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# MARINE SAFETY

## Current Status of the VTS 2000 Program and Key Stakeholders' Views on It

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Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss the Coast Guard's vessel traffic service (VTS) 2000 program, a proposed initiative to build new or improved VTS systems at up to 17 U.S. ports. VTS systems typically use radar or closed-circuit television linked to a central data-gathering location, called a vessel traffic center. This center monitors vessel traffic in port areas and provides information to vessels in these areas on such matters as marine traffic, tides, weather conditions, and emergencies.

Our testimony today is based on a recently issued report<sup>1</sup> to this Subcommittee and covers four topics: (1) the current status of the Coast Guard's development of VTS 2000, (2) the extent that key stakeholders (shippers operating in the ports, marine pilots, and port officials) support acquiring and funding VTS 2000, (3) the extent that key stakeholders are interested in acquiring and funding lower-cost VTS systems (if they are not supportive of VTS 2000), and (4) other issues that could affect the establishment of privately funded VTS systems. Our report addresses these topics in more detail and recommends ways that the Coast Guard can minimize the program's costs, interact to a greater extent with the user community, and oversee private systems.

We conducted our work at eight of the ports that the Coast Guard is considering for VTS 2000.<sup>2</sup> These ports were either among the locations that would most likely benefit from a VTS system or were involved in operating or considering a privately funded system.

In summary, we found that:

- Important questions about the VTS 2000 program remain unanswered, including how many ports need the system, how much it will cost, and whether other cost-effective solutions are available. Such uncertainties make it difficult to judge whether VTS 2000 represents the best approach to ensuring marine safety in the nation's ports. While the Coast Guard cannot provide definitive answers to all these questions at the present time, it can or will soon be able to provide updated information so that the Congress can make informed decisions about how to proceed.

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<sup>1</sup>Marine Safety: Coast Guard Should Address Alternatives as It Proceeds With VTS 2000 (GAO/RCED 96-83, Apr. 22, 1996)

<sup>2</sup>We visited Houston, Los Angeles/Long Beach, Mobile/Pascagoula, New Orleans, Philadelphia/Delaware Bay, Port Arthur/Lake Charles, San Francisco, and Tampa.

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- Widespread support for VTS 2000 was lacking among the key stakeholders we interviewed. The stakeholders' views at five ports were predominantly negative; support was somewhat greater—but still mixed—at the other three ports. Many believed that the system would likely be more expensive than needed at their port. Most opposed user fees or other funding approaches that would transfer the funding of VTS 2000 from the Coast Guard to users.
  - Support was greater for VTS systems that key stakeholders perceived to be less expensive than VTS 2000. At four ports that already have VTS systems, most stakeholders said that existing systems were sufficient. At two of the four ports that do not have a VTS system, most favored adding some form of VTS system, though support for funding the improvements was much more marginal. At the final two ports, support for a VTS system was mixed or nonexistent.
  - Several key issues could affect the establishment of privately funded or privately operated VTS systems. These relate to the private sector's ability to fund the initial start-up costs of such a system, the private sector's exposure to liability, and the Coast Guard's role in establishing and overseeing a privately funded system.

Before discussing our findings in more detail, we would like to provide some background information on VTS systems in general and VTS 2000 in particular.

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## Background

Under the authority of the Ports and Waterways Safety Act of 1972, as amended, the Coast Guard operates VTS systems in eight ports. Operations and maintenance costs for these systems, which totaled about \$19 million in fiscal year 1995, are borne by the Coast Guard and are not passed on to the ports or the shipping industry. Two other ports, Los Angeles/Long Beach and Philadelphia/Delaware Bay, have user-funded systems.

Study of VTS systems was prompted by the Oil Pollution Act of 1990 (P.L. 101-380), passed after the 1989 Exxon Valdez oil spill and other accidents in various ports. The Act directed the Secretary of Transportation to prioritize U.S. ports and channels in need of new, expanded, or improved VTS systems. The resulting report, called the Port Needs Study, was submitted to the Congress in March 1992. This study laid much of the groundwork for the proposal for VTS 2000.

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## Critical Questions About Vts 2000 Remain Unanswered

Making funding decisions today about VTS 2000 is complicated by several as-yet-unanswered questions regarding the need for the system in certain ports, the system's cost, and available alternatives to VTS 2000. Having more complete, up-to-date information on these questions is critical to deciding whether to move forward with the program.

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## System's Benefits Have Not Been Demonstrated in Most Ports Under Consideration for Vts 2000

One uncertainty relates to which ports will receive VTS 2000 systems. Most of the 17 candidate ports were identified in the 1991 Port Needs Study, which quantified (in dollar terms) the benefits of building new VTS systems at port areas nationwide. The Coast Guard is not scheduled to make a final decision on which ports to include in the program until fiscal year 2000, but the information developed to date suggests that the number of ports ultimately selected could be much less than 17. The Port Needs Study and the follow-on studies completed so far show that a new system would produce little or no added benefit at about two-thirds of the ports being considered.<sup>3</sup>

Budget information the Coast Guard has provided to the Congress thus far has not fully reflected the limited benefits of installing VTS 2000 systems in many of the ports being considered. For example, the Coast Guard should provide to the Congress updated information on the added benefits, if any, that would be achieved by installing VTS 2000 at various ports, especially for those that already have VTS systems. In our view, this information, coupled with the Coast Guard's current thinking on the high and low priority locations for VTS 2000, is critical to assist the Congress in deciding on whether a development effort for 17 ports is warranted. We realize that the Coast Guard is not in a position to make a final decision on all ports at this time, because it is still gathering information and conducting follow-on studies to reassess some ports on the list. However, having the most current and complete data will allow the Congress to better decide on funding levels for the VTS 2000 program and provide direction to the Coast Guard.

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## Updated Cost Estimates Are Lower but Final Costs Are Still Uncertain

A second major area of uncertainty is the cost to develop VTS 2000. This cost is considerable, regardless of whether it is installed at a few ports or all 17. The Coast Guard initially estimated that development costs alone (exclusive of installation costs at most sites) would total \$69 million to \$145 million, depending on the number of sites that receive VTS 2000 and

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<sup>3</sup>We did not verify the accuracy of the results of the Coast Guard's studies because it was outside the scope of our review.

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the extent of software development. The estimated costs to install equipment and build facilities at each site ranged from \$5 million to \$30 million, bringing the program's total costs to between \$260 million and \$310 million. The Coast Guard's updated estimate of annual operating costs for a 17-site system is \$42 million. At present, the Coast Guard plans to pay for all of these costs from its budget instead of passing them on to users.

A few days ago, the Coast Guard awarded contracts for initial development of the VTS 2000 system. The bids from three vendors currently competing for the contract to design the system were substantially lower than earlier estimates. Further refinements to the Coast Guard cost estimates will be made in early 1997 when the Coast Guard plans to select a single contractor to build the VTS 2000 system.

The system's costs will also depend on the Coast Guard's decision about how sophisticated the system should be. VTS 2000 can be developed in four phases; and additional capability can be added at each phase. For example, phase 1, originally estimated to cost \$69 million, would create a system with operational capabilities that are about on a par with upgraded VTS systems currently being installed at some ports. The Coast Guard's development plan allows for stopping after phase 1 (or any other phase) if cost or other considerations preclude further development.

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## Alternatives to Vts 2000 May Be Available

To date, the Coast Guard's approach has not involved much consideration of whether feasible alternatives exist to VTS 2000 at individual ports under consideration. I want to emphasize that we did not attempt to assess whether other alternatives were preferable, but many would appear to merit consideration or study. Here are a few of these alternatives:

- **Reliance on existing VTS systems.** The systems in place at seven locations may be sufficient. For example, the port of Los Angeles/Long Beach, which is on the Coast Guard's "short list" for the first round of VTS 2000 systems, now has a VTS system, which cost about \$1 million to build and meets nearly all of VTS 2000's operational requirements, according to a Coast Guard study. The Coast Guard is reconsidering its decision to keep the port on the "short list" but is still evaluating it for VTS 2000. Other VTS systems in Houston/Galveston, Puget Sound, Philadelphia/Delaware Bay, New York, San Francisco, and Valdez all have been recently upgraded or enhanced or are scheduled to be upgraded in the near future irrespective

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of VTS 2000. Therefore, these systems may provide protection similar to that of VTS 2000 now and into the future.

- VTS systems with smaller scope than proposed thus far under VTS 2000. The Port Needs Study and follow-on studies have proposed blanketing an entire port area with VTS coverage, but less comprehensive VTS coverage might be sufficient. For example, some key stakeholders at Port Arthur/Lake Charles, which has no radar-based VTS coverage, said such coverage was needed at only a few key locations, instead of portwide. A group is studying the feasibility of a more limited, privately-funded system. One vendor estimated that a system to cover key locations at Port Arthur/Lake Charles would cost \$2 million to \$3 million. Coast Guard officials told us that reduced coverage is an option they could consider when site-specific plans are established for VTS 2000.
- Non-VTS approaches. In some cases, improvements have been proposed that are not as extensive as installing a VTS system. For example, several years ago in Mobile/Pascagoula, the Coast Guard Captain of the Port proposed a means to enhance port safety at two locations where the deep ship channels (for ocean-going ships) intersect the Intracoastal Waterway (which mainly has barge traffic and small vessels). The proposal involved establishing “regulated navigation areas” that would require vessels from both directions to radio their approach and location to all other vessels in the vicinity. This proposal may merit further consideration before a decision is made on the need for a VTS in this port area.

At the ports we visited, few stakeholders said they had been involved with the Coast Guard in discussing whether such alternatives are a viable alternative to VTS 2000 systems in their port. In discussions with us, Coast Guard officials agreed that greater communication with key stakeholders is an essential step in making decisions about VTS 2000.

An additional study currently being conducted by the Marine Board of the National Research Council may provide additional information that will be useful in assessing VTS 2000. Among other things, this study will address the role of the public and private sectors in developing and operating VTS systems in the United States. An interim report is due to be completed in June 1996.

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## Support for Vts 2000 Not Widespread Among Key Stakeholders Interviewed at Ports

Most of the stakeholders we interviewed did not support installing a VTS 2000 system at their port. Their opinions were predominantly negative at five ports, about evenly split at two, and uncertain at one. Many who opposed VTS 2000 perceived the proposed system as being more expensive than needed.

Support for VTS 2000 was even less when we asked if stakeholders would be willing to pay for the system, perhaps through fees levied on vessels. A clear majority of the stakeholders was not willing to fund VTS 2000 at six of the ports; at the other two, support was mixed.

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## Interviewed Key Stakeholders Showed Greater Support for Alternative Vts Systems

The stakeholders interviewed at six ports generally supported some form of VTS system that they perceived to be less expensive than VTS 2000. However, at the four ports with VTS systems, this support did not reflect a belief that a new system was needed; most stakeholders said that existing systems were sufficient. The two locations without a VTS system (New Orleans and Tampa) supported an alternative VTS system. In contrast, at Mobile/Pascagoula, most stakeholders were opposed to a VTS system, saying that the low volume of ocean-going vessels did not warrant such a system. At Port Arthur/Lake Charles, views were evenly mixed as to whether a system was needed.

In general, because stakeholders perceived that other alternative VTS systems could be less costly than VTS 2000, they were somewhat more disposed to consider paying for them. At two locations with existing private VTS systems, they are already doing so. At the remaining six ports, the stakeholders had the following views on paying for alternative VTS systems: stakeholders' views were generally supportive at three, opposed at one, and mixed at the other two.

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## Several Key Issues Could Affect the Successful Establishment of Privately Funded Vts Systems

In discussions with key stakeholders at each of the eight ports we visited, three main concerns emerged that could impede private-sector involvement in building and operating VTS systems.

Obtaining funding for construction. At half of the six ports that do not have a privately funded VTS, the stakeholders were concerned that if local VTS systems are to be funded by the user community rather than through tax dollars, the lack of adequate funding for constructing such a system may pose a barrier. The cost of a VTS depends on its size and complexity; however, radar equipment, computer hardware and software, and a facility



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for monitoring vessel traffic alone could cost \$1 million or more at each port. The privately funded systems at Los Angeles/Long Beach and Philadelphia/Delaware Bay initially faced similar financing concerns; both received federal or state assistance, either financial or in-kind.

Obtaining liability protection. At each of the same six ports, most of the stakeholders were concerned that private VTS operators might be held liable for damages if they provided inaccurate information to vessel operators that contributed to an accident. At locations such as Tampa and San Francisco, where the possibility of privately funded systems has been discussed, the stakeholders believe that securing liability protection is a key issue that must be resolved before they would move forward to establish a VTS system. Currently, the two existing privately funded VTS systems receive liability protection under state laws, except in cases of intentional misconduct or gross negligence. However, these laws have yet to be tested in court.

Defining the Coast Guard's role. Federal law does not address what role, if any, the Coast Guard should play in privately funded systems. At seven of the ports, most of the stakeholders said the Coast Guard should have a role. In support of this position, they cited such things as the (1) need for the Coast Guard's authority to require mandatory participation by potential VTS users and to ensure consistent VTS operations and (2) Coast Guard's expertise in and experience with other VTS systems.

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In summary, difficult choices need to be made about how to improve marine safety in the nation's ports. There is an acknowledged need to improve marine safety at a number of ports, but not much agreement about how it should be done. Decisions about whether VTS 2000 represents the best approach are made more difficult by the uncertainties surrounding the scope, cost, and appropriateness of VTS 2000 over other alternatives in a number of locations. While some unresolved questions cannot be immediately answered, we think it is vitally important for the Coast Guard to present a clearer picture to the Congress as soon as possible of what VTS 2000 is likely to entail. Complete, up-to-date information will put the Congress in a better position to make informed decisions about the development of VTS 2000.

Mr. Chairman, this concludes our prepared statement. We would be happy to respond to any questions that you or the Members of the Subcommittee may have.

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