



U. S. DEPARTMENT OF HOMELAND SECURITY

UNITED STATES COAST GUARD



REPORT

ON

Implementation of the Oil Pollution Act of 1990



Report on the Implementation of the Oil Pollution Act of 1990
CGMTA 2004; Amendments Relating to OPA 90, Title VII, Section 707

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I. EXECUTIVE SUMMARY

This report is provided pursuant to section 707 of the Coast Guard and Maritime Transportation Act of 2004, P.L. 108-293, 118 Stat. 1076. Section 707 calls on the Coast Guard to report on the implementation of the Oil Pollution Act of 1990 (OPA 90), including:

- *1. The status of the level of funds currently in the Oil Spill Liability Trust Fund and projections for level of funds over the next 5 years, including a detailed accounting of expenditures of funds from the Oil Spill Liability Trust Fund for each of fiscal years 2000 through 2004 by all agencies that receive such funds.
2. The domestic and international implications of changing the phase-out date for single hull vessels pursuant to section 3703a of title 46 U.S.C., from 2015 to 2010.
3. The costs and benefits of requiring vessel monitoring systems on tank vessels used to transport oil or other hazardous cargo, and of using additional aids to navigation, such as RACONs.
- *4. A summary of the extent to which the response costs and damages for oil spills have exceeded the liability limits established in section 1004 of the Oil Pollution Act of 1990 (33 U.S.C. 2704), and a description of the steps that the Coast Guard has taken or plans to take to implement subsection (d)(4) of that section.
5. A summary of manning, inspection, and other safety issues for tank barges and towing vessels used in connection with them.

** For ease of reading these two sections have been combined and responded to in Section II of this report.*

A. Level of Funds, Liability Limits and Long Term OSLTF Viability

The level of funds in the Oil Spill Liability Trust Fund (OSLTF) at the end of FY 2004 was \$842 million. Based on past spending trends and current forecasts, the OSLTF is expected to be depleted by FY 2009.

By FY 2007, the level of funds in the OSLTF may not be sufficient to cover all anticipated uses due to conflicts in Congressional earmarks and appropriations precedence for various Fund uses. Further, among those uses, the actual removal costs and damages the OSLTF may pay are highly dependent on the number and severity of oil spills. A single major or catastrophic oil spill could have a significant impact on the OSLTF balance and these projections.

There have been 19 oil spill incidents since 1992 that are known to have resulted in removal costs and damages in excess of OPA liability limits. All such incidents involved vessel spills.

OPA liability limits have not been adjusted for inflation since OPA was enacted. The authority to adjust liability limits for inflation pursuant to OPA section 1004(d)(4) was delegated by the President to various agencies in section 4 of Executive Order 12777, October 18, 1991, and would be accomplished through regulation. The Coast Guard has not been delegated this

authority, but is in the process of pursuing such a delegation. The impact on the OSLTF of liability limit adjustments for inflation, as indicated by the responsible party's increased share of expenses for the 19 incidents in which removal costs and damages have exceeded established limits would be limited. However, there are indications from the data available that the potential cost share for the OSLTF for vessel spills is disproportionately large and that an increase in the liability limits for such vessels may be desirable to better reflect the "polluter pays" policy that is the foundation of the OPA liability and compensation regime.

The long-term viability of the OSLTF is questionable unless additional sources of revenue can be identified and put into place. This outlook results from the combination of structural imbalance between significant, consistent outlays and sporadic, declining revenues.

The current structure of the OSLTF as it has evolved is not self-sustaining. Despite a continuing demand on its resources, its principal revenue sources, the tax on oil and transfers from the legacy funds that were replaced by the OSLTF, have expired.

OPA provides that the OSLTF is the ultimate insurer for oil spill removal costs and damages when those responsible do not pay. In many incidents, liable responsible parties cannot be located, do not have the ability to pay, or have defenses or limits to their liability. Therefore, recoveries from liable parties cannot fully reimburse the removal costs and damages expended from the OSLTF.

While penalty deposits and interest on the fund balance provide significant OSLTF revenue, they have not made up the shortfall in cost recovery from liable parties. In addition, the OSLTF must make substantial contributions to annual agency operations as well as payments in support of the Prince William Sound Oil Spill Recovery Institute (OSRI) and the Alaska Denali Commission (Denali) that are not balanced by offsetting revenue. The result is a decline in the balance of the OSLTF.

The impact of the exhaustion of the OSLTF is significant and far-reaching. First, if the OSLTF would not be available to fund cleanup of oil discharges, so Federal responses will either have to be terminated or funded from alternative revenue sources such as annual Federal appropriations. Second, without a viable OSLTF, those persons that incur removal costs or damages as a result of an oil spill may not be compensated. Significantly, state and local governments will be deprived of important compensation for their qualifying spill response projects. Finally, Federal agency operations funded by appropriations from the OSLTF will have to be funded from other sources.

B. Implications of Changing Phase-out Date of Single Hull Tank vessels

The implications of accelerating the single hull tank vessel phase-out date from 2015 to 2010 are mixed. The impacts vary, and the report includes charts and analyses depicting the impacts, based upon vessel gross tonnage date of build, whether the vessel has a double bottom or double sides, and where the vessel unloads. The U.S. tank barge fleet would be greatly affected by accelerating the single hull phase-out: approximately 1,650 tank barges (representing 38% of the

total tank barge fleet) would lose 5 years of service life. Overall, approximately 1,700 U.S. and 70 foreign single hull tank vessels would be affected and lose some service life in U.S. waters.

C. Vessel Monitoring Systems and Aids-to-Navigation

The Coast Guard, in conjunction with industry and other agencies, continuously studies and assesses the nation's waterways in an effort to cost-effectively reduce the risks in marine navigation in U.S. waterways. As part of the Maritime Transportation Security Act of 2002, the Coast Guard now requires over 3,400 vessels to carry an Automatic Identification System (AIS). This system automatically transmits information between ships and shore, and from ship-to-ship. The information includes vessel name, type, size, course and speed. AIS is capable of integrating with radar and electronic charts. Although AIS costs roughly \$7,000 per unit to install, the qualitative benefits from dramatically increasing our maritime domain awareness (and concomitant reduction in risk) are believed to outweigh the costs. Additionally, the Coast Guard operates 113 RACONs or radar responders. The benefit of a RACON is its ability to provide an identifying signature to landmarks or buoys on a shipboard radar display, at a cost of \$40,000 per unit. Currently, there are no indications that any marine casualty cases could have been avoided from additional RACONs.

D. Summary of Tank Barge and Towing Vessel Safety Issues

The Coast Guard's implementation of the provisions of OPA 90 continues to show great success. While the volume of barge transportation in petroleum and chemical cargoes continues to show an increasing trend, the number of infractions, civil penalty investigations, and spills for tank barges continues to decline. This is a result of industry's high compliance rate, and the Coast Guard's emphasis on safety and prevention. To continue improvement, the Coast Guard sought and obtained (in the Coast Guard and Maritime Transportation Act of 2004) the authority to develop an inspection and certification program for all uninspected towing vessels, and to establish a safety management system which addresses operations and manning of towing vessels. This new authority will be used to continue to improve safety and reduce risk in the tank barge and towing vessel industry. The report includes charts and analyses of the industry's performance since OPA 90, and also provides a synopsis of the significant regulations that pertain to tank barge and towing vessel safety.

II. Oil Spill Liability Trust Fund (OSLTF)

A. Background

The Oil Pollution Act of 1990 (OPA) addressed the wide-ranging problems associated with prevention, response, and compensation for oil pollution from vessels and facilities in our nation's navigable waters, adjoining shorelines, and exclusive economic zone. OPA greatly increased Federal oversight of maritime oil transportation, while providing greater environmental safeguards. This was accomplished by setting new requirements for vessel construction and crew licensing and manning, mandating contingency planning, enhancing Federal response capability, broadening enforcement authority, increasing penalties, creating new research and development programs, increasing potential liabilities, adding new compensation provisions, and significantly broadening financial responsibility requirements.

Title I of OPA established new and higher liability limits for oil spills, with commensurate changes to financial responsibility requirements. It substantially broadened the scope of damages, including natural resource damages, for which polluters are liable. It also provided for the use of a \$1 billion Oil Spill Liability Trust Fund (OSLTF or the Fund) to pay for expeditious oil removal and uncompensated damages. In section 7 of Executive Order 12777, the President delegated management responsibility for the OSLTF to the Secretary of the Department in which the Coast Guard is operating. Upon re-delegation by the Secretary, the Commandant of the Coast Guard delegated responsibility to the newly created National Pollution Funds Center (NPFC), an independent unit reporting directly to the Coast Guard Chief of Staff.

B. History of the Fund

In August 1990, when President George H. W. Bush signed OPA into law and authorized use of the OSLTF, the Fund was already four years old. Congress created the Fund in 1986 but did not pass legislation to authorize the use of the money or the collection of revenue to maintain it. Only after the 1989 *T/V EXXON VALDEZ* oil spill and the passage of OPA was authorization granted. Provisions establishing the Fund are at 26 U.S.C. 9509. In addition to authorizing use of the OSLTF, OPA consolidated the liability and compensation requirements of certain prior Federal oil pollution laws and their supporting funds, including:

- The Federal Water Pollution Control Act (FWPCA) 311k revolving fund,
- The Deepwater Port Liability Fund,
- The Trans-Alaska Pipeline Liability Fund, and
- The Offshore Oil Pollution Compensation Fund.

With the gradual consolidation of these funds and the collection of a tax on the petroleum industry, the OSLTF balance increased to more than \$1 billion. Fund uses were delineated by OPA Section 1012 (33 U.S.C. 2712) to include:

- Removal costs incurred by USCG and U.S. Environmental Protection Agency (EPA) Federal On-Scene Coordinators (FOSCs);

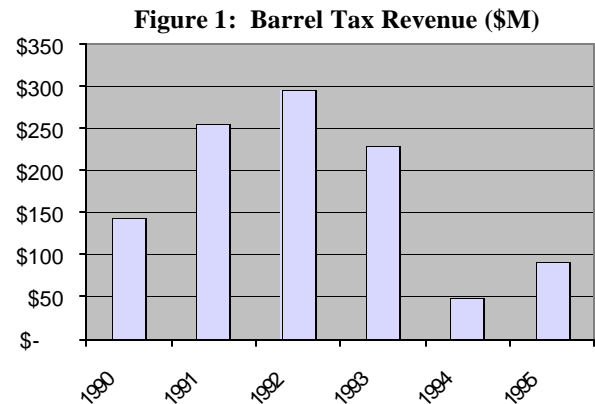
- Payments to Federal, state, and Indian tribe trustees to conduct Natural Resource Damage Assessments (NRDAs) and restorations;
- Payment of claims for uncompensated removal costs and damages; and
- Administrative, operational, and personnel costs and expenses incidental to implementation, administration, and enforcement of OPA and certain provisions of section 311 of the FWPCA (33 U.S.C. 1321).

C. Fund Revenue Sources

The OSLTF has several recurring and nonrecurring sources of revenue.

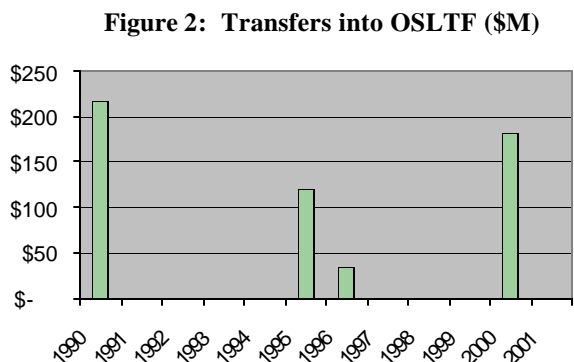
1. Barrel Tax

The largest source of revenue has been a 5¢ per barrel tax, collected from the oil industry on petroleum produced in or imported to the United States (Figure 1). The tax was suspended on July 1, 1993, because the un-obligated Fund balance exceeded \$1 billion (26 U.S.C. 4611(f)(2)). It was reinstated on July 1, 1994, when the balance declined below \$1 billion. The tax expired on December 31, 1994, pursuant to 26 U.S.C. 4611(f)(1).



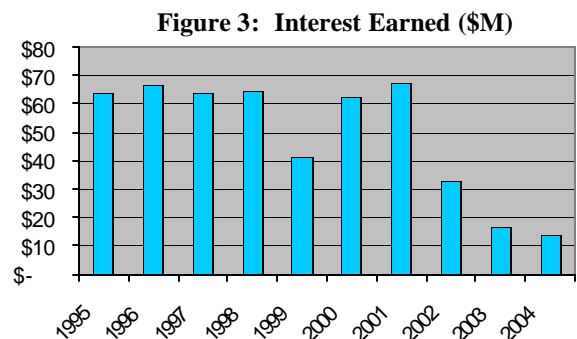
2. Transfers

A second major source of revenue has been transfers from other existing pollution funds (Figure 2). Total transfers into the Fund since 1990 have exceeded \$550 million. Over \$216 million in transfers from the Oil Pollution Fund, Offshore Oil Pollution Compensation Fund, and Deepwater Port Liability Fund were deposited into the Fund in 1990. The largest source has been the Trans-Alaska Pipeline Liability Fund (TAPS), which transferred \$335 million over the period 1995 to 2000. No additional funds remain to be transferred to the Fund.



3. Interest

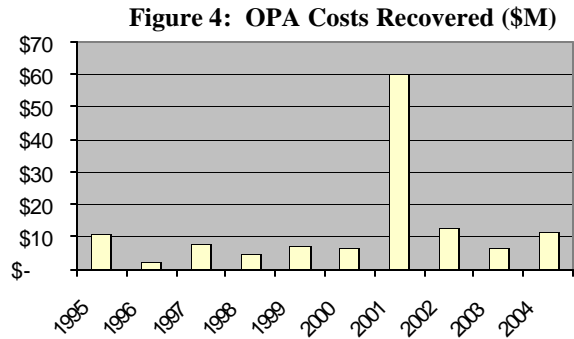
Currently, the largest ongoing source of OSLTF revenue is the interest on the Fund principal from U.S. Treasury investments (Figure 3). As a result of historically low interest rates, interest income has declined significantly in recent years, falling to \$13.5 million (or 45% of revenue) in FY 2004. The Department of the



Treasury serves as the Fund's investment manager.

4. Cost Recoveries from Responsible Parties

A fourth source of revenue is cost recoveries from responsible parties (RPs). Those responsible for oil incidents are liable for costs and damages. The NPFC has a billing and collection program to recover costs expended by the Fund. Figure 4 shows cost recoveries for FY 1995 to FY 2004, which usually fluctuate between \$3 million and \$12 million per year. The unusually high collections in FY 2001 resulted from a large settlement in respect to the 1994 *T/B MORRIS J. BERMAN* oil spill.



NPFC collected 27% of the OSLTF removal and claims expenditures made during the period FY 1995 to FY 2004 as shown in Figure 5. There are several barriers to achieving a higher rate of recovery. Often, the FOSC is unable to identify the source of the spill or identify a responsible party. The prospect of successful cost recovery for a Federal Project involving an onshore facility is generally low. Many Federal projects arise from legacy environmental problems associated with aging infrastructure such as leaking underground storage tanks, abandoned pipelines, leaking oil wells, and abandoned oil production facilities.

Unfortunately, in many instances like these, the government cannot collect because of lack of sufficient evidence to litigate successfully or otherwise compel the RP to pay, or because the RP is bankrupt, deceased, or otherwise unable to pay. These projects are typically complex and costly, often involving removal over a period of years as action is taken to clean up soil and groundwater that is discharging to navigable waters.

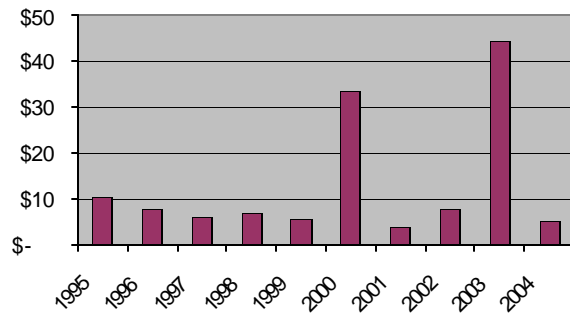
**Figure 5: Removal and Claims Expenditures vs. Cost Recovered (\$M)
FY 1995 – FY 2004**



5. Penalties

Penalties paid pursuant to section 311 of the FWPCA, section 309(c) of the FWPCA for violations of section 311, the Deepwater Port Act of 1974, and section 207 of the Trans-Alaska Pipeline Authorization Act are required to be deposited into the Fund. Penalty deposits are generally between \$4 million and \$7 million per year, with two very large penalties deposited to the Fund in FY 2000 and FY 2003 (Figure 6).

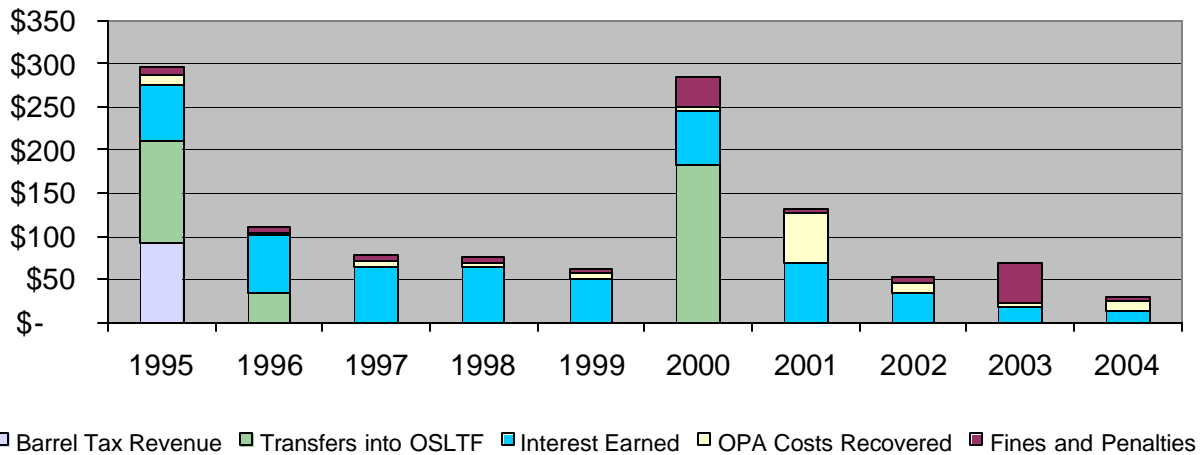
Figure 6: OSLTF Penalty Collections (\$M)



6. Summary of Revenues

A summary of OSLTF revenues can be found in Figure 7.

Figure 7: Summary of OSLTF Revenues (\$M)



D. Fund Expenses

1. The Emergency Fund

To ensure rapid, effective response to oil spills, OPA Section 6002 provides that the President has the authority to make available from the OSLTF, without further appropriation, up to \$50 million each year to fund removal activities and initiate Natural Resource Damage Assessments (NRDAs). Funds not used in a fiscal year are carried over to subsequent fiscal years and remain available until expended. To the extent that \$50 million is inadequate,

authority was granted under Section 323 of the Maritime Transportation Security Act (MTSA) of 2002 to advance up to \$100 million from the OSLTF to fund removal activities. This provision has not been utilized to date.

2. Removal Activities

The OSLTF provides funding for oil pollution removal activities when oil is discharged into the navigable waters, adjoining shorelines, and the exclusive economic zone of the U.S. Funding is also provided to prevent or mitigate the substantial threat of such an oil discharge. The Emergency Fund may be used for, but is not limited to, containing and removing oil from water and shorelines, preventing or minimizing a substantial threat of discharge, and monitoring the removal activities of RPs. Examples of removal costs include the cost of:

- Contract services (e.g., cleanup contractors),
- Equipment used in removals,
- Chemical testing required to identify the type and source of oil,
- Proper disposal of recovered oil and oily debris,
- Costs for Government personnel and temporary Government employees hired for the duration of the spill response, and
- Completion of documentation.

The USCG has responsibility for removal actions in the coastal zone, while EPA has responsibility in the inland zone. Figures 8 and 9 show the number of new cases opened and the corresponding dollar amounts for USCG and EPA removal actions. It is important to note that these cases do not represent all cases where oil is spilled, but only those incidents where the OSLTF was accessed.

Figure 8: USCG vs. EPA Cases

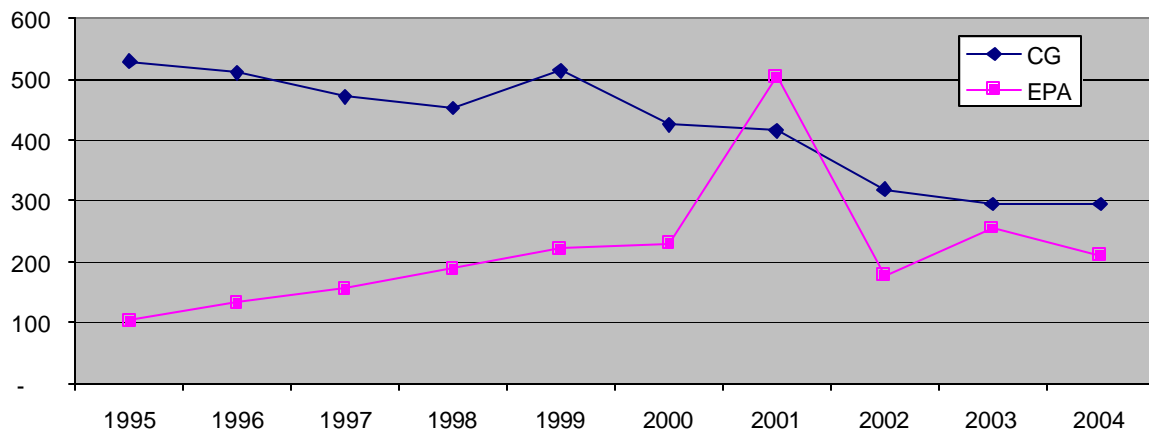
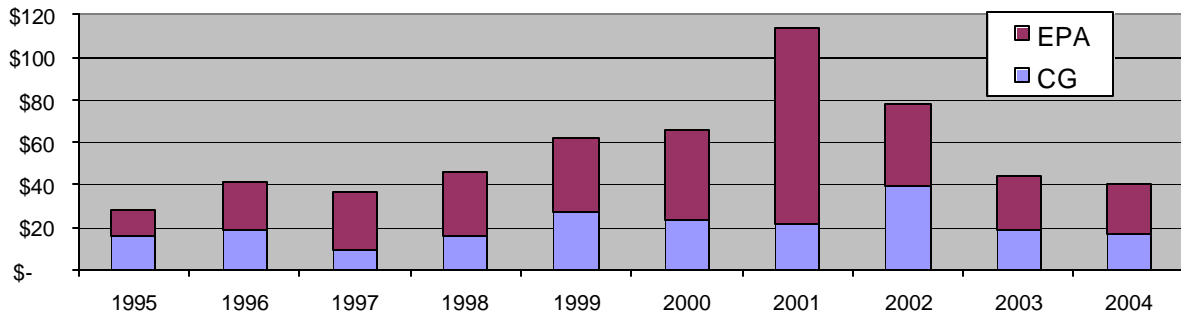


Figure 9: OSLTF Response Funds Assigned (\$M)



The EPA cases are generally removal actions occurring at onshore facilities. There are several apparent reasons for the significant number and cost of spills from facilities. First, the vast oil production industry infrastructure is aging, including oil wells, refineries, leaking underground storage tanks, and pipelines. A great number of oil wells that were drilled (onshore and offshore) have been depleted and are now abandoned, most with no identifiable responsible party. Many of these pollution sites are 20 to 50 years old—pre-dating current state regulatory programs—and have not been properly maintained (Figure 10).

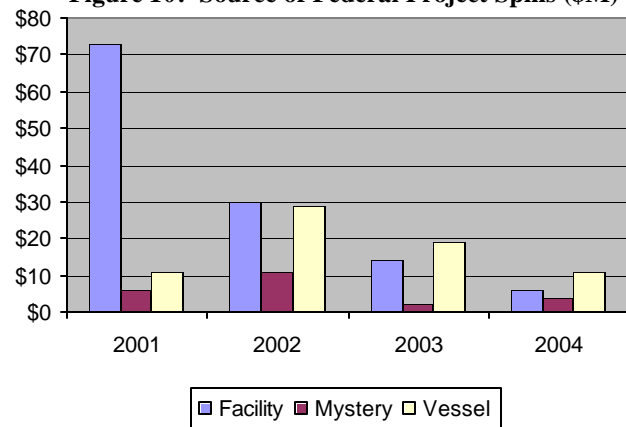
Second, a complex factor in the domestic oil production economy has been the wide cyclic swings in the price per barrel of crude oil. As a result, the domestic oil industry has produced a large number of marginal or non-viable oil well facilities that are “abandoned” when production is no longer economically viable, leaving behind a grim environmental legacy.

A third factor is that the vast majority of onshore oil-producing, -transporting, and -storing facilities that spill or threaten to spill are older facilities that do not have adequate insurance at the time of the spill. When no viable responsible party is identified or no insurance coverage is available, response costs are likely to be borne directly by the OSLTF Emergency Fund without effective recourse. OPA, as originally designed, did not anticipate the extent to which the OSLTF would be needed to address water pollution threats from aging, often derelict, land-based facilities.

Many of these same arguments are directly cited by and corroborated in a 2001 report to the President by the National Energy Policy Development Group (National Energy Policy Development Group, *Reliable, Affordable, and Environmentally Sound Energy for America’s Future*, May 2001, p. 3-10).

“Mystery spills,” or spills for which a responsible party cannot be identified, also have a sustained impact.

Figure 10: Source of Federal Project Spills (\$M)



3. NRDA Initiate Requests

The Emergency Fund is also available to pay for the Initiation of Natural Resource Damage Assessments (INRDAs) conducted by designated Federal natural resource trustees. In the pre-assessment phase, outlined in 15 CFR 990, Subpart D, trustees must determine jurisdiction, undertake preliminary data collection, assess the effectiveness of the response, identify feasible restoration measures, and provide a notice of intent to conduct restoration planning. The NPFC and the Federal Lead Administrative Trustee (FLAT) execute an Inter-Agency Agreement (IAG) for each OPA incident requiring funds for pre-assessment phase activities. Natural resource trustees include authorized representatives of the U.S. Departments of Commerce (NOAA), Interior, Defense, Agriculture, and Energy, as well as states, Indian tribes, and foreign trustees. Pursuant to Executive Order 12777, amounts to initiate assessment are available exclusively to the five Federal trustees, who may further allocate funds among all other affected trustees. Initiates have not had a significant impact on the OSLTF. Figure 11 shows the cost of all initiates has totaled \$3.6 million since the Fund's inception.

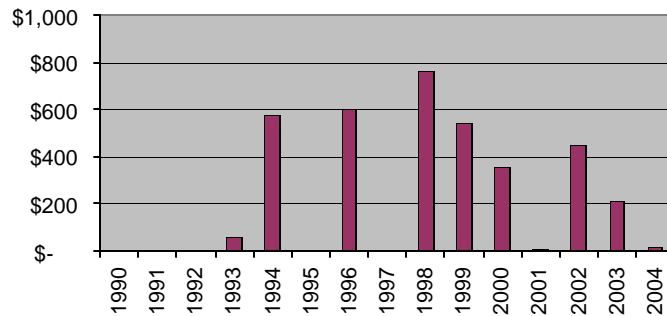
4. Claims

OPA provides that any person or government may present a claim for compensation for removal costs or damages resulting from an oil pollution incident covered by the Act. Claims can be presented for:

- Uncompensated Removal Costs,
- Natural Resource Damages,
- Damage to Real or Personal Property,
- Loss of Profits and Earning Capacity,
- Loss of Subsistence Use of Natural Resources,
- Loss of Government Revenues, and
- Increased Cost of Public Services.

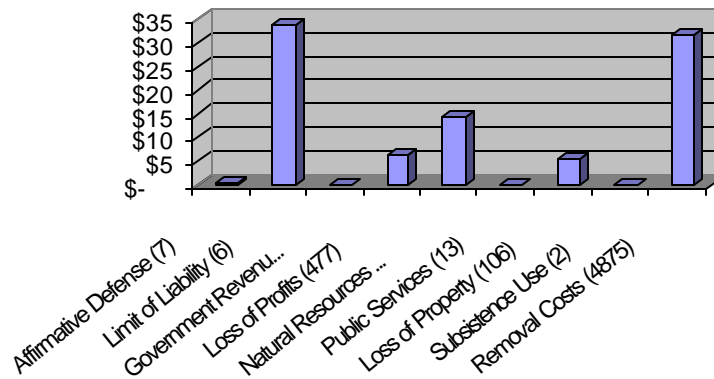
Some claims may incorporate many different types of damages, and there are instances in which the responsible parties and/or their guarantors may file claims for removal and damage costs they incurred. RPs may submit defensive claims, alleging an “act of God,” “act of war,” or “sole fault of a third party.” RPs may also submit limit-of-liability claims, in which the RP demonstrates that the OPA liability limit applies and that it incurred removal costs in excess of the applicable limit. While the total number of claims from RPs requesting reimbursement for costs expended in excess of their liability limits is low (six from 1992 to

Figure 11: OSLTF Payments for INRDAs (\$K)



2004), the total cost of these claims represents the largest dollar value of all claim types (Figure 12).

Figure 12: Claims Paid by Types (\$M) FY 1992 - FY 2004



To centralize the OSLTF claims process, the President delegated authority to pay claims from the OSLTF to the Secretary of the Department in which the Coast Guard is operating. Upon re-delegation by the Secretary, the Commandant of the Coast Guard further delegated that authority to the NPFC on March 12, 1992. The NPFC's claim procedures attempt to strike a reasonable balance between the objectives of compensating deserving claimants and acting as a fiduciary for the Fund. Before claimants can be compensated, they must satisfy the statutory requirements of OPA. The incident must involve a discharge of oil or a substantial threat of a discharge of oil from a vessel or facility into the navigable waters, adjoining shorelines, or the exclusive economic zone of the U.S. The removal actions for which costs are claimed must be consistent with the National Contingency Plan (NCP), and the claim must be submitted within express time periods (generally three years for damages, six years for removal costs).

The most common claim type received by the NPFC is removal cost claims. These claims may be presented by any person who has incurred costs for removal actions that are consistent with the NCP. Removal cost claimants include state governments, putative RPs who can show that the oil came from another source, cleanup contractors who have not been paid by the hiring RP, and members of the public who have discovered a spill and responded to the need for cleanup. Most of the removal cost claims presented to the NPFC are state claims.

A claimant must claim a damage or removal cost compensable under OPA and must have first presented the claim to the RP or guarantor except in certain circumstances. Two exceptions to this are that state governments may present claims for uncompensated removal costs directly to the NPFC, and claimants may present removal or damage claims directly to the NPFC if there is no known RP. Other exceptions allow a claim to be presented directly to the Fund when the Fund advertises for such claims or when an RP presents a claim based on an OPA defense or liability limit.

5. Agency Appropriations

Several Federal agencies receive annual appropriations from the OSLTF to cover certain administrative, operational, personnel, enforcement, and research and development costs as authorized in OPA and as delegated by Executive Order 12777 (Table 1). Agency responsibilities for carrying out OPA requirements include regulation, administration and enforcement of changes in vessel construction; tighter controls on licensing and manning; new requirements for vessel and facility operations and response planning; stricter liability and compensation requirements including increased financial responsibility, management of the OSLTF, compensation to claimants, and cost recovery from responsible parties; and improved cooperative relationships among responding agencies and oil industry stakeholders, including periodic drills and implementation of changes to the National Contingency Plan, Area Contingency Plans and National Response System.

Table 1: Agency OSLTF Appropriations (\$K)

Agency	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
United States Coast Guard	\$ 48,500.0	\$ 48,393.3	\$ 48,437.0	\$ 48,184.8	\$ 52,000.0
Environmental Protection Agency	\$ 14,974.4	\$ 14,967.0	\$ 15,000.0	\$ 14,479.7	\$ 16,113.4
DOI Minerals Management Service	\$ 6,118.0	\$ 6,104.5	\$ 6,105.0	\$ 6,065.3	\$ 7,017.5
Commerce	\$ -	\$ 5,000.0	\$ -	\$ -	\$ -
DOT Research and Special Programs Admin.	\$ 5,479.0	\$ 7,471.5	\$ 4,864.0	\$ 7,423.4	\$ 12,923.3
Treasury	\$ 2.1	\$ 22.3	\$ 41.0	\$ 40.0	\$ 40.0
Prince William Sound Oil Spill Recovery Institute	\$ 982.3	\$ 1,203.4	\$ 1,147.3	\$ 924.1	\$ 880.1
Denali Commission	\$ 5,476.0	\$ 11,360.9	\$ 11,360.9	\$ 2,486.9	\$ 4,273.7
Totals	\$ 81,531.8	\$ 94,522.9	\$ 86,955.1	\$ 79,604.2	\$ 93,247.9

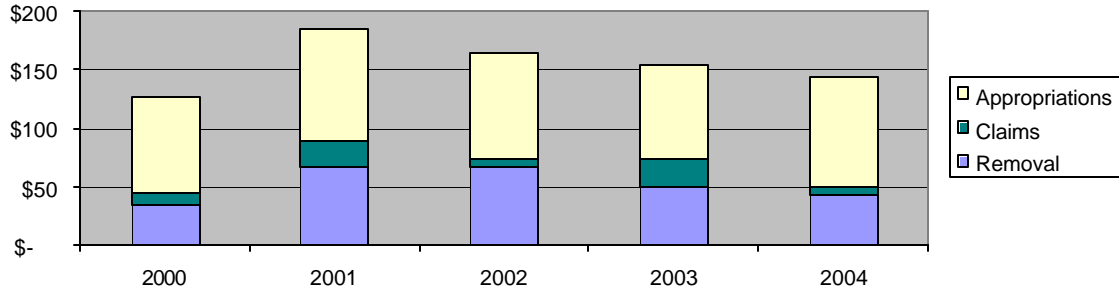
In FY 1997, Congress amended OPA to provide funding for the Prince William Sound Oil Spill Recovery Institute (OSRI) from the interest earned on \$22.5 million of Trans Alaska Pipeline Liability Fund (TAPS) monies previously transferred to the OSLTF (P.L. 104-324, sec 1102(b), Oct 19, 1996, 110 Stat. 3965). Pursuant to the Coast Guard and Maritime Transportation Act of 2004 (P.L. 108-293, section 704, August 9, 2004), interest funding for OSRI is to continue until 2012, at which time the \$22.5 million shall thereafter be made available for purposes of OPA section 1012 in Alaska.

A similar Congressional action provided funding to the Alaska Denali Commission starting in FY 2000 and continuing indefinitely. The funding is the interest earned on the final \$182 million transferred to the OSLTF from the TAPS Fund. Omnibus Appropriations Act of 1999 (P.L. 105-277, Title III section 329) (note at 43 USC 1653). Section 329(a) of that Act provides that *notwithstanding any other provision of law*, the remainder of the balance of the TAPS liability fund transferred under authority of OPA 8102(a)(2) to the OSLTF after June 16, 1998, shall be used in accordance with this section. Section 329(b) provides that the interest from the amount so transferred and deposited to the OSLTF after June 16, 1998, shall be transferred annually by the NPFC to the Denali Commission to be used to repair or replace bulk fuel storage tanks in Alaska that are not in compliance with Federal or state law (in accordance with a program developed in consultation with the Coast Guard). There is no statutory end date for this funding mechanism.

6. Summary of Expenses

The OSLTF expenses are comprised of oil spill responses/removals, claims, and annual appropriations to Federal agencies (Figure 13).

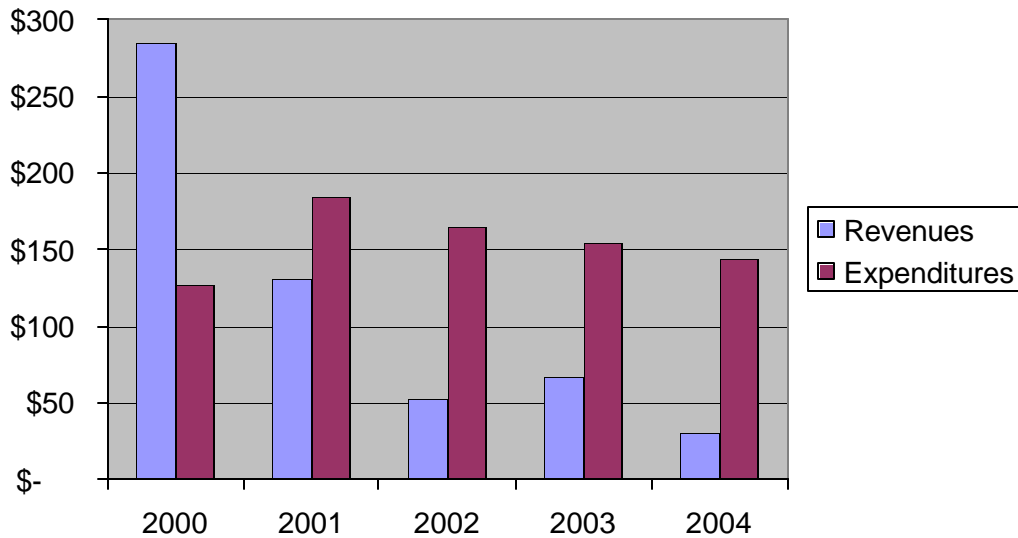
Figure 13: Summary of OSLTF Expenses (\$M)



7. Comparison of Revenues and Expenses

Figure 14 compares the incoming revenues to the outgoing fund expenditures in the OSLTF for FY 2000 to FY 2004. In FY 2004, expenses exceeded revenues by \$113 million.

Figure 14: Comparison of OSLTF Revenue and Expenses (\$M)



E. Fund Projections

Based on historical trends and recent Fund projections, we anticipate that an average decline of \$200 million per year will occur and that the Fund could be completely depleted by FY 2009. Figures 15, 16, and Table 2 provide Fund projections through FY 2009. The assumptions upon which the forecast is based are summarized below.

1. OSLTF Revenue Assumptions

- Cost recovery income is based on historical rates and expected trends. Collections in FY 2004 were above average; no large recoveries are currently pending.
- Penalty income is based on historical rates.
- Interest on investments is based on an anticipated 2.0% Treasury investment rate applied against the previous year's ending balance.

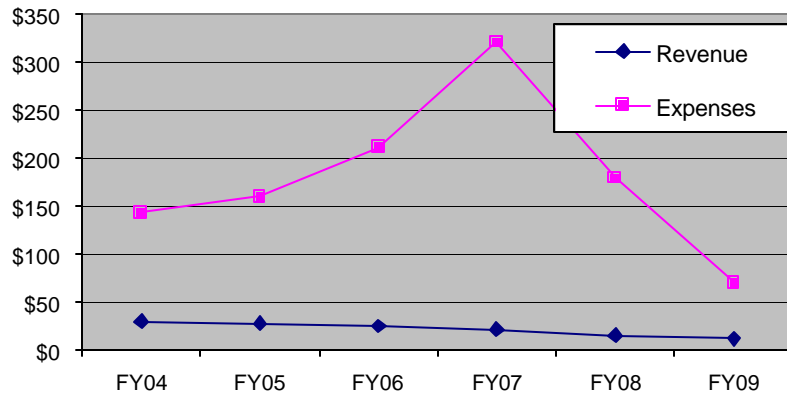
2. OSLTF Expense Assumptions

- FY 2005 to FY 2009 expenses have been straight-lined and do not reflect the potential for a spill of national significance or the potential appropriations/Fund use conflicts discussed below.
- Emergency Fund expenses are based on recent expenditure trends.
- Emergency Fund prior year obligations are current as of FY 2004 but will be expended over the next three years based on past trends.
- Forecasts of paid claims are based on past trends, claims pending, and trustee information about potential future natural resource damage (NRD) claims. In general, we are forecasting significant increases from responsible parties and NRD claims from trustees. The FY 2007 forecast includes anticipated large claims from the *ATHOS I*, *SELENDANG AYU*, and the *NEW CARISSA*.
- Transfers to USCG, EPA, DOI, DOT, and Treasury remain at FY 2005 levels throughout the forecast, consistent with recent history.

3. Potential Appropriations/Funds Use Conflicts

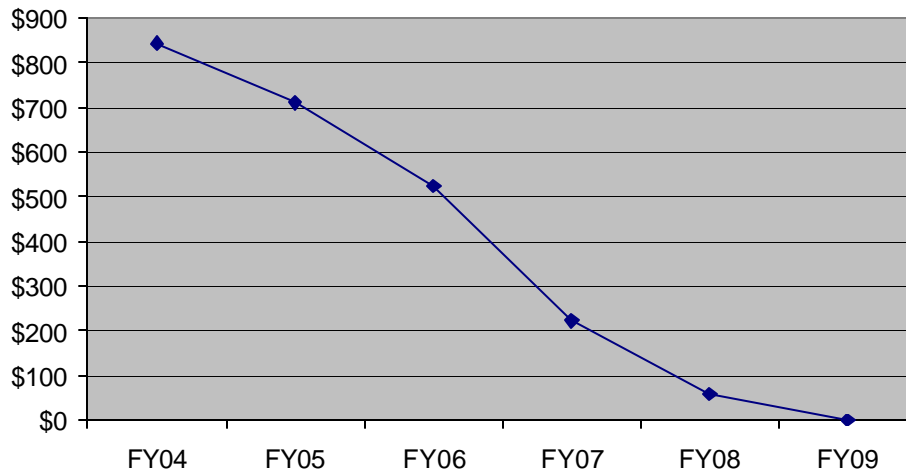
By FY 2007, we anticipate conflicts between various Fund uses. Therefore, one or more uses may not be fully covered by the Fund. The conflict arises because the total of the anticipated FY 2007 expenses, plus the Fund balance of \$204.5 million that generates interest payments for OSRI and Denali, plus the balance that may be available from prior years in the Emergency Fund exclusively for response and to initiate natural resource damage assessments, is expected to exceed the FY 2006 end-of-year balance. Anticipated revenue is inadequate to make up the shortfall. At this point, the Fund may be unable to fully support all anticipated uses.

Figure 15: Comparison of Projected Revenue and Expenses (\$M)



An average deficit of \$200 million is projected to occur between FY 2004 and FY 2009. The Fund is expected to be depleted by FY 2009, at which time revenues and expenses would fall to zero.

Figure 16: Projected Fund Balance (\$M)



The Fund is expected to expire by FY 2009. Conflicts in expenditures, as discussed above, are expected in FY 2007.

**Table 2: Oil Spill Liability Trust Fund Projections (\$M)
FY 2004 - FY 2009**

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Revenues:	<i>Actual</i>	<i>Forecast</i>	<i>Forecast</i>	<i>Forecast</i>	<i>Forecast</i>	<i>Forecast</i>
Barrel Tax	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cost Recoveries	\$ 11.7	\$ 6.0	\$ 6.0	\$ 6.0	\$ 6.0	\$ 6.0
Penalties	\$ 4.9	\$ 4.5	\$ 4.5	\$ 4.5	\$ 4.5	\$ 4.5
Interest on Investments	\$ 13.5	\$ 16.9	\$ 14.2	\$ 10.5	\$ 4.5	\$ 1.2
Transfers in (TAPS)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Revenue	\$ 30.0	\$ 27.4	\$ 24.7	\$ 21.0	\$ 15.0	\$ 11.7
Expenses:						
Emergency Fund (EF)	\$ 43.1	\$ 50.0	\$ 50.0	\$ 50.0	\$ 50.0	\$ 50.0
Claims	\$ 7.0	\$ 20.0	\$ 70.0	\$ 180.0	\$ 38.0	\$ 19.7
OSRI (earmark)	\$ 0.9	\$ 1.0	\$ 1.0	\$ 1.0	\$ 1.0	\$ -
Denali (earmark)	\$ 4.3	\$ 4.0	\$ 4.0	\$ 4.0	\$ 4.0	\$ -
Transfer to CG (approps)	\$ 52.0	\$ 46.5	\$ 44.5	\$ 44.5	\$ 44.5	\$ -
Transfer to EPA (approps)	\$ 16.1	\$ 16.0	\$ 16.0	\$ 16.0	\$ 16.0	\$ -
Transfer to DOI (approps)	\$ 7.0	\$ 7.1	\$ 7.1	\$ 7.1	\$ 7.1	\$ -
Transfer to other DOT (approps)	\$ 12.9	\$ 15.0	\$ 19.0	\$ 19.0	\$ 19.0	\$ -
Transfer to Treasury (approps)	\$ 0.04	\$ 0.06	\$ 0.06	\$ 0.06	\$ 0.06	\$ -
Total Expenses	\$ 143.4	\$ 159.7	\$ 211.7	\$ 321.7	\$ 179.7	\$ 69.7
FY Net Change - Revenue less Expenses	\$ (113.3)	\$ (132.3)	\$ (187.0)	\$ (300.7)	\$ (164.7)	\$ (58.0)
Projected EOY Fund Asset Balance	\$ 842.7	\$ 710.3	\$ 523.4	\$ 222.7	\$ 58.0	\$ (0.0)

F. Adequacy of Liability Limits

1. The Law

Under section 1004 of OPA (33 U.S.C. 2704), a responsible party's (RP's) liability for removal costs and damages is limited, unless the incident is caused by gross negligence or willful misconduct or is the result of violation of an applicable Federal regulation. The liability limit for a vessel spill is based on a formula that considers the vessel tonnage and whether the vessel is a tank vessel (ship or barge) or non-tank vessel. Liability limits for onshore facilities, offshore facilities, and deepwater ports are set at established amounts. If an RP pays or incurs removal costs or damages in excess of an applicable liability limit, the RP may present a claim to the OSLTF for compensation of the excess amount (OPA section 1008 (33 U.S.C. 2708)).

2. Consumer Price Index (CPI) Adjustments

OPA liability limits have not been adjusted for inflation since OPA was enacted. The authority to adjust liability limits for inflation pursuant to OPA section 1004(d)(4) was delegated by the President to various agencies in section 4 of Executive Order 12777, October 18, 1991, and would be accomplished through regulation. The Coast Guard has not been delegated, but is in the process of, requesting this authority.

3. Limit of Liability Claims Paid and Pending from Responsible Parties

To date, the NPFC has received seven RP claims based on entitlement to a limit on liability in connection with vessel oil spills. The NPFC has so far paid a total of \$36.3 million to RP claimants. An additional \$52.4 million claimed by RPs for the seven incidents is still under adjudication, and the amounts to be paid have not been finalized.

To gain a better appreciation of these seven incidents, we have broken them down by vessel type as follows:

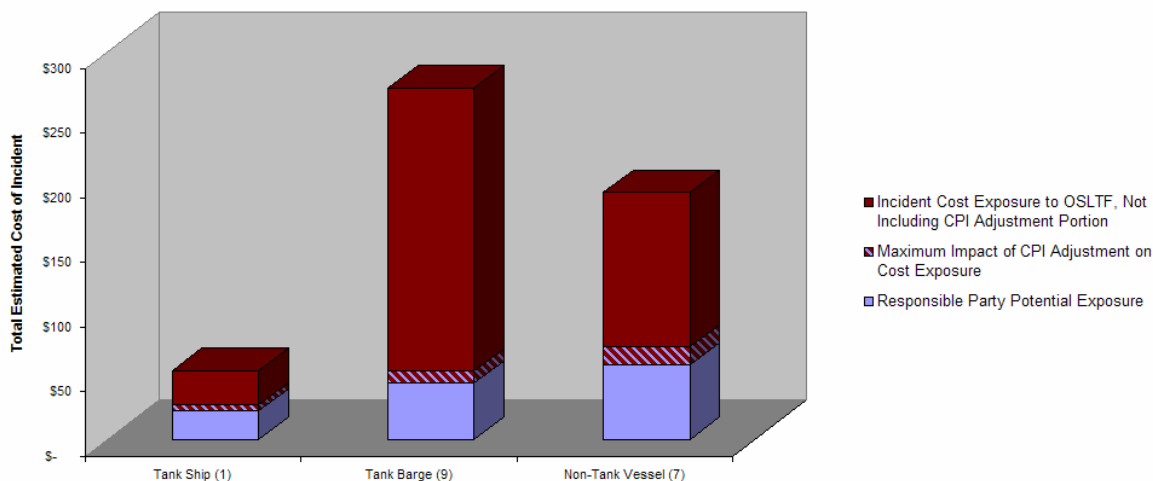
- **Tank Ship** – One incident resulted in payments totaling \$18.5 million with an additional \$11 million in claims pending.
- **Tank Barge** – Four incidents resulted in payments of \$17.7 million with an additional \$2 million in claims pending.
- **Non-Tank Vessel** – Two incidents have resulted in pending claims of \$39.3 million.

4. Potential OSLTF Exposure for Limit of Liability Claims

Figure 17 is a compilation of incident costs for 17 incidents between FY 1993 and FY 2004 where the costs of the incident are known to have exceeded limits of liability. All of these incidents involved vessel spills. Seven of these 17 incidents generated claims, which are described above. Claims have not been submitted in the remaining ten incidents for various reasons (e.g., criminal liability, DOJ settlement, or gross negligence and/or violation of Federal regulation, for which limits of liability would not apply). While most of the incidents have not generated claims, the information regarding known costs does help provide a more robust analysis of the overall costs and risk of exposure to the Fund with regard to vessel limits to liability. Figure 17 illustrates the relative risk of exposure to the Fund resulting from significant incidents by the different types of vessels.

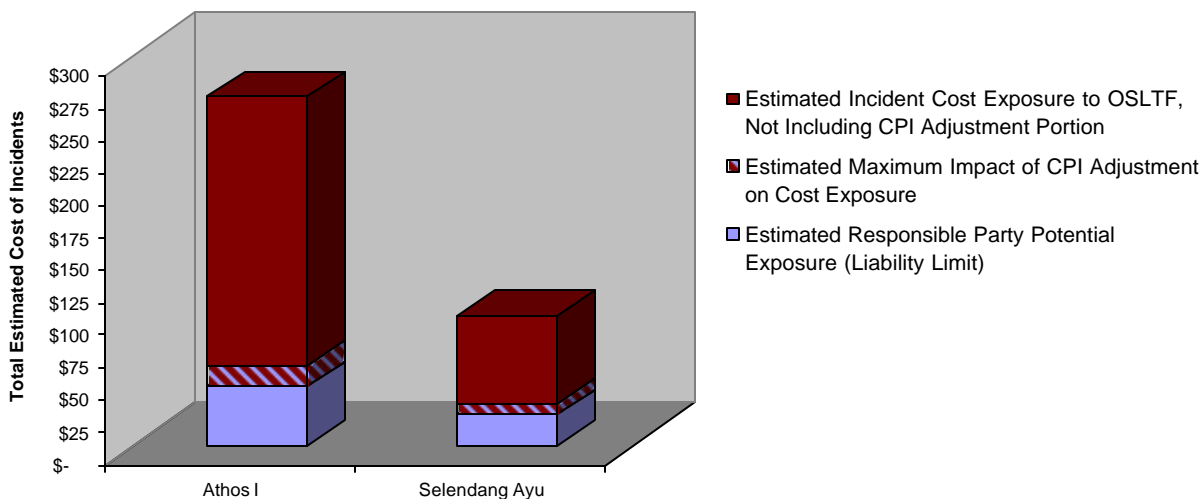
In Figure 17, the potential exposure or projected cost of the 17 incidents between FY 1993 and FY 2004 is separated by vessel type as represented by separate bars. Each bar is divided into three components that illustrate who would have borne the cost if limits of liability had been applied in each of the incidents. The bottom section of each bar represents what the responsible parties' cost share would be by vessel type if limits of liability applied for all 17 incidents. The cross-hatched shading represents the incremental increase to liability limits had the limits been adjusted to reflect significant increases in the Consumer Price Index as provided in OPA section 1004(d)(4) (33 U.S.C. 2704(d)(4)); the Fund bears the risk of this crosshatched area, rather than RPs, until liability limits are adjusted for inflation. The top section of each bar illustrates the Fund's additional potential exposure for the incident costs had limits of liability applied.

**Figure 17: OSLTF Potential Exposure of Claims from Responsible Parties (\$M)
(17 Incidents between FY 1993 and FY 2004)**



Two incidents that occurred near the beginning of FY 2005 provide a more current representation of OSLTF exposure from limits of liability for responsible parties (Figure 18). The *SELENDANG AYU* is a cargo vessel that broke up off of the Aleutian Islands; and the *ATHOS I* is a single-hulled tank ship that struck an object, resulting in an oil spill in the Delaware River. Although response to both incidents is still ongoing and total costs are merely projected, the graph below shows how costs would be attributed assuming limits are held for the vessels and how much the exposure would have shifted from the Fund to the responsible parties had the limits been adjusted for CPI through 2004. The middle bars plus the dark upper portion represent the current exposure to the Fund. The bottom portion of the bar represents the responsible parties' current exposure.

Figure 18: OSLTF Potential Exposure of Claims from Recent Large Spills



Based upon the graphical representation of estimated financial exposure for major incident costs by vessel type depicted in Figure 17, two observations stand out regarding limits of liability as they relate to risk or exposure to the Fund. First, as indicated by the crosshatched portion of each bar, adjustments to liability limits for inflation would reduce the risk to the

Fund, but the reduction would be limited. Second, spills from tank barges and non-tank vessels can result in significant removal cost and damages, and the Fund's share of the risk given current liability limits for such vessels is greater by several magnitudes than the risk to the RPs. Although only two spills by a tank ship have exceeded their liability limit since 1992, at least nine spills by tank barges and eight by non-tank vessels have done so, with the Fund at risk for costs up to four times the liability limit.

G. Impacts of OSLTF Decline

A principal purpose of the Fund is to ensure the President has the resources to respond when oil discharges or substantially threatens to discharge to navigable waters, adjoining shorelines, and the exclusive economic zone. If the Fund is exhausted, the \$50 million now made available from the Fund annually will no longer be available and the President will not have the resources readily available for response.

Table 3 shows the distribution, by state, of OSLTF response funds over the past eight years. Every state, the District of Columbia, the Commonwealth of Puerto Rico, and the various Territories administered by the Department of the Interior have received Federal response and OSLTF funding for oil spills. All continue to be at risk for oil spills. Without the OSLTF, states would have to provide funds for these highly visible emergency events.

**Table 3: Oil Spill Response Funds by State (\$K)
FY 1997 - FY 2004**

State/Territory	Total	State/Territory	Total	State/Territory	Total
Alabama	1,667.4	Kentucky	21,796.8	Ohio	11,385.8
Alaska	16,597.2	Louisiana	100,397.5	Oklahoma	11,097.8
American Samoa	17,605.6	Maine	1,977.1	Oregon	9,941.3
Arizona	530.0	Maryland	10,159.5	Pennsylvania	10,782.2
Arkansas	1,291.5	Massachusetts	7,096.7	Puerto Rico	4,187.1
California	40,334.3	Michigan	13,009.9	Rhode Island	999.0
Colorado	994.3	Minnesota	35.2	South Carolina	1,594.4
Connecticut	4,751.3	Mississippi	2,371.1	South Dakota	85.0
Delaware	744.0	Missouri	1,118.7	Tennessee	3,640.3
District of Columbia	83.2	Montana	837.8	Texas	9,932.7
Florida	16,448.4	Nebraska	1,662.2	Utah	620.6
Georgia	4,210.5	Nevada	110.0	Vermont	440.0
Guam	4,944.0	New Hampshire	1,294.2	Virgin Islands	197.5
Hawaii	4,962.3	New Jersey	2,381.3	Virginia	1,323.7
Idaho	2,472.1	New Mexico	231.3	Washington	5,160.5
Illinois	10,291.3	New York	7,287.3	West Virginia	8,409.5
Indiana	5,819.2	North Carolina	1,656.9	Wisconsin	104.1
Iowa	2,076.8	North Dakota	117.5	Wyoming	349.1
Kansas	10,317.0	Northern Marianas	50.0		

Alaska, California, Florida, and Louisiana are big coastal states with significant oil transport and production. It follows that they have many spills that require Federal funds. Illinois, Kansas, Kentucky, Oklahoma, and West Virginia are the site of significant abandoned oil production wells and facilities whose cleanup is being funded by the OSLTF. Thirty-nine states (out of 56 states, territories, and possessions) had combined OSLTF costs that exceeded \$1 million during this period (FY 1997-FY 2004). Clearly, the Federal response mechanism, the National Contingency Plan, and the OSLTF provide a significant benefit to all states, which assume the

operational and financial burden of responding to oil spills to their navigable waters and shorelines.

In the event the OSLTF were depleted, the President would still have the statutory responsibility under the Federal Water Pollution Control Act (FWPCA) to respond to oil spills. However, without a viable funding mechanism to pay for oil spill response, the government would find itself in the position it was in prior to the *T/V EXXON VALDEZ* spill in Prince William Sound, when the President had authority to respond but did not have adequate resources to do so.

Another major purpose of the Fund is to compensate third parties for removal costs and damages when polluters do not pay. If the Fund were exhausted, persons who have a right to compensation under OPA would be deprived of a ready source of compensation and would have to resort to more costly and time-consuming litigation against a non-paying responsible party. In passing OPA, Congress intended that injured persons would not have to resort to litigation in order to be compensated (House Report 101-653, August 1, 1990, p. 117). Further, in many instances responsible parties cannot be located or simply do not have the financial ability to pay claimants. Thus, in the absence of a viable Fund, claimants may have no effective means of compensation.

The largest category of claimants to the OSLTF is states, which submit removal cost claims for oil spills they alone respond to. These same state organizations are often part of the “first responders” community that DHS is committed to supporting.

Additionally, the Fund is the source for substantial annual appropriations to various agencies, principally the USCG and EPA. If the Fund were exhausted, Federal appropriations would have to come from other sources, or the activities financed from such appropriations would have to be reduced.

III. IMPLICATIONS OF CHANGING PHASE-OUT DATE OF SINGLE HULL TANK VESSELS

The Coast Guard was asked to outline the domestic and international implications of changing the phase-out date for single hull vessels pursuant to section 3703a of title 46, United States Code, from 2015 to 2010. Changing the single hull tank vessel phase-out date from 2015 to 2010 would vary depending on vessel gross tonnage, date of build, whether the vessel has a double bottom or double sides, and the vessel unloading location. In this report *domestic implications* are depicted in terms of reduced service life for U.S. single hull tank vessels, and *international implications* are depicted in terms of reduced service life for foreign single hull tank vessels trading to the U.S.

Overall, approximately 1,700 U.S. and 70 foreign single hull tank vessels would be affected and lose some service life in U.S. waters. The greatest impact would be on the U.S. tank barge fleet, where approximately 1,650 tank barges (representing 38% of the total tank barge fleet) would lose 5 years of service life. Detailed analyses are contained in paragraphs A through E below.

A. Single hull tank vessels less than 5,000 gross tons

Paragraph (c)(2) of section 3703a of title 46, United States Code, requires the phase-out of all single hull tank vessels less than 5,000 gross tons on January 1, 2015. Changing the phase-out date to January 1, 2010, would have the following implications:

Domestic implications: All U.S. tank vessels less than 5,000 gross tons would lose 5 years of service life. The vast majority of these tank vessels are barges, and they would be significantly impacted as reflected in Table 4:

Table 4. U.S. Tank Vessels less than 5,000 gross tons that would lose 5 years of service life

Number of Tank Vessels	Gross Tonnage (total)	Comments (based on gross tonnage)
1,648 tank barges	1,829,630 GT	<ul style="list-style-type: none">• represents 38% of total U.S. tank barge fleet• represents 47% of tank barges less than 5,000 GT
26 tank ships	11,181 GT	<ul style="list-style-type: none">• represents less than 1% of total U.S. tank ship fleet

International implications: Foreign tank vessels less than 5,000 gross tons do not generally trade to the U.S., so the implications in this area would be negligible. The available data indicates that less than 1% of all foreign tank vessels that traded to the U.S. in 2004 were less than 5,000 gross tons.

B. Single hull tank vessels of 5,000 gross tons and greater

Domestic implications: Paragraphs (c)(3) and (c)(4) of section 3703a of title 46, United States Code, already require the phase-out of all single hull tank vessels of 5,000 gross tons and greater on or before January 1, 2010. Therefore changing the phase-out date from 2015 to 2010 would not impact these U.S. single hull tank vessels.

International implications: The phase-out requirements in paragraphs (c)(3) and (c)(4) of Section 3703a of title 46, United States Code, which phase-out all single hull tank vessels of 5,000 gross tons and greater on or before January 1, 2010, also apply to foreign tank vessels trading to the U.S. Therefore changing the phase-out date from 2015 to 2010 would not impact these foreign tank vessels trading to the U.S.

C. Single hull tank vessels of 5,000 gross tons and greater, that have a double bottom or double sides

Domestic implications: Dependent on specific gross tonnage and date of build, U.S. single hull tank vessels that have a double bottom or double sides, built after January 1, 1980, would lose from 1 to 5 years of service life. The impact of this change is as reflected in Table 5:

Table 5. U.S. Tank Vessels 5,000 gross tons and greater (with double bottom or double sides)

OPA 90 Phase-out Year	Number of Tank Vessels	Gross Tonnage (total)	Comments (based on gross tonnage)
2011	5 tank ships	123,592 GT	<ul style="list-style-type: none"> • Would lose 1 year of service life • 5.2% of all tank ships above 5,000 GT
2012	3 tank ships	84,698 GT	<ul style="list-style-type: none"> • Would lose 2 years of service life • 3.6% of all tank ships above 5,000 GT
2013	1 tank barge 3 tank ships	23,913 GT 62,330 GT	<ul style="list-style-type: none"> • Would lose 3 years of service life • 2.6% of all tank ships above 5,000 GT
2014	1 tank ship	27,508 GT	<ul style="list-style-type: none"> • Would lose 4 years of service life • 1.2% of all tank ships above 5,000 GT
2015	1 tank ship	22,138 GT	<ul style="list-style-type: none"> • Would lose 5 years of service life • 0.9% of all tank ships above 5,000 GT

Note: % based on current U.S. tank ship fleet and assumes total U.S. tank ship fleet gross tonnage will remain approximately constant

International implications: Dependent on specific gross tonnage and date of build, foreign single hull tank vessels that have a double bottom or double sides, built after January 1, 1980, would lose from 1 to 5 years of trading life to the U.S. The impact of this change is as reflected in Table 6 (foreign tank vessels of 5,000 gross tons and greater that traded to the U.S. in 2004):

Table 6. Foreign Tank Vessels 5,000 gross tons and greater (with double bottom or double sides) that traded to the U.S. in 2004

OPA 90 Phase-out Year	Number of Tank Vessels	Gross Tonnage (total)	Comments (based on gross tonnage)
2011-2015	72 tank ships	3,152,317 GT	<ul style="list-style-type: none"> • Would lose 1-5 years of service life in US • 4% of all foreign tank ships trading to the U.S. in 2004

D. Single hull tank vessels unloading oil at a deepwater port (Louisiana Offshore Oil Port – LOOP)

Domestic and international implications: Paragraph (b)(3)(A) of section 3703a of title 46, United States Code, allows single hull tank vessels to unload oil at a deepwater port (licensed under the Deepwater Ports Act of 1974) until January 1, 2015. Therefore all single hull tank vessels trading to LOOP would potentially lose 5 years of service/trading life. However the MARPOL phase-out date for many of these single hull tank vessels is prior to January 1, 2015, which could reduce the impact if the U.S. phase-out date was changed to January 1, 2010.

E. Single hull tank vessels offloading oil within a lightering zone (60+ miles offshore)

Domestic and international implications: Paragraph (b)(3)(B) of section 3703a of title 46, United States Code, allows single hull tank vessels to unload oil within a lightering zone (established under section 3715(b)(5) of title 46, United States Code) that is more than 60 miles offshore, until January 1, 2015. Therefore all single hull tank vessels trading to a U.S. offshore lightering zone would potentially lose 5 years of service/trading life. However the MARPOL phase-out date for many of these single hull tank vessels is prior to January 1, 2015, which could reduce the impact if the U.S. phase-out date was changed to January 1, 2010.

IV. VESSEL MONITORING SYSTEMS AND AIDS-TO-NAVIGATION

The Coast Guard continuously studies and assesses the costs and benefits of requiring vessel monitoring systems on tank vessels used to transport oil or other hazardous cargo, as well as the risks attributed to marine navigation in U.S. waterways. As part of this effort, we work with industry to evaluate the impacts of technology to determine what technologies will be useful and cost-effective in order to reduce navigation risk. Technology that enables vessels to achieve greater situational awareness shows promise as being both cost effective and influential in reducing risk. One of these technologies is the Automatic Identification System (AIS).

A. Summary of Automatic Identification System (AIS)¹

The Coast Guard published a final rule as part of the Maritime Transportation Security Act of 2002 (MTSA) that requires the carriage of AIS on certain vessels. This includes domestic vessels in Vessel Traffic Service (VTS) areas and all vessels under the International Convention for the Safety of Life at Sea (SOLAS) in all waters. AIS integrates advanced technologies to automatically transmit and receive information from ships or shore stations in near real-time. By allowing automatic exchange of information, AIS increases situational awareness and permits more effective passing arrangements between ships and among ships and VTS. AIS contributes

¹ The Coast Guard published the final rule for AIS in the Federal Register in October 2003 (68 FR 60559). Readers can access and view the AIS final rule online through the Document Management System (DMS) under docket number USCG-2003-14757 at <http://dms.dot.gov>.

to the Coast Guard's homeland security mission by enhancing maritime domain awareness (MDA).²

AIS allows for inter-vessel exchange of information. The information includes name, location, dimensions, type, course, and speed. Vessels can integrate AIS with other systems, such as radar and electronic charting. To achieve the full potential of AIS, there must be universal application. The rule impacts over 3,400 domestic vessels, including the following:

- Vessels under SOLAS i.e., vessels on international voyages;
- All commercial, self-powered vessels of at least 65 feet in VTS areas;
- Passenger vessels that carry 150 passengers or more in VTS areas;
- All dredges and floating plants engaged in operations in VTS areas;
- Certain commercial towing vessels of at least 26 feet and over 600 horsepower in VTS areas; and
- Foreign-flagged vessels less than 300 gross tons (non-SOLAS) and greater than 65 feet in length that make ports of call in the United States in VTS areas.

Of the 3,400 U.S. vessels affected by this rule, 438 are SOLAS vessels on international voyages, and the balance were non-SOLAS vessels. AIS also had an impact on 70 foreign-flagged non-SOLAS vessels.

The estimated average cost of AIS is \$7,000 per unit. The estimated installation costs are \$2,000 per unit, annual maintenance costs are \$250 per unit, and mariner training costs are \$110 per mariner. The benefits of the rulemaking were calculated by examining vessel casualty cases contained in the Coast Guard's Marine Safety Management System (MSMS) database. The monetized benefits only include marine casualty cases that could have benefited from the use of AIS.

Using the above information, the discounted total cost of the rule implementing the AIS system was estimated to be \$49.3 million over the 10-year period of the analysis (Table 7). The SOLAS fleet would incur only \$5 million of this cost and the non-SOLAS domestic fleet would incur the remainder. We estimated the total present value of the benefit derived from the AIS rule to be \$24.4 million over the period of analysis. Although the monetized discounted benefit of this regulation is significantly lower than the discounted cost, the qualitative benefits of this system are believed to far outweigh the costs. For example, the monetized benefit does not account for the benefit of reducing vulnerability at U.S. ports.

² The Coast Guard's definition of maritime domain awareness is "the effective understanding of anything associated with global maritime environment that could impact the security, safety, economy, or environment of the United States."

Table 7: Summary of Quantifiable AIS Cost and Benefit for U.S. Flag SOLAS Vessels and Domestic Non-SOLAS Vessels in VTS Areas (2003–2012, 7 Percent Discount Rate, 2003 Dollars)

	U.S. Flag SOLAS Fleet*	Non-SOLAS Fleet in VTS Areas*	Total*
Benefit	\$13.3	\$11.1	\$24.4
Cost	\$5.2	\$44.1	\$49.3

*Benefit and cost presented in millions of dollars

If AIS carriage requirement was expanded to vessels that operate outside VTS areas, the total number of additional vessels affected would be approximately 19,000 U.S. vessels and more than 1,100 foreign-flagged vessels. The approximate cost of this expansion of AIS carriage requirement would be \$193 million (non-discounted) using the proportional costs estimated for the AIS rule. The benefits are unknown without a thorough evaluation of the casualty data.

B. Radar Beacons (RACONS)

The Coast Guard operates 113 RACONS or radar responders. The estimated cost of a RACON is \$40,000 per unit. A RACON is a receiver/transmitter transponder device. The benefit of a RACON is its ability to provide an identifying signature to landmarks or buoys on a shipboard radar display. When a RACON receives a radar pulse, it responds by transmitting a unique identifiable mark back to the radar set. The Coast Guard use RACONS for the following purposes:

- Identify aids to navigation, both seaborne and land-based e.g., buoys and lighthouses;
- Identify landfall or positions on inconspicuous coastlines;
- Identify navigable spans under bridges;
- Identify offshore oil platforms and similar structures;
- Identify and warn of environmentally sensitive areas such as coral reefs; and
- Mark new and uncharted hazards.

Currently, there are no indications that any marine casualty cases could have been avoided from additional RACONS.

C. Summary of Coast Guard Studies: (PAWSAs, PARS, and WAMS)

The Coast Guard regularly conducts waterway studies such as Ports and Waterways Safety Assessments (PAWSA), Port Access Route Studies (PARS), and Waterways Analysis and Management Studies (WAMS). In an average year, the Coast Guard performs two PAWSAs, two to three PARs, and about 300 WAMS.

PAWSAs are a tool to identify risks and provide mitigation measures in the nation’s ports and waterways. The Coast Guard involves stakeholders (e.g., professional mariners and industry) in the process. This provides the Coast Guard with more information concerning the environmental, public safety, and economic consequences of its actions. The ultimate purpose of PAWSA is not only to establish a baseline of ports for consideration for VTS, but to provide the

Captain of the Port (COTP) and port community with an effective tool to evaluate risk and work toward long-term solutions to mitigate these risks. The goal is to find solutions that are both cost effective and meet the needs of waterways users.

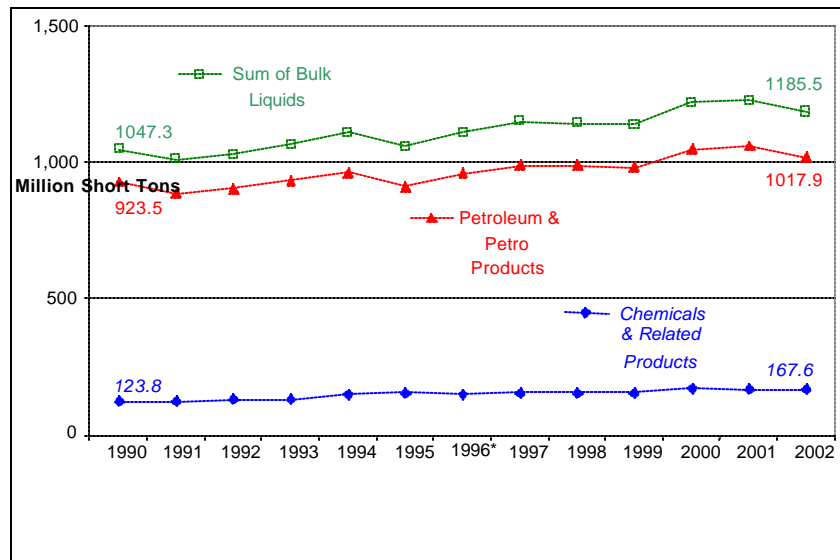
The Port and Waterways Safety Act of 1978 [PWSA, 33 U.S.C. 1223 (c)] requires that the Coast Guard conduct a PARS prior to establishing or adjusting a traffic separation scheme (TSS) or any other routing measure. A TSS is an internationally recognized measure that minimizes the risk of collision by separating vessels into opposing streams of traffic through the establishment of traffic lanes. The Coast Guard estimates the costs and benefits of these improvements. Waterways Analysis and Management Studies (WAMS) encompass all aspects of the marine thoroughfare to check the effectiveness of Coast Guard programs and resources. A typical WAMS will look at the physical dimensions of the channel, bridges, marine facilities, obstructions, traffic density and patterns, vessel size, and aids-to-navigation systems. As a result of a WAMS, the Coast Guard often makes navigational improvements such as increasing the number of aids to navigation.

V. SUMMARY OF TANK BARGE AND TOWING VESSEL SAFETY ISSUES

A. Marine Transportation of Petroleum

Waterborne transportation of petroleum, chemicals and related products in bulk continues to trend upward in the U.S. economy according to statistics compiled by the U.S. Army Corps of Engineers ending in 2002 (Figure 19).

Figure 19: Annual Statistics of Petroleum and Chemical Transportation within the U.S.



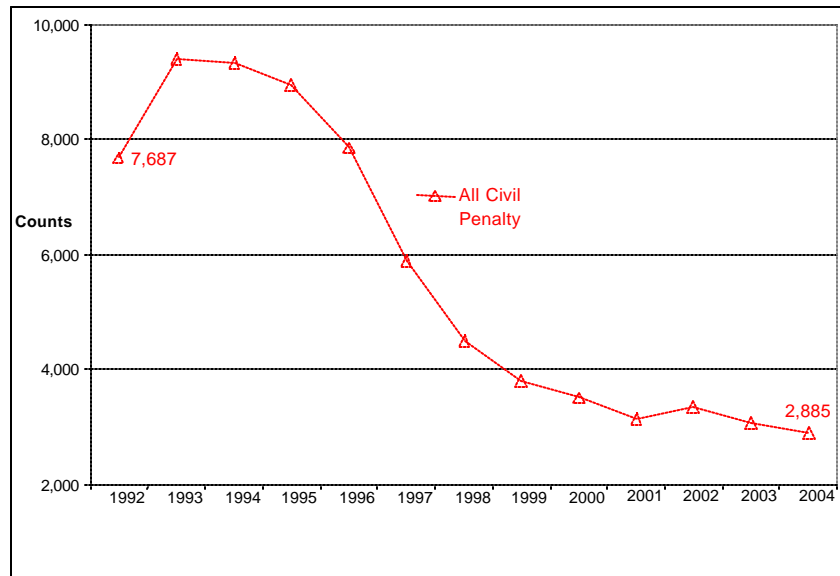
Source: Waterborne Commerce of the United States, National Summaries, Part 5 by the Department of the Army, Corps of Engineers, Institute for Water Resources. Data obtained from Table 1-5, Total Waterborne Commerce 1983-2002 by Commodity Group.

B. Pollution Statistics

1. Enforcement Actions³

The annual numbers of infractions of OPA 90 related regulations continue to decline. Figure 20 below illustrates this decline in the numbers of civil penalty actions taken by the Coast Guard, and reflect the increased and wide-spread compliance by industry.

Figure 20: Overall reduction in the Annual Infractions to OPA 90



The annual breakdown of the major sub-parts of the Code of Federal Regulations associated with the Act, as well as oil spills shows a decline in the number of incidents and improved compliance (Table 8).

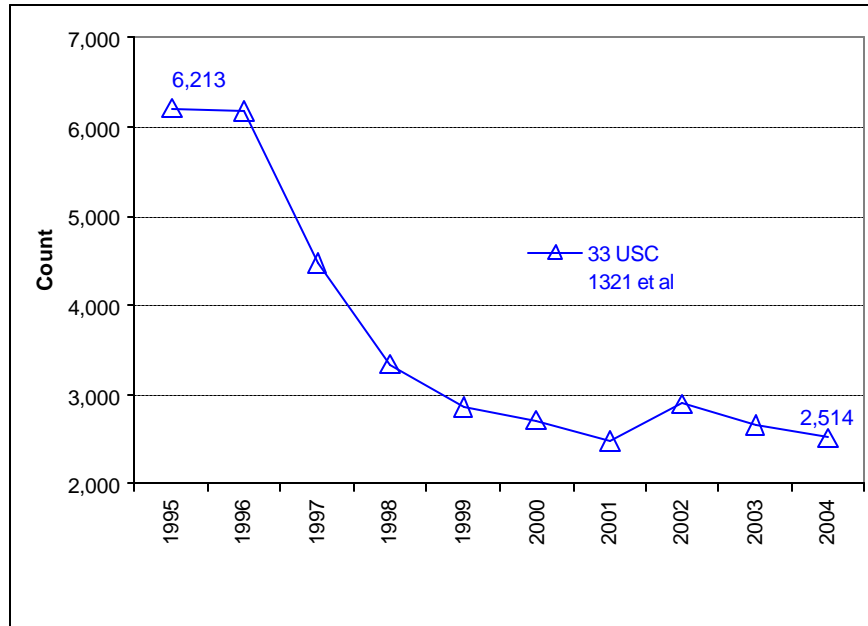
³ Source: U.S. Coast Guard MISLE-MARS 2.3 MSN Enforcement Offenses cube, data as of November 15, 2004. The MSN Enforcement Offenses Cube contains detail data on enforcement offenses that have been entered into the MSN application.

Table 8: Annual Decline of Infractions by Implemented OPA 90 regulations and for oil spills.

OPA'90 Regs	Vessel and Facility Operations					General
Calendar Years	33CFR 138 COFR	33CFR 153 General	33CFR 154 Facilities	33CFR 155 Vessels	33CFR 156 Xfer Ops	33USC§ 1321 Spills
1992	0	78	1,030	1,187	623	4,769
1993	0	72	1,598	1,432	818	5,499
1994	35	97	784	1,570	817	6,031
1995	48	53	723	1,208	709	6,213
1996	33	22	499	627	485	6,185
1997	32	24	443	469	427	4,484
1998	29	11	467	339	303	3,339
1999	17	38	312	269	294	2,860
2000	13	41	308	215	222	2,712
2001	5	16	241	194	194	2,478
2002	8	17	91	175	168	2,896
2003	6	11	74	224	95	2,651
2004	9	11	80	137	134	2,514

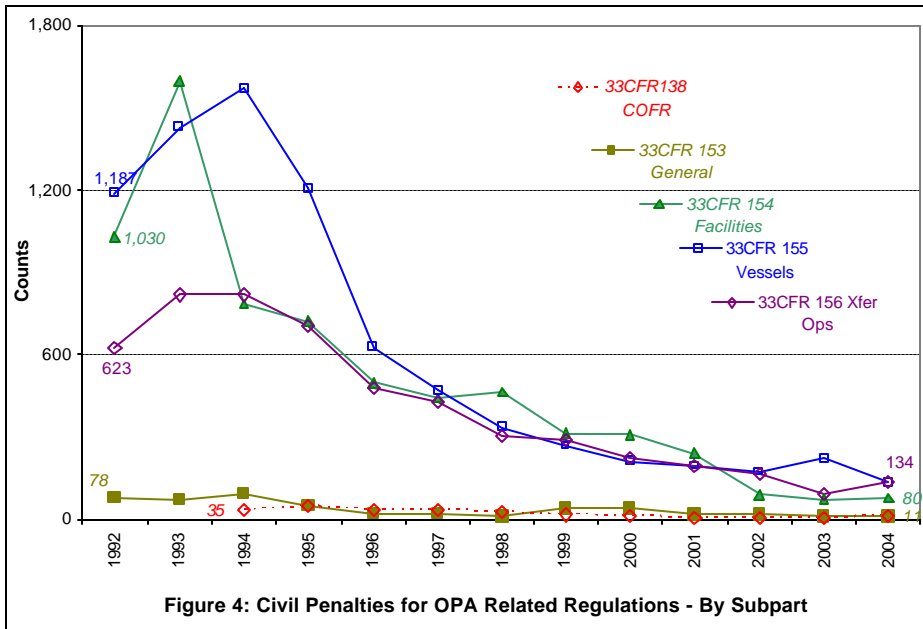
The annual numbers of oil spill civil penalty investigations continue to decline. Figure 21 below illustrates this decline in the numbers of civil penalty actions for spills taken by the Coast Guard.

Figure 21: Annual decline of Civil Penalties due to enforcement of OPA 90



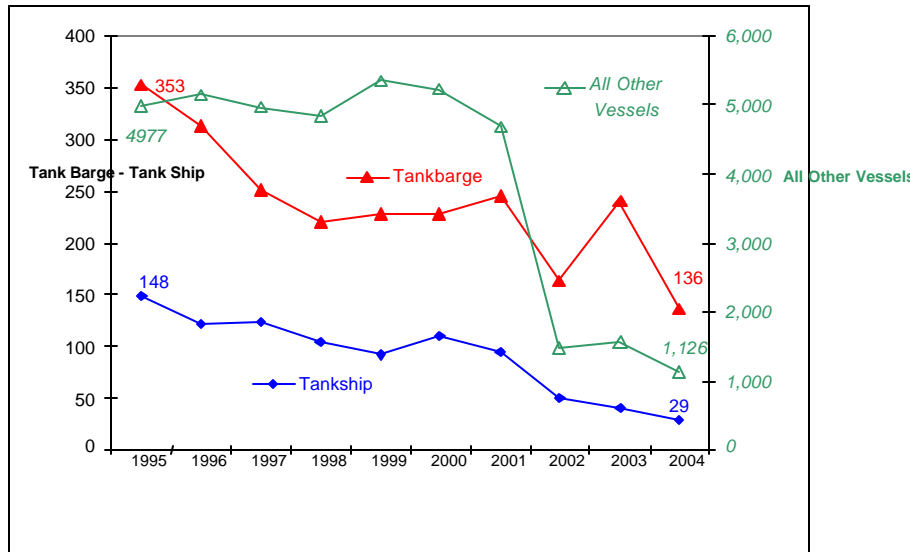
The annual breakdown of the four major sub-parts of the Code of Federal Regulations associated with the Act shows a similar trend (Figure 22).

Figure 22: Annual reduction of Civil Penalties by Subparts of 33 CFR, Subchapter O



2. Oil Spill Statistics for Tank Barges, Tank Ships and other vessels are found in Figure 23⁴.

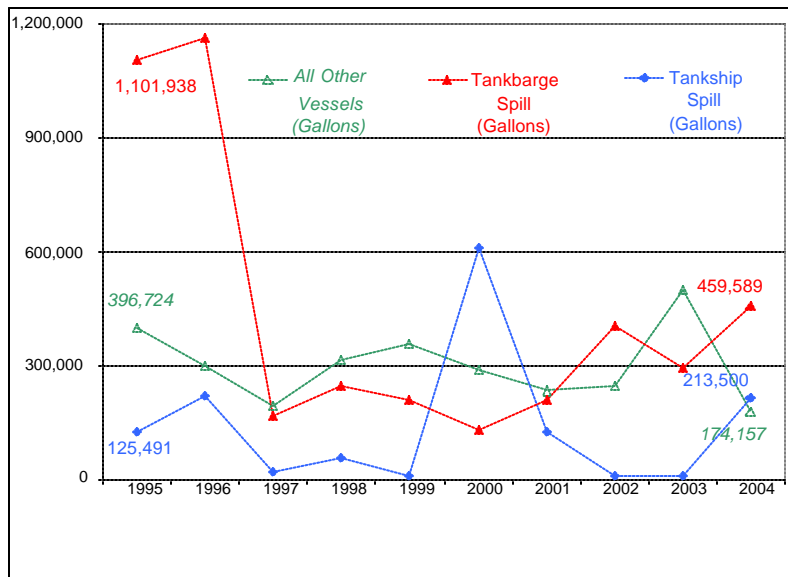
Figure 23: Annual spill incident statistics for tank barges and tank ships in the U.S. The data indicates a decline in the number of oil spills for tank barges since 1996.



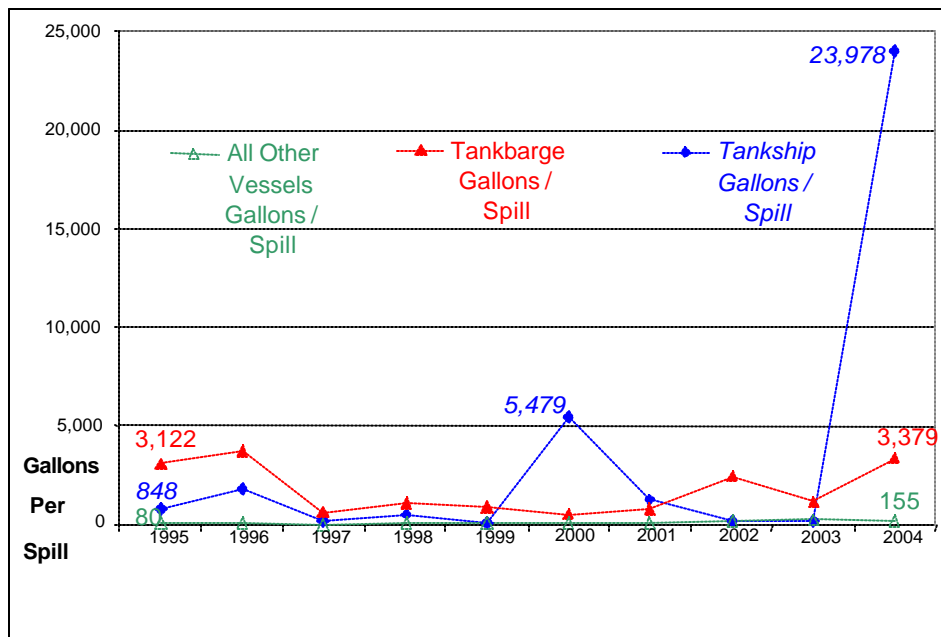
⁴ Pollution statistics from the MSIS era are retained in a standardized report entitled *Oil Spill Compendium, Pollution Incidents in and Around U.S. Waters, 1969–2002*. The Compendium may be found at: <http://www.uscg.mil/hq/g%2dm/nmc/response/stat/aa.htm>. Pollution incidents for MISLE are not yet found in the Compendium due to issues with application conversion. MISLE pollution statistics are currently being generated for the Coast Guard’s Business Performance plan in another application.

Review of the data which generated Figures 24 and 25 reveal that since 1996, both tank barges and tank ships are having fewer spills annually and for the most part those spills are of smaller quantity. The spike in 2000 of tank ship spill volume and subsequent increase in the volume per spill as shown in Figure 26, was in part due to two incidents: the grounding of the WESTCHES TER spilling 538,000 gallons of crude oil in the Mississippi River, and the collision of the POSAVINA, spilling 59,000 gallons of number 6 fuel oil in Boston Harbor. Another spike in 2004 for tank ships can be attributed to spills involving the loss of the BOW MARINER (55,000 gallons of diesel oil), and casualties on the TORM MARY (26,000 gallons number 6 oil), the GENMAR ALEXANDER (40,000 gallons of crude and number 6 oil), and the ATHOS I, the largest and most recent incident, with an estimated 260,000 gallons of heavy crude oil.

Figure 24: Annual spill volume statistics by gallon for tank barges, tank ships and all other vessels.



**Figure 25: Annual statistics of average gallons of oil spilled
(note higher values for 2000 and 2004 due to large spill incidents)**



C. Significant Spills from Tank Barges and Tank Ships

The following are narrative descriptions of fourteen significant pollution incidents involving tank barges and tank ships as found in the Coast Guard's Oil Spill Compendium. Eleven of these are allisions, collisions or groundings where the vessel is underway; three occur during cargo transfer operations:

- January 7, 1994 - The tank barge MORRIS J. BERMAN, which was being towed by the M/V EMILY S. grounded near San Juan, Puerto Rico, spilling approximately 750,000 gallons of heavy fuel oil into the Atlantic Ocean.
- October 11, 1995 - A tank barge was damaged in a collision with another tug-and-tow, in the vicinity of Norco, Louisiana. The damaged barge spilled approximately 194,502 gallons of decanted slurry oil into the Mississippi River.
- July 22, 1995 - Approximately 60,000 gallons of crude oil was spilled into the Delaware River, near Westville, New Jersey during a transfer from a tank ship to a shoreside storage facility. The transfer hoses were damaged when a severe thunderstorm moved through the area. High winds caused the ship to move away from dock suddenly, resulting in damage to the hoses.
- January 19, 1996 - The towing vessel SCANDIA experienced an engine room fire, while towing the tank barge NORTH CAPE in the Atlantic Ocean near Point Judith, Rhode Island. The tug and barge drifted until the barge grounded on Moonstone Beach, Rhode Island. Damage to the barge resulted in approximately 828,000 gallons of No. 2 oil being spilled into the water.

- March 18, 1996 - The tank barge BUFFALO 292 experienced a structural failure, resulting in a bend of approximately 30 degrees in the hull. Approximately 176,400 gallons of fuel oil was spilled into Galveston Bay, Texas, in the vicinity of the Gulf Intracoastal Waterway and the Houston Ship Channel.
- September 27, 1996 - The tank ship JULIE N struck a bridge near Portland, Maine. Damage to the ship resulted in approximately 165,900 gallons of fuel oil being spilled into Casco Bay.
- June 27, 1998 - The tank barge CTCO 211, in tow of the M/V CHRISTINE CENAC, collided with the M/V AMERICAN HERITAGE near Darrow, Louisiana. Approximately 154,000 gallons of crude oil was spilled into the Mississippi River, from the CTCO 211.
- January 12, 1999 - The towing vessel ELKHORN RIVER collided with the tank barge M & M 100 near Port Fourchon, Louisiana. Approximately 51,406 gallons of diesel fuel was spilled into Bayou Lafourche.
- January 29, 1999 – The tank barge WTC 2014, in tow of the M/V TED WAXLER, collided with a mooring buoy in Bayou Sorrel, Louisiana. Approximately 64,000 gallons of unleaded gasoline was spilled into the waterway.
- November 28, 2000 - The tank ship WESTCHESTER grounded in the Mississippi River, near Buras, Louisiana. Approximately 538,000 gallons of crude oil were spilled into the river from the number one (starboard) cargo tank. This incident accounted for 38% of the oil spill volume reported to the U. S. Coast Guard for the year 2000. Also, this was the largest oil spill into U.S. waters since 1996.
- June 12, 2000 - The number one tank of the tank barge NMS 111 was overfilled, resulting in approximately 80,000 gallons of number 6 oil spilling into the Houston Ship Channel.
- June 8, 2000 - While departing a facility in Boston, MA, the tank ship POSAVINA was damaged by the tug ALEX C. Damage to the tank ship resulted in the spillage of approximately 59,000 gallons of number 6 fuel oil into the waterway.
- November 7, 2001 - While waiting to enter the McAlpine lock and dam on the Ohio River, the tank barge WTC 105 was moored along a guide wall. At that location, three of the barge's starboard cargo tanks were damaged by an unknown object, below the waterline. Approximately 124,320 gallons of gasoline was discharged into the Ohio River.
- September 22, 2001 - The Liberian flag tank ship NEW AMITY collided with the tank barge NMS 1486, while navigating in the Houston Ship Channel. As a result, approximately 50,000 gallons of intermediate fuel oil was spilled into the waterway.
- July 5, 2002 – The U.S. flag tank barge USNS SWOB 28 spilled approximately 105,000 gallons of waste oil in Guam.
- February 21, 2003 – The U.S. flag tank barge B-150 exploded during transfer operations. The subsequent fire resulted in a spill estimated at 6,000 gallons of unleaded gasoline on the Arthur Kill, Staten Island, New York.
- April 27, 2003 – The U.S. flag tank barge B-120 grounded spilling 40,000 gallons of number 6 oil in Buzzards Bay, Massachusetts.
- May 5, 2003 – The U.S. flag tank barge KIRBY 26906 spilled 20,000 gallons of number 2 diesel oil in the Mississippi River in way of Baton Rouge, Louisiana.

- February 19, 2004, the Marshall Islands flag tank ship GENAR ALEXANDER spilled approximately a combined 40,000 gallons of crude oil and number 6 oil in the New Orleans area.
- February 28, 2004 – The Singapore flag tank ship BOW MARINER sinks, spilling a cargo of 3.6 million gallons of ethyl alcohol and 55,000 gallons of diesel oil off the coast of New Jersey.
- March 19, 2004 – The U.S. flag tank barge M 407 grounded, spilling over 151,000 gallons of petroleum naphtha in Galveston, Texas.
- August 2, 2004 – The Danish flag tank ship TORM MARY spilled over 26,000 gallons of number 6 oil in the Sabine waterway of Texas.
- November 26, 2004 – The Cypriot flat tank ship ATHOS I struck a submerged object and suffered damage to its number 7 cargo tank releasing an estimated 260,000 gallons of heavy crude oil into the Delaware River.

D. Applicable Federal Regulations for Tank Barges and Towing Vessels

The following sections are brief listings and descriptions of some of the significant federal regulations that pertain to tank barge and towing vessel safety.

An itemized listing of all applicable regulations would be extensive and unnecessarily lengthen this report. This section summarizes requirements found in Title 46 and Title 33 of the Code of Federal Regulations.

1. Title 46, Code of Federal Regulations (CFR) – SHIPPING:

46 CFR Subchapter C (Parts 24-28): The regulations in this subchapter contain the current requirements for towing vessels that transport tank barges carrying combustible or flammable liquid cargo in bulk. These regulations include fire suppression requirements for certain towing vessels that will come into effect in April 2005. For further discussion on towing vessels, see the Coast Guard and Maritime Transportation Act of 2004, below.

46 CFR Subchapter D (Parts 30-39): The regulations in this subchapter contain requirements for materials, design, construction, inspection, manning and operation of U.S. flag tank vessels (and tank barges), including handling and stowage of cargo and duties of officers and crew. These regulations pertain to all U.S. flag tank vessels carrying combustible or flammable liquid cargoes in bulk.

46 CFR Subpart I (Parts 90-105): This part provides specific requirements for the intervals of various examinations pertaining to the suitability of U.S. flag vessels to remain in service; these examinations include a drydock examination, internal structure examination, and cargo tank internal examination. The regulations stipulate various intervals based on the vessel's construction (material and hull type) and location of service (fresh or saltwater).

46 CFR Subchapter O (Parts 150-154): The regulations in this subchapter contain additional requirements for vessels carrying certain bulk dangerous cargoes. These regulations may be in addition to, supplement, or modify requirements in other subchapters in Chapter I of 46

CFR. Part 151 specifies requirements for tank barges and Part 153 provides requirements for tank ships (both U.S. and foreign-flagged ships).

2. Title 33, Code of Federal Regulations – NAVIGATION AND NAVIGABLE WATERS

33 CFR Part 138: The regulations in this part provide the requirements for the vessel owner, operator, and/or demise charterer to establish and maintain evidence of financial responsibility to cover their liability in the event of an oil or hazardous material spill. These regulations discuss the Certificate of Financial responsibility and the six appendices provide copies of the various required forms associated with this part.

33 CFR Subchapter O (Parts 151-159): The regulations in this subchapter contain extensive and detailed requirements pertaining to vessels carrying oil; control and discharge removal of pollution by oil; oil pollution prevention regulations for vessels; requirements for oil transfer operations; rules for the protection of the marine environment relating to tank vessels carrying oil in bulk; and reception facilities for disposal of waste oil.

33 CFR Subchapter P (Parts 160-169): The regulations in this subchapter contain a variety of requirements relating to the navigation safety of vessels carrying oil in bulk. Specific items include general ports and waterways safety; vessel traffic management; inland waterway navigation regulations; towing of barges; navigation safety regulations; shipping safety fairways and offshore traffic separation schemes; and escort requirements for certain tankers.

3. Towing Vessel Regulatory Efforts and Recommendations

Towing Vessel Inspection Status: The Coast Guard sought authority to add towing vessels to the list of vessels inspected for certification; this authority was subsequently provided in section 415 of the Coast Guard and Maritime Transportation Act of 2004 (CGMTA). This resulted in the initiation of a rulemaking project to develop a comprehensive set of regulations for the inspection and certification of all currently un-inspected towing vessels less than 300 gross tons involved in the transportation of cargo. Early public involvement began in December 2004 through the Towing Safety Advisory Committee and continued in January-February 2005 with a series of public meetings to gather information for development of an Advanced Notice of Proposed Rulemaking. Public meetings were held in New Orleans, St. Louis, Oakland and Washington, DC. Recommendations are being developed based on input from these public meetings.

Safety Management System Utilization: CGMTA also provided the authority for the Coast Guard to establish, by regulation, a safety management system standard appropriate for the characteristics, methods of operation, and nature of service of towing vessels. Requirements for such a system will be included in the regulatory project regarding the inspection of towing vessels. The investigation reports for two incidents involving towing vessels, ANNE HOLLY incident in St. Louis (1998) and the SCANDIA-fire / barge NORTH CAPE-grounding (1996) resulting in a major oil spill in Rhode Island, both recommended that a safety management system be developed and required for use with towing vessels.