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Report to the Chairman, Subcommittee on Transportation and Related Agencies, Committee on Appropriations, House of Representatives

March 1993

COAST GUARD

Selection of Ports for Establishing or Improving Vessel Traffic Service Systems

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GAO

United States
General Accounting Office
Washington, D.C. 20548

Resources, Community, and
Economic Development Division

B-252008

March 19, 1993

The Honorable Robert Carr
Chairman, Subcommittee on
Transportation and Related Agencies
Committee on Appropriations
House of Representatives

Dear Mr. Chairman:

In response to your request, this report provides information on how the Coast Guard is selecting U.S. ports to receive new or improved vessel traffic service (VTS) systems. VTS systems typically consist of a central data-gathering and monitoring location, known as a vessel traffic center, and an array of remote surveillance sensors, such as radar and closed circuit television cameras. Coast Guard personnel monitor vessel traffic and navigational hazards through remote sensors and radio communication with vessels. The Coast Guard then provides mariners with information and advisories to help avert collisions, groundings, and other mishaps.

You specifically asked us to determine (1) whether the Coast Guard's plans for selecting ports in which to establish, expand, or improve VTS systems are consistent with the Research and Special Programs Administration's (RSPA) Port Needs Study and, if not, why not and (2) what criteria the Coast Guard is using to decide in which areas of ports to establish or expand VTS systems and the performance specifications of those systems.

Results in Brief

The Coast Guard's plans for establishing, expanding, and improving VTS systems, as indicated by its fiscal year 1993 budget request, are consistent with the Port Needs Study. Ninety-one percent of the $26.8 million that the Coast Guard requested for fiscal year 1993 to establish or improve VTS systems is earmarked for ports identified by the study as the areas that the Coast Guard should first consider. The balance of funds requested will be used to complete the VTS Upgrade and Expansion Projects, a program begun before the study was completed and directed at improving some of the Coast Guard's existing VTS systems.

The Coast Guard is using a benefit/cost approach to determine the specific areas within the selected ports to be monitored by the VTS systems. Once

the Coast Guard has selected the areas to be monitored, it plans to determine the appropriate performance specifications for each system by designing a system that operates adequately under all the circumstances and weather conditions likely to occur in that port zone.

Background

The Oil Pollution Act of 1990 (P.L. 101-380) directed the Secretary of Transportation to conduct a study to prioritize the U.S. ports and channels that are in need of new, expanded, or improved VTS systems. RSPA's Volpe National Transportation Systems Center conducted the study, called the Port Needs Study, between February 1990 and July 1991 at a cost of $2.8 million. The Secretary of Transportation submitted the study to the Congress in March 1992.

The act required that the study prioritize the U.S. ports and channels by evaluating

- the nature, volume, and frequency of vessel traffic;
- the risk of collisions, spills, and damages associated with that traffic;
- the impact of installing, expanding, or improving a VTS system; and
- all other relevant costs and data.

The Port Needs Study prioritized the need for VTS systems in U.S. ports and channels by establishing preliminary budget and benefit estimates for the Coast Guard to use in determining where to establish or improve VTS systems. For comparison purposes, the study grouped 82 major U.S. ports and their adjacent bays, rivers, seaward approaches, and other bodies of water into 23 port zones.[1] These ports load and unload 80 percent, by tonnage, of all U.S. international and domestic cargo. The study identified 7 of the 23 port zones as the areas the Coast Guard should initially consider when determining where to establish or improve VTS systems.

The Port Needs Study and the Coast Guard's Plans to Establish VTS Systems

The study prioritized the 23 port zones by developing benefit and cost estimates of potential U.S. Coast Guard VTS systems in each port zone. On the basis of these estimates, the study identified 7 of the 23 port zones as the areas the Coast Guard should initially consider when determining where to establish or improve VTS systems. The Coast Guard's plans for installing and improving VTS systems, as indicated by its fiscal year 1993 budget request, are consistent with the study's recommendation.

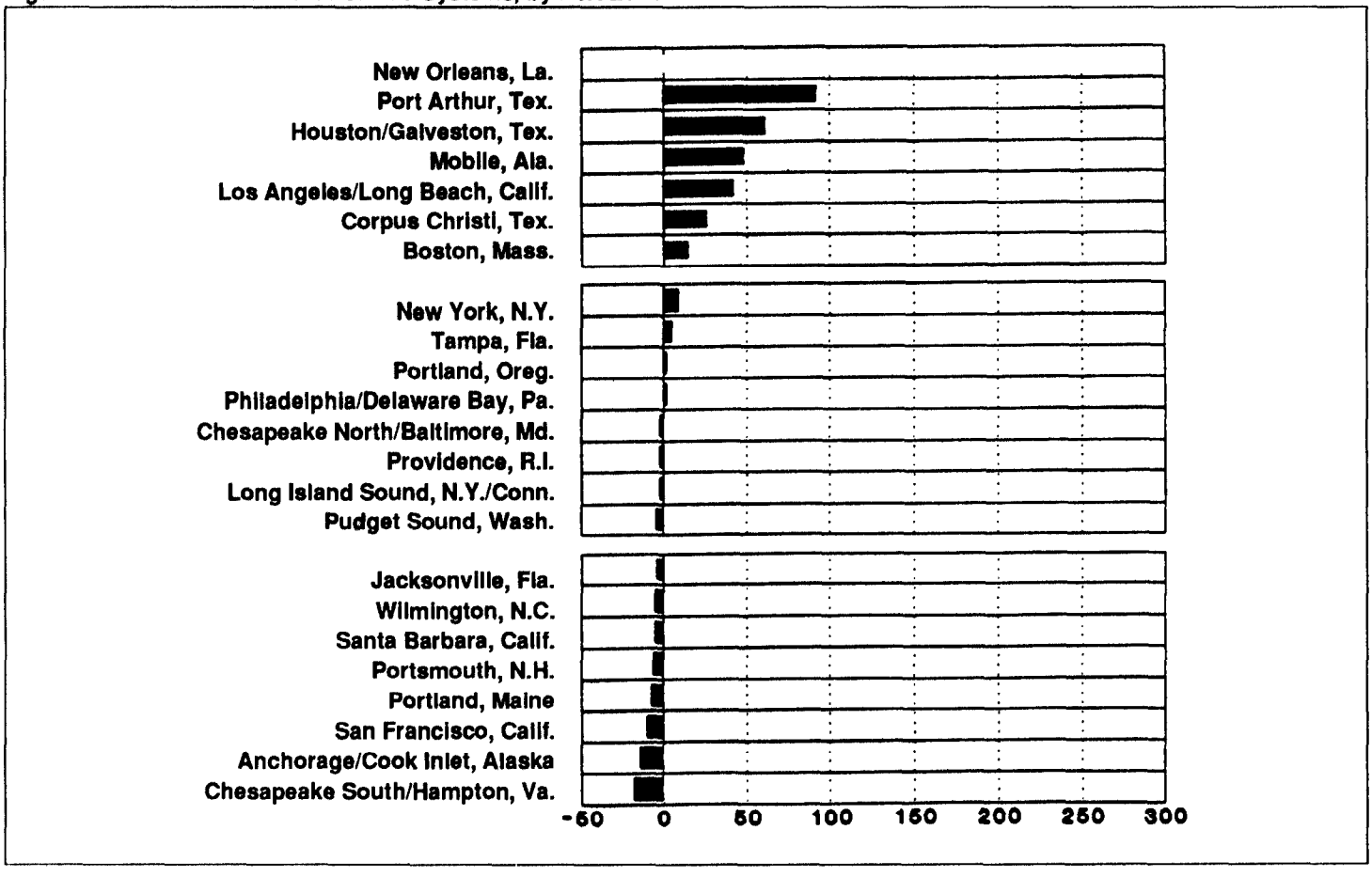
[1]Prince William Sound, the site of the Exxon Valdez oil spill, was not included in the study because the Congress had already legislated the expansion and improvement of the Prince William Sound VTS system in the Oil Pollution Act of 1990. See appendix II for additional details.

Ninety-one percent of the $26.8 million that the Coast Guard requested for fiscal year 1993 to establish and improve VTS systems is earmarked for the identified port zones. The Coast Guard currently estimates that it will cost $145 million in investment funds through fiscal year 2001 to establish or improve VTS systems in these port zones and eight others identified by the study, and to improve other existing Coast Guard-operated VTS systems.

The study prioritized the ports and channels by identifying a group of port zones for the Coast Guard to initially consider when determining where to establish VTS systems. The study identified this group by developing a net benefit estimate for a potential VTS system in each port zone.[2] The study found that the net benefit estimates for seven of the port zones were consistently positive even when (1) the benefit estimates were decreased by 50 percent or (2) the cost estimates were increased by 50 percent. This finding suggests that these port zones are the best candidates for VTS systems and hence the ones that the Coast Guard should initially consider when determining where to establish VTS systems. The study also identified a second group of port zones as the second best candidates for VTS systems. The net benefit estimates of the port zones in this second group were both positive and negative, depending on whether the benefit or the cost estimates were varied by 50 percent. The remaining port zones constitute the third group. The net benefit estimates for these port zones were negative even when the benefit estimates were increased by 50 percent. The study focused on a group of port zones to be initially considered, rather than prioritizing individual port zones, because of the inherent uncertainties in predicting the benefits and costs of future VTS systems. Figure 1 shows the estimated net benefits for each port zone and how the port zones are grouped.

[2]The net benefit estimate of a VTS system is the difference between the benefit provided by the VTS system (i.e., the expected reduction in vessel accidents and associated consequences) and the cost to build and operate the system. Net benefits are positive when the benefits are greater than the costs.

Figure 1: Net Benefit Estimates of VTS Systems, by Port Zone



Source: GAO presentation of data from the Port Needs Study.

Cost estimates for each port zone were based on initial investment costs and annual operation and maintenance costs. Total costs for an individual VTS system range from $6 million for Portsmouth, New Hampshire, to $37 million for New Orleans, Louisiana. The total cost estimate for all 23 port zones is $327 million. Investment costs were estimated by developing a "candidate" VTS system for each port zone. The candidate VTS system's design is a preliminary engineering design made for the purpose of developing cost estimates that are consistent and comparable among the 23 port zones. Each candidate system employs state-of-the-art equipment

and provides surveillance for the entire port zone. For comparison purposes, initial investment costs were assumed to be committed in fiscal year 1993 and operation and maintenance costs were estimated from fiscal year 1996, when the study assumes for comparison purposes that the systems will become operational, through fiscal year 2010. All costs are discounted back to 1993.

Benefit estimates for each port zone were based on the cost of vessel accidents and associated consequences expected to be prevented by the candidate VTS system. The estimates were based on a statistical analysis of historical vessel accidents and the unique navigational features of each port zone to determine the probability of vessel accidents occurring in each port zone. These probabilities were applied to vessel traffic forecasts to estimate the probable number of future vessel accidents that would occur in the absence of any VTS system. The effectiveness of the candidate VTS systems in preventing vessel accidents in each port zone was then estimated as was the cost of the losses expected to be avoided by the VTS systems. The total benefit estimate for all 23 port zones is $806 million. The study measured losses in the following categories. (The dollar figures represent the total costs that the study predicted would be avoided if candidate systems were fully implemented in all 23 port zones.[3])

- Vessel damage. On average, 40 percent of vessel accidents result in vessel damage. The study predicts that the candidate systems would prevent $163 million in vessel damage between 1996 and 2010.
- Human deaths/injuries. On average, 3 percent of vessel accidents result in deaths and 10 percent in injuries. The study predicts that the candidate systems would prevent 31 deaths and 138 injuries between 1996 and 2010.
- Cargo damage and loss. On average, 11 percent of vessel accidents result in damage and/or loss of cargo. The study predicts that the candidate systems would prevent $5 million in cargo damage and loss between 1996 and 2010.
- Navigational aid damage. On average, 2 percent of vessel accidents cause damage to navigational aids. The study predicts that the candidate systems would prevent $84,000 in navigational aid damage between 1996 and 2010.
- Damage to bridges. On average, 1 percent of vessel accidents result in damage to bridges. The study predicts that the candidate systems would prevent $14 million in damage to bridges between 1996 and 2010.
- Hazardous commodity spills. On average, 13 percent of vessel accidents involving tankers and tank barges result in the spill of hazardous

[3]The total benefit estimate is discounted back to fiscal year 1993. The totals for the categories of expected avoided losses are not discounted.

commodities. The study predicts that the candidate systems would prevent $1.6 billion in damage caused by hazardous commodity spills between 1996 and 2010.

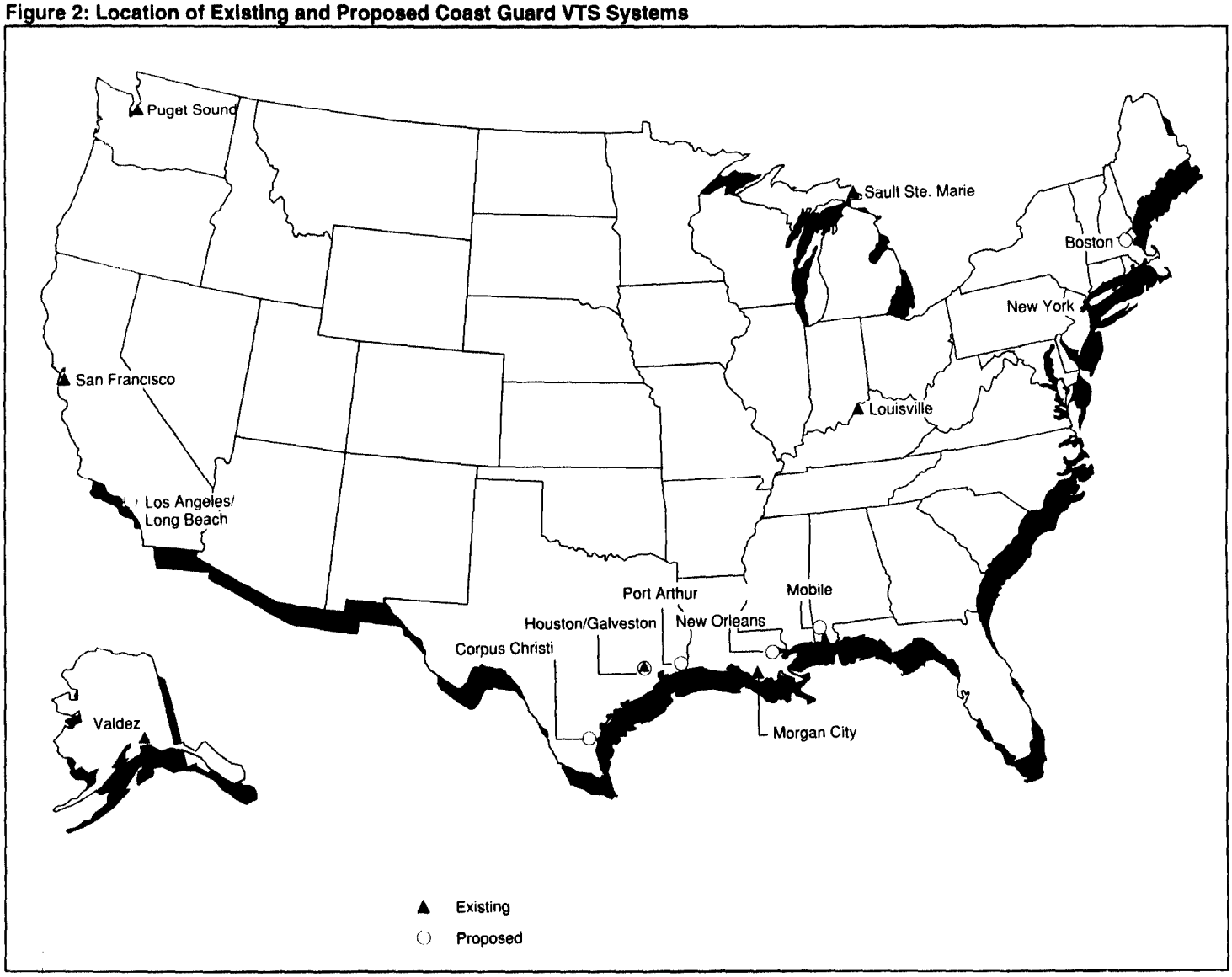
- Emergency response. The dollar value of emergency responses to vessel accidents is estimated by the type of vessel and the type of response required. The study predicts that the candidate systems would prevent $10.4 million in emergency response costs between 1996 and 2010.

The Coast Guard initiated a program in fiscal year 1993 to address the Port Needs Study. The program, called VTS 2000, is currently directed at designing and establishing VTS systems in the port zones identified by the study as the ones that should initially be considered for VTS systems. Ninety-one percent, or $24.3 million, of the $26.8 million that the Coast Guard requested for fiscal year 1993 to establish or improve VTS systems is for this program. Although it received only $9 million for fiscal year 1993 to fund the first year of the VTS 2000 program, the Coast Guard has not significantly altered its plans. The Coast Guard expects to establish initial operating capability in the Los Angeles/Long Beach port zone in fiscal year 1996. It expects to have established a VTS system in all of the port zones in the first two groups identified in the Port Needs Study by 2001. The Coast Guard also plans to have upgraded the radars, computers, and other equipment in the vessel traffic centers (VTC) in some of its existing VTS systems with the technology it is planning to use in its new VTS systems. Appendix I provides additional details on the Coast Guard's plans to establish new VTS systems.

In addition to the VTS 2000 program, the Coast Guard budgeted $35.1 million between fiscal years 1989 and 1993 to expand, improve, and/or reestablish five existing or previously existing VTS systems. The Coast Guard initiated a program called the VTS Expansion and Upgrade Projects in fiscal year 1989 in response to the renewed interest in VTS systems following the Exxon Valdez oil spill. Of the $26.8 million that the Coast Guard requested for fiscal year 1993, $2.5 million is to complete this program. Under this program, the Coast Guard has received a total of $29.5 million, including the $2.5 million it requested for fiscal year 1993, to expand and/or upgrade four of the eight VTS systems it currently operates. In addition to the Expansion and Upgrade Projects, the Coast Guard has also budgeted $5.6 million to expand and improve a fifth VTS system it operates in Valdez, Alaska. Appendix II provides additional details on the Coast Guard's existing VTS systems and its plans to improve them. Figure 2 shows the locations of the seven port zones currently being considered

under VTS 2000 and the eight VTS systems the Coast Guard operates (Houston/Galveston is included in both categories.)

Figure 2: Location of Existing and Proposed Coast Guard VTS Systems



The Coast Guard's Criteria for Selecting Areas to Monitor and Determining VTS System Performance Specifications

The Coast Guard is focusing its efforts on establishing new VTS systems primarily in the seven port zones identified by the Port Needs Study as the areas that the Coast Guard should consider initially. The Coast Guard is using a benefit/cost analysis to determine the specific areas of the port zones to be monitored and its professional judgment to determine the performance specifications of the systems.

The Coast Guard's Criteria for Selecting Areas of Port Zones to Monitor With VTS Systems

The study divided each of the 23 port zones into subzones based on water-body type, such as river, enclosed harbor, or constricted waterway. Each port zone contains between 1 and 10 subzones. There are a total of 99 subzones. The Coast Guard is using a benefit/cost analysis to determine which subzones (or portions of subzones) to monitor with remote sensors. Initially, the Coast Guard is soliciting the opinions of local Coast Guard personnel, local mariners, and others familiar with local navigational problems to ensure that the most accident-prone areas are identified. This methodology allows the Coast Guard to easily identify the subzones most likely to need surveillance. After identifying these subzones, the Coast Guard plans to develop cost and benefit estimates to ensure that positive net benefits will result from establishing a VTS system.

Regarding benefits, the Coast Guard is developing estimates using the computer model developed for the Port Needs Study. Although the study used this model to calculate the benefits of a VTS system for entire port zones, the model can also be used to estimate benefits by subzone. For example, in the New Orleans port zone, many local users identified an area called the Crescent, which roughly coincides with a subzone, as the most accident-prone area. The model estimated that a VTS system monitoring the Crescent would provide nearly one-third of the total benefits that could be expected from monitoring the entire New Orleans port zone. Coast Guard officials said that although their long-term intention was to provide surveillance for at least the majority of the port zone, the Crescent was the logical subzone with which to begin.

Regarding costs, Coast Guard estimates are based on the cost of a VTC, the cost of equipment to monitor the subzone(s) (i.e., remote sensors, communication equipment, and other equipment), and operation and maintenance costs. Coast Guard officials said that the cost of a VTC makes up a substantial portion of the total cost of a VTS system and is not significantly affected by the number of subzones being monitored. For

example, for the New Orleans port zone, the Coast Guard requested $14.3 million to build the VTC and purchase surveillance and other equipment necessary to monitor one subzone. However, the study estimated the total investment cost of a VTS system in New Orleans, including the VTC and monitoring equipment for the six subzones that constitute the port zone, to be $25.5 million. According to Coast Guard officials, the VTS systems would be designed so that equipment to monitor additional areas could easily be integrated into the existing VTC, allowing the Coast Guard to expand the area of surveillance as the situation dictates.

The Coast Guard's Criteria for Determining the Performance Specifications of VTS Systems

The Coast Guard has decided that VTS systems should achieve as close to a zero-accident rate as possible under normal circumstances and conditions in the areas being monitored. The Coast Guard is using its professional judgment to design systems to meet these performance specifications. The zero-accident rate applies only to VTS-addressable accidents, that is, accidents that could be prevented by the timely dissemination of information collected by the VTC to mariners whose vessels are at risk of an accident. Examples include collisions between vessels in open water caused by poor visibility or human error. Examples of unaddressable accidents include collisions with docks and other vessels while in confined waters.

Coast Guard officials also said that the VTS systems are being designed to function adequately under most circumstances likely to be encountered in the particular area being monitored. For example, in ports where heavy rain is common, a radar system would be used that could operate adequately in heavy rain. However, in ports where heavy rain is rare and/or vessels do not typically operate in such weather, a radar without that capability would be used. Officials also said that in certain areas that are particularly dangerous, redundant coverage (e.g., the use of two radars to monitor a single area in case one radar becomes inoperative) may be appropriate. They added, however, that in most cases redundant coverage would be excessive.

Conclusions

The Coast Guard's actions in selecting ports for establishing or improving VTS systems are consistent with the Port Needs Study. Ninety-one percent of the $26.8 million it requested for fiscal year 1993 to establish or improve VTS systems was requested for VTS 2000. The Coast Guard is using a

benefit/cost approach to determine the specific areas of port zones to be monitored by the VTS systems it is establishing under VTS 2000.

Agency Comments

We discussed the information in this report with the VTS Program Manager and VTS Project Manager responsible for VTS 2000 and the expansion and improvement of existing VTS systems. We included their comments where appropriate. The officials generally agreed with the information presented in this report. As requested, we did not obtain written agency comments.

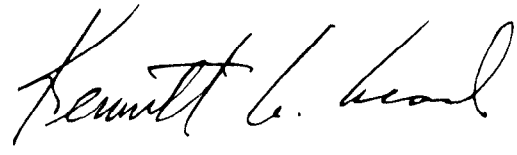
Scope and Methodology

We interviewed (1) Volpe National Transportation Systems Center personnel responsible for conducting the Port Needs Study to understand the limits and applications of the study and (2) Coast Guard headquarters personnel responsible for the VTS program to determine the Coast Guard's plans and criteria for establishing and improving VTS systems. We also visited Governors Island, New York, to observe firsthand VTS operations in New York Harbor. Additionally, we reviewed pertinent statutory and regulatory requirements for the VTS program and the Port Needs Study. We conducted our review from June to November 1992 in accordance with generally accepted government auditing standards.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send a copy to the Secretary of Transportation, the Commandant of the Coast Guard, and other interested parties. We will make copies available to others upon request.

Please contact me at (202) 512-2834 if you or your staff have any questions. Other major contributors to this report are listed in appendix III.

Sincerely yours,



Kenneth M. Mead
Director, Transportation Issues

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Abbreviations

RSPA	Research and Special Programs Administration
VTC	Vessel Traffic Center
VTS	Vessel Traffic Service

The Coast Guard's Plans to Establish New VTS Systems

VTS 2000 is currently directed at designing and establishing VTS systems in the seven port zones identified by the Port Needs Study as the first areas that the Coast Guard should consider in determining where to establish vessel traffic service (VTS) systems. The Coast Guard's initial budget request for this program was $24.3 million for fiscal year 1993. The funds were requested to establish VTS systems in, or to conduct more detailed studies of, six of the seven port zones.[1] The Coast Guard received $9 million for fiscal year 1993 to fund the first year of the VTS 2000 program. The Coast Guard intends to spend the funds on the New Orleans, Port Arthur, and Los Angeles/Long Beach VTS systems, and on general design work applicable to all VTS 2000 systems. The following is a description of the seven port zones and the Coast Guard's plans for each zone.

- New Orleans, Louisiana. The New Orleans port zone includes the Mississippi River from Baton Rouge, Louisiana, to the Gulf of Mexico, the Mississippi River-Gulf Outlet Canal, and the Gulf approaches to these waterways. The study estimated that the candidate VTS system would provide $254 million in net benefits. The largest loss expected to be avoided is the cost of cleaning up hazardous commodity spills (50 percent of the total). The Coast Guard requested $14.3 million for fiscal year 1993 to build a vessel traffic center (VTC) and provide surveillance for the 43-mile stretch of the Mississippi River around New Orleans known as the Crescent. The Coast Guard's long-term intention is to provide surveillance for at least the majority of the port zone.
- Port Arthur, Texas. The Port Arthur port zone extends from Port Arthur to Calcasieu Lake and includes the ports of Beaumont and Lake Charles and the Gulf of Mexico approaches to Sabine Pass and Calcasieu Pass. The study estimated that the candidate VTS system would provide $92 million in net benefits. The largest loss expected to be avoided is the cost of cleaning up hazardous commodity spills (48 percent of the total). The Coast Guard requested $4.5 million for fiscal year 1993 to build a VTC and provide surveillance for a 10-mile stretch known as Sabine-Neches Waterway. The Coast Guard has no immediate plans to expand surveillance beyond this area.
- Houston/Galveston, Texas. The Houston/Galveston port zone extends from Houston to the Gulf of Mexico and includes Galveston Bay, portions of the Gulf Intercoastal Waterway, and the Gulf approaches to Galveston Bay. The study estimated that the candidate VTS system would provide $61 million in net benefits. The largest losses expected to be avoided are damage to commercial fish species (42 percent of the total) and the cost of

[1]The Coast Guard did not consider the remaining port zone (Houston/Galveston, Texas) because the Coast Guard already operates a VTS system in that zone. The study did not consider existing VTS systems when it divided the port zones into groups.

cleaning up hazardous commodity spills (30 percent of the total). The Coast Guard received $1.3 million in fiscal year 1992 to expand the area of surveillance. The scheduled completion date is the second quarter of fiscal year 1994. When completed, the system will monitor an area roughly equivalent to the Houston/Galveston port zone.[2]

- Los Angeles/Long Beach, California. The Los Angeles/Long Beach port zone includes the harbors of Los Angeles and Long Beach, San Pedro Bay, and the offshore approaches. The study estimated that the candidate VTS system would provide $43 million in net benefits. The largest loss expected to be avoided is the cost of property damage from hazardous commodity spills (55 percent of the total). The Coast Guard requested $4.5 million for fiscal year 1993 to build a VTC and provide surveillance for the outer harbor and port approaches. The Coast Guard's long-term intention is to expand surveillance to the inner harbors and to provide surveillance for the Santa Barbara port zone, which consists primarily of the Santa Barbara Channel. The Port Needs Study found that establishing a separate VTS system for the Santa Barbara port zone would probably result in negative net benefits. Consequently, the Coast Guard plans to use the Los Angeles/Long Beach VTC to monitor the Santa Barbara port zone and believes positive net benefits will result from monitoring both areas.
- Mobile, Alabama. The Mobile port zone extends from an area on the Mobile River north of Mobile Harbor to the Gulf of Mexico. It includes Mobile Bay, the Gulf approaches to the Mobile Ship Channel, and 60 miles of the Intercoastal Waterway. It also includes Pascagoula and the ship channel approaches from the Gulf. The study estimated that the candidate VTS system would provide $48 million in net benefits. The largest losses expected to be avoided are the cost of cleaning up hazardous commodity spills (38 percent of the total) and damage to commercial fish species (34 percent of the total). The Coast Guard requested a total of $1 million for fiscal year 1993 to conduct a more detailed analysis of the type of vessel traffic management needed for this port zone and for the Corpus Christi and Boston port zones.
- Corpus Christi, Texas. The Corpus Christi port zone extends from the Port of Corpus Christi to the Gulf of Mexico and includes 30 miles of the Intercoastal Waterway, Corpus Christi Bay, Aransas Pass, and the Gulf approaches to Aransas Pass. The study estimated that the candidate VTS system would provide $26 million in net benefits. The largest losses expected to be avoided are the cost of cleaning up hazardous commodity spills (40 percent of the total) and damage to commercial fish species (29 percent of the total). The Coast Guard's fiscal year 1993 budget request

[2]The Port Needs Study estimated that the candidate system would provide only $4 million in additional net benefits over the existing VTS system.

included $1 million to conduct a more detailed analysis of the type of vessel traffic management needed for this port zone and for the Mobile and Boston port zones.

- Boston, Massachusetts. The Boston port zone includes the approaches from Massachusetts Bay into Boston Harbor, the outer and inner harbor areas, and the confluence of the Charles River and the Mystic River. It also includes Lynn Harbor and Nahant Bay on the north and the Weymouth Fore River on the south. The study estimated that the candidate VTS system would provide $15 million in net benefits. The largest loss expected to be avoided is associated with the explosion of a Liquified Natural Gas tanker (63 percent of the total). The Coast Guard requested $1 million for fiscal year 1993 to conduct a more detailed analysis of the type of vessel traffic management needed for this port zone and for the Mobile and Corpus Christi port zones.

The Coast Guard's Current VTS Systems and Plans to Improve Them

The Coast Guard currently operates eight VTS systems. Four of these are being improved and/or expanded under the VTS Expansion and Upgrade Projects. This series of projects was initiated to address the renewed interest in VTS systems generated by the Exxon Valdez oil spill in March 1989 and the several spills that occurred in the following 3 months. Under this program, the Coast Guard has reopened the VTS system in New York, New York, and is upgrading and/or expanding the area of surveillance in New York; Puget Sound, Washington; San Francisco, California; and Houston/Galveston, Texas. In addition, the Coast Guard is expanding and improving the VTS system in Valdez, Alaska. The Coast Guard budgeted $35.1 million between fiscal years 1989 and 1993 for these five projects. Coast Guard officials said that additional funds to establish or improve VTS systems would be requested under the auspices of the VTS 2000 program. The Coast Guard has no plans to significantly expand or improve the remaining three VTS systems it operates in Sault Sainte Marie, Michigan; Louisville, Kentucky; and Morgan City, Louisiana. The following is a description of the five VTS systems that have been or are being improved and/or expanded.

- New York, New York. The New York VTS system was closed because of budget constraints in 1988. At the Congress' direction, the Coast Guard reopened it in December 1990. The Coast Guard received $16.8 million to expand the area of surveillance and upgrade the VTC and other equipment. The scheduled completion date is the fourth quarter of fiscal year 1994. When completed, the system will monitor an area roughly equivalent to the New York port zone. The New York port zone includes Upper and Lower New York Bay, the seaward approach to Lower New York Bay, Newark Bay, and Raritan Bay, and portions of the Hudson and East rivers, and Kill Van Kull and Arthur Kill.
- Puget Sound, Washington. The Coast Guard received $6 million to expand surveillance to Tacoma, Washington, and upgrade the VTC and other equipment. The scheduled completion date is the first quarter of fiscal year 1994. When completed, the system will monitor most of the Puget Sound port zone. The Puget Sound port zone extends from the Canadian border north of the San Juan Islands south to Tacoma and Olympia, and west to include the Strait of Juan de Fuca and its offshore approaches.
- San Francisco, California. The Coast Guard received $5.4 million to expand surveillance and upgrade the VTC and other equipment. The scheduled completion date is the third quarter of fiscal year 1994. When completed, the system will monitor significant portions of the San Francisco port zone. The San Francisco port zone includes San Francisco

Bay, the seaward approach to San Francisco Bay, San Pablo Bay, Suison Bay, and portions of the Sacramento and San Joaquin rivers.

- Houston/Galveston, Texas. The Coast Guard received $1.3 million to expand the area of surveillance and expects to complete this task in the second quarter of fiscal year 1994. When completed, the system will monitor an area roughly equivalent to the Houston/Galveston port zone.
- Valdez, Alaska. The Coast Guard budgeted $5.6 million to expand surveillance and upgrade the VTC and other equipment.[1] The scheduled completion date is the first quarter of fiscal year 1994. When completed, the Coast Guard will provide radar or automatic dependent surveillance for all of Prince William Sound and the seaward approaches to Prince William Sound.[2] Prince William Sound was not included in the Port Needs Study because the Congress had already legislated the expansion and improvement of the Prince William Sound VTS system in the Oil Pollution Act of 1990.

The following is a description of the remaining three VTS systems that the Coast Guard operates. The areas these VTS systems monitor were not included in the Port Needs Study because they were not considered major U.S. ports.

Sault Sainte Marie, Michigan. This VTS system monitors a 63-mile stretch of the St. Mary's River from Lake Huron to Lake Superior. This portion of the river is normally closed to traffic from January through March because of ice.

Louisville, Kentucky. The Louisville VTS system monitors a 14-mile stretch of the Ohio River near McAlpine Dam. It only operates during periods of high water, which average 60 days per year.

Morgan City, Louisiana. The Morgan City VTS system monitors Berwick Bay where the Gulf Intercoastal Waterway and the Atchafalaya River converge. Coast Guard officials said that traffic is heavy in this area because it is part of a short cut between major Gulf ports.

[1]The Oil Pollution Act of 1990 provided $5 million for the Valdez VTS system and a navigation light in Prince William Sound. The Coast Guard elected to spend $4.6 million of the $5 million for the Valdez VTS system and used reprogrammed funds for the remaining $1 million.

[2]Automatic dependent surveillance is the surveillance of a vessel based on position data obtained and reported automatically by the vessel.

Major Contributors to This Report

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