity, as well as limited rulemaking resources. The three remaining OPA 90 rulemakings are:

- Tank Vessel Response Plans for Hazardous Substances
- Facility Response Plans for Hazardous Substances
- Reporting Marine Casualties [that pose significant harm to the environment]

Regarding the drug and alcohol testing of crew, the current rulemaking is not considered an OPA 90 action The rulemaking stems from Public Law (Pub. L. 105–383) (46 U.S.C. 2303a) requiring alcohol tests to be done within 2 hours of a serious marine incident. The Notice of Proposed Rulemaking (NPRM) for this Public Law was published February 28, 2003. The Final Rule has been prepared and is currently going through clearance.

Regarding salvage and marine firefighting, the current rulemaking is not considered an OPA 90 action. In 1993, the Coast Guard complied with OPA 90 by publishing vessel response plan requirements that included salvage and marine firefighting elements. The current rulemaking builds on the existing requirements. The Coast Guard published an NPRM in 2002. Analysis of public comments is ongoing, with the goal of publishing a Final Rule in the future.

Additionally, the Coast Guard recently initiated a rulemaking in the area of Vessel and Deepwater Port Limits of Liability—Adjustments to Reflect the Consumer Price Index. This action is needed to adjust the limits of liability for vessels and deepwater ports to reflect significant increases in the Consumer Price Index. A NPRM is under development, with a goal of publishing it in 2006.

Question 12. How can we best confirm whether vessels transiting through the Area to Be Avoided off the coast of Washington are laden with oil? Is this a responsibility of the Coast Guard? Does the Coast Guard regularly access this area?

Answer. Tank vessels and tank barges transiting near the Olympic Coast Sanctuary and its associated Area to be Avoided (ATBA) are required to carry an Automatic Identification System (AIS) transponder, and to report whether or not they are carrying hazardous cargo. In addition, all vessels are required to submit an advance notice of arrival to the Coast Guard that lists the cargo they are carrying.

The Coast Guard VTS in Seattle, and the Canadian Coast Guard VTS in Tofino, British Columbia, continually monitor the ATBA to detect incursions. As such, it is extremely rare for a vessel laden with oil to enter the area. Compliance with the voluntary ATBA is better than 99 percent. In the rare event that a commercial vessel does enter the area, its intentions are immediately questioned by one of the two vessel traffic services, regardless of its cargo. Because this remote, electronic vigilance has been successful, the Coast Guard does not conduct regular patrols in the area.

Question 13. NOAA testified, and we've heard previous testimony in the Committee from others, that double-hull tankers are not a panacea, in that even a double-hull tanker could be involved in a major spill were it to be involved in a collision. That being the case, won't navigational measures continue to be necessary? What about measures to reduce human error? What are some additional steps that could be taken in both regards?

Answer. Carefully selected navigation and human factors measures are effective in reducing the likelihood of accidents and will continue to be applicable. The key is to focus on the most effective measures which reduce overall risk. A number of such existing measures which improve vessel operator decision-making through increased situational awareness are described below. Likewise, technological advancements in shipboard navigation and safety equipment greatly improve the mariners' situational awareness and enhance their ability to prevent incidents from occurring.

In addition to double-hull requirements, OPA 90 and its implementing regulations imposed some additional measures to further reduce the likelihood of tanker accidents, including the requirement for a second officer on the bridge while operating within U.S. waters, tug escorts for laden tankers in certain waters, and mandatory participation in VTS.

Many other navigation and vessel traffic management measures have successfully been applied as well, including AIS, floating and fixed aids to navigation, Port Access Route Study, ship routing and Traffic Separation Scheme (TSS) modifications, safety zones, electronic charts, weather monitoring, pilotage requirements, and channel dredging and widening.

The existing Port State Control program, coupled with the recent implementation of the Maritime Transportation Security Act regulations, increases Coast Guard situational awareness and provides opportunities for accident prevention. This includes verification of a vessel's compliance with the International Management Code for the Safe Operation of Ships and for Pollution Prevention and the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), the primary international tools for addressing human and organizational factors. The 1995 amendments to STCW required significant enhancements to the qualification and fitness of seafarers worldwide.

Finally, the Puget Sound Harbor Safety Committee instituted a number of voluntary standards of care for vessels operating in Puget Sound, improving the overall safety of vessel operations within the Puget Sound region.

The many measures described above serve to augment the reduction in risk provided by a double-hull design.

Question 14. You testified that the Pacific Northwest has some of the strongest safety prevention elements in place, due to efforts unique to the region. What are

some of these unique elements, and could they be applied in other parts of the country?

Answer. Although not unique to Puget Sound, before any vessel greater than 1,600 gross tons enters U.S. waters, its crew is obligated to perform safety checks of propulsion and steering equipment, and report any deficiencies prior to entering port to help guard against a mechanical malfunction occurring close to U.S. shorelines or within maneuvering waters. In addition, tank vessels en route or departing the region are required to follow offshore routing schemes that hold them further off the coastlines of Washington and Vancouver Island, British Columbia. On the U.S. side, the IMO has recognized an "Area To Be Avoided" (ATBA) buffer zone extending 25 miles out from the Washington coast along the Olympic Coast National Marine Sanctuary, for all laden tank vessels and other vessels of 1,600 gross tons and above. Similarly, a 50-mile wide Tanker Exclusion Zone has been established off of the Canadian coast to route the Trans-Alaskan Pipeline tanker traffic further offshore to protect against groundings as a result of any potential disabling vessel conditions. Most deep draft freight vessels operating off the Washington coast comply with the Olympic Coast National Marine Sanctuary ATBA.

The United States and Canadian jointly operated Cooperative Vessel Traffic Service (CVTS), and the International Maritime Organization-adopted TSS, have been in effect within Puget Sound Waters for decades and serve to ensure an ordered and predictable traffic pattern for shipping in the region. All deep, draft vessels (all above 300 gross tons) are obligated to participate in the CVTS and follow the TSS according to the International Navigation Rules of the Road. The TSS establishes one-way traffic lanes, similar to an interstate highway, with a separation zone between the opposing lanes of marine traffic. The Cooperative Vessel Traffic Service tracks and directs all participating vessels transiting the region as necessary to ensure collisions and powered groundings will not occur.

Extensive analysis and collaboration with Canada and tribal interests (complemented by the discussions and recommendations from a Long-term Risk Management Panel convened by the Governor of Washington State and the Secretary of Transportation) led to significant improvements to the TSS, which were implemented with international approval in 2004 (based on extensive analysis and collaboration with Canada and tribal interests). The most significant adjustments ensure greater separation for tankers while in transit throughout the system, particularly in more confined waters.

The CVTS system is a model of bilateral cooperation and waterways safety management, ensuring the environmental protection and safety of our shared waters. Twice a year delegates from both the Coast Guard and Canadian Coast Guard meet to facilitate consultations between the United States and Canada on the effective implementation of the CVTS Agreement.

Almost all oil laden tank vessels must also be under the escort of two tugs which are capable of stopping the vessel's movement within strict parameters. No vessel above 100 gross tons is permitted to meet a laden tanker transiting Rosario Strait, the typical route for tankers destined for Washington refineries. Typically, as tankers enter Rosario Strait, escort tugs actually tether themselves to the tanker for enhanced ability to positively control the tanker's movement if needed.

Other programs, which are readily applicable to other parts of the country, include:

Weather Sensors and Decision Aids: As a result of a special appropriation for Puget Sound pollution prevention enhancement, two sophisticated weather buoys and numerous other weather sensors and cameras have been installed throughout Puget Sound waters to enhance the mariners' and the Coast Guard's situational awareness in the region. In addition, a Rescue Tug Deployment Decision Making tool has been created to assist the Captain of the Port in objectively determining the need for the dispatch and pre-staging of stand-by tug capabilities to protect against adverse weather and potential disabled vessels combining to create an unacceptable risk for particular areas within the region. These measures all combine to facilitate both normal voyage planning and emergency response decisionmaking.

Harbor Safety Committees: In addition to government safety and pollution prevention efforts, the Puget Sound and Columbia River region's maritime industries have established strong Harbor Safety Committees, with members from a broad spectrum of industry. These Committees have established Standards of Care, voluntary measures for operating practices and equipment testing that supplement the Federal and State standards. These additional measures have proven a valuable tool in quickly improving the maritime industry's performance, without the need to embark in regulatory changes.

Question 15. You testified that in District 13, there are many more inspections of foreign flag vessels than in the rest of the country. Why is that?

Answer. From the data provided in the Coast Guard's Port State Control Annual Reports, the National Average for examination percentage of foreign vessels, based on total ship arrivals, is 19 percent in 2002, 19 percent in 2003, and 15.5 percent in 2004. Meanwhile, D13 ports examined foreign vessels at higher rates; approximately 46 percent in 2002, 32 percent in 2003 of the foreign vessels, and 38 percent in 2004.

The Coast Guard selects foreign vessels for PSC exams through the use of a targeting matrix that weighs risk factors involving the ship owner/operator, flag state, vessel classification societies, vessel type, and vessel compliance history. We use this targeting matrix to identify vessels that have the greatest risk of being substandard and to focus our port state control efforts on high-risk vessels.

Collectively, Puget Sound and Portland zones receive a higher percentage of foreign bulk cargo carrier arrivals than other ports. Past data indicates that older bulk cargo vessels are more likely to be substandard than most other ports in the nation, and older bulk carriers receive more points during the targeting process than new bulk carriers or other freight ships. Approximately 35 percent of the foreign ships arriving at D13 ports are bulk carriers, compared with 18 percent nationwide.

Much of the cargo handled by ships visiting D13 ports are low-value commodities. Past data indicates that vessels that carry low-value commodities are more likely to be substandard and the targeting matrix typically focuses upon vessels carrying low-value commodities. For example, Portland is considered the second or third (by year) biggest grain exporter in the nation. D13 also sees a large number of first-time vessels to the U.S. or vessels on their maiden voyages. The Coast Guard targets every vessel at its first arrival in the United States for examination. Vessel Security Boarding Teams in Sector Seattle AOR have received extensive training to conduct portions of Port State Control Exams—they know what to look for with respect to safety and environmental protection requirements; and if they note deficiencies, they will initiate a Port State Control Examination.

Question 16. Please describe any ongoing joint efforts with the Canadian government on oil spill prevention and response efforts.

Answer. The United States Coast Guard and the Canadian Coast Guard jointly operate the Cooperative Vessel Traffic Service (CVTS) and the International Maritime Organization adopted TSS. These cooperative services have been in place for decades, and have ensured an orderly and predictable traffic pattern for all vessels in the region. Within this framework, the two Coast Guards have continued to refine and improve the TSS by extending the initial entry point several miles further offshore, providing greater separation of opposing ship traffic, adding separation zones where none previously existed in some of the narrower waterways, including a special operating area to preclude meeting of large commercial vessels at a critical turn in the waterway. The CVTS and TSS operation, along with internationally recognized rules-of-the-road and standardized merchant mariner training, are responsible for the extremely low frequency of collisions and groundings in this very busy and confined waterway.

Additionally on the prevention side, the Coast Guard works closely with our Transport Canada Marine Safety counterparts in executing our respective port state control programs. In the Thirteenth District, Captain of the Port/Officer in Charge, Marine Inspection Puget Sound had established a program of reciprocity for Port State Control examinations conducted by Transport Canada marine surveyors, thus maximizing the number of foreign vessel exams within the Puget Sound region.

On the response side, the Coast Guard has ongoing and routine contact with our Canadian Coast Guard counterparts in implementing the Canada-United States Joint Marine Pollution Contingency Plan (JCP). This plan plays a critical role in preparing for, and responding to oil spills in the Puget Sound area. Using the CANUSPAC annex to the JCP, both the Canadian and U.S. Coast Guard work together as part of a Joint Response Team (JRT). The two Coast Guards exercise the plan at least annually, and typically have a concurrent response equipment deployment exercise to ensure we have the ability to move necessary equipment to either side of the international border in concert, and engage spilled oil at the earliest opportunity. On August 19, 2005, the Coast Guard conducted a meeting with the Canadian Government and the Makah tribe to finalize details on our upcoming joint-oil spill exercise scheduled to take place on October 27, 2005. The exercise will simulate a vessel sinking off the Washington coast with an oil discharge that threatens both Canadian shores and the Makah reservation. Exercise play will involve a command post being set up in Canada and on the Makah reservation, as well as an equipment deployment at Swiftsure Bank, off the British Columbia coast. There will also be a JRT meeting later in November or December.

Question 17. Please describe any ongoing joint efforts with the tribal governments on oil spill prevention and response efforts.

Answer. The tribes of the Pacific Northwest, as sovereign nations, are invited to be a part of the Regional Response Team/Northwest Area Committee (RRT/NWAC). They are routinely invited to participate in efforts to develop and maintain the Northwest Area Contingency Plan, the geographical annexes to the plan, and to all workgroup meetings of the RRT/NWAC. There has been limited success in having the region's tribes attend the RRT/NWAC meetings. There are approximately 27 different tribal entities in the RRT/NWAC area. Accordingly, it is difficult to get them to participate collectively since there is no single tribal group or committee that represents them all. As a result, the CG works to include the appropriate tribes within the geographical area in which we are involved. For example, some of the tribes have participated in the Coast Guard sponsored Environmental Risk Assessment in the Cape Flattery area. This risk assessment is designed to help decisionmakers weigh various environmental trade-offs when applying different cleanup technologies to oil spills.

Several of the coastal area tribes participated in a large Washington coastal area logistics exercise. This exercise brought together state, Federal, and tribal trustees and industry to look at the unique and difficult logistical challenges of responding to a spill on the Washington coast. This exercise identified issues requiring further attention through planning and equipment placement necessary to be able to conduct a successful cleanup operation in this rugged, sensitive coastal area. Most recently, the tribes have participated in the planning for the upcoming Joint Canadian-U.S. Oil Spill exercise and at a Public Affairs Workgroup meeting of the RRT/NWAC. The October 2005 CAN/US exercise, will be an open water field training evolution and partial Command Post Exercise beyond the mouth of the Strait of Juan De Fuca. On the U.S. side, it will be based in Neah Bay on the Makah tribal land area. Tribal representatives will be working with the exercise committee to develop and participate in the exercise. Furthermore, individual tribes within the region have been part of the Unified Command stood up for response to pollution incidents within Puget Sound. A most recent example is the Wells Point spill of December 2003.

The Coast Guard is working concurrently with regional tribes and is in the process of establishing a Regulated Navigation Area (RNA) within the Strait of Juan de Fuca to permanently establish VTS Measures to modify traffic lanes to accommodate the usual and customary fishing grounds of regional tribes. Recent changes to the Traffic Separation Scheme conflicted with traditional fishing areas and impeded the ability of the tribes to fish safely. The RNA will reroute vessel traffic safely around traditional fishing areas, greatly reducing risk of collision and associated pollution.

Question 18. Has the Coast Guard ever done a cost-benefit analysis on the use of standby tugs to prevent oil spills in Puget Sound?

Answer. Yes. A regulatory assessment entitled, "Use of Tugs to Protect Against Oil Spills in the Puget Sound Area" (Report No. 9522–002) was published November 15, 1999, and is available on the Internet at *http://www.uscg.mil/hq/g-m/pscb.pdf*.

RESPONSE TO WRITTEN QUESTION SUBMITTED BY HON. MARIA CANTWELL TO RICHARD WRIGHT

Question 1. I understand that a recent Washington State Department of Ecology-funded study on the role of fishing vessels in clean-ups found that there might be insufficient vessel capabilities for responding to an oil spill in Washington. Do you agree with the report's conclusions? If not, please let me know your specific concerns.

Answer. As I stated at the field hearing, in a very large spill, it is hard to argue that additional well-trained people and vessels would not be a help. However, the study did not look at the program MSRC has in place to train and access vessels and people of opportunity. I have been in the process of improving that program since well before the study and will continue to do so. The Department of Ecology (DOE) is also working on this program as the study recommended that a government agency take on this task to avoid potential competition for the same limited resources by the various response entities. MSRC will lend every assistance to the State in this project. Also, the study failed to account for the considerable resources available to MSRC through our Memorandum of Agreement with Burrard Clean Operations of British Columbia, our partners to the north. One additional comment, it would be a mistake to focus strictly on fishing vessels. Fishing vessels and their crews are quite nomadic. This is especially true of the Puget Sound-based fleet. This

makes crews difficult to keep trained and vessels difficult to depend upon. MSRC's program includes vessels of opportunity of all types, such as tugs and workboats, as well as fishing vessels.

Question 2. If you believe there are gaps in the current oil spill prevention and response regime, what should be done to address them? Are there steps that should be taken at the Federal level, both through resource commitments or Federal legislation?

Answer. Once again, as I stated at the field hearing, I believe that our biggest gap is in the area of remote sensing. I would support any innovative research in any phase of response activities; however, remote sensing remains the most important area, in my opinion. This is most critical in the early hours of small to medium-sized releases, especially at night. It may seem easy to find oil on water, but it usually is not. Certainly, huge spills are obvious early in the response, but as they quickly spread and age, finding the best place for recovery activities becomes more difficult. Currently, most of the effort in the U.S. seems to be focused on infrared technology. However, the Canadian government has made great strides in laser-based sensing, which shows much more promise than infrared. As this represents possible international collaboration, it would seem that the Federal Government should take the lead. In a time of limited resources, remote sensing represents the biggest bang for the buck.

Question 3. You testified that in Washington State, the amount of response equipment and location of such equipment far exceeds Federal requirements. Why is that? Is it a function of state law or is this a voluntary prevention initiative on the part of industry? Does this mean that the level of response equipment in other parts of the country may be lacking?

Answer. Oil spill response in Washington is very much a partnership effort between the state, the Coast Guard, and industry. Where we are today is reflective of that partnership. In cooperation with the regulatory community, the industry has spent hundreds of millions of dollars and invested hundreds of thousand of person-hours in making the response stature in Washington the finest in the country, if not the world. Laws and regulations have not been the drivers; protecting our unique environment has been. I am not able to speak for other sections of our country directly; however, OPA 90 and subsequent regulations have provided a set of minimum standards for the entire nation. Here in Washington, as previously stated, we greatly exceed these minimum requirements.

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