
Office of Inspector General

**THE COAST GUARD'S PLANNING
PROCESS FOR THE DEEPWATER
CAPABILITY REPLACEMENT
PROJECT**

**Report Number: MA-2000-065
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**U.S. Department of
Transportation**
Office of the Secretary
Of Transportation
Office of Inspector General

Memorandum

Subject: **ACTION:** The Coast Guard's Planning Process for the
Deepwater Capability Replacement Project
MA-2000-065

Date: March 9, 2000

Reply To
Attn. Of: JA-40

From: Alexis M. Stefani
Assistant Inspector General for Auditing

To: Commandant
United States Coast Guard

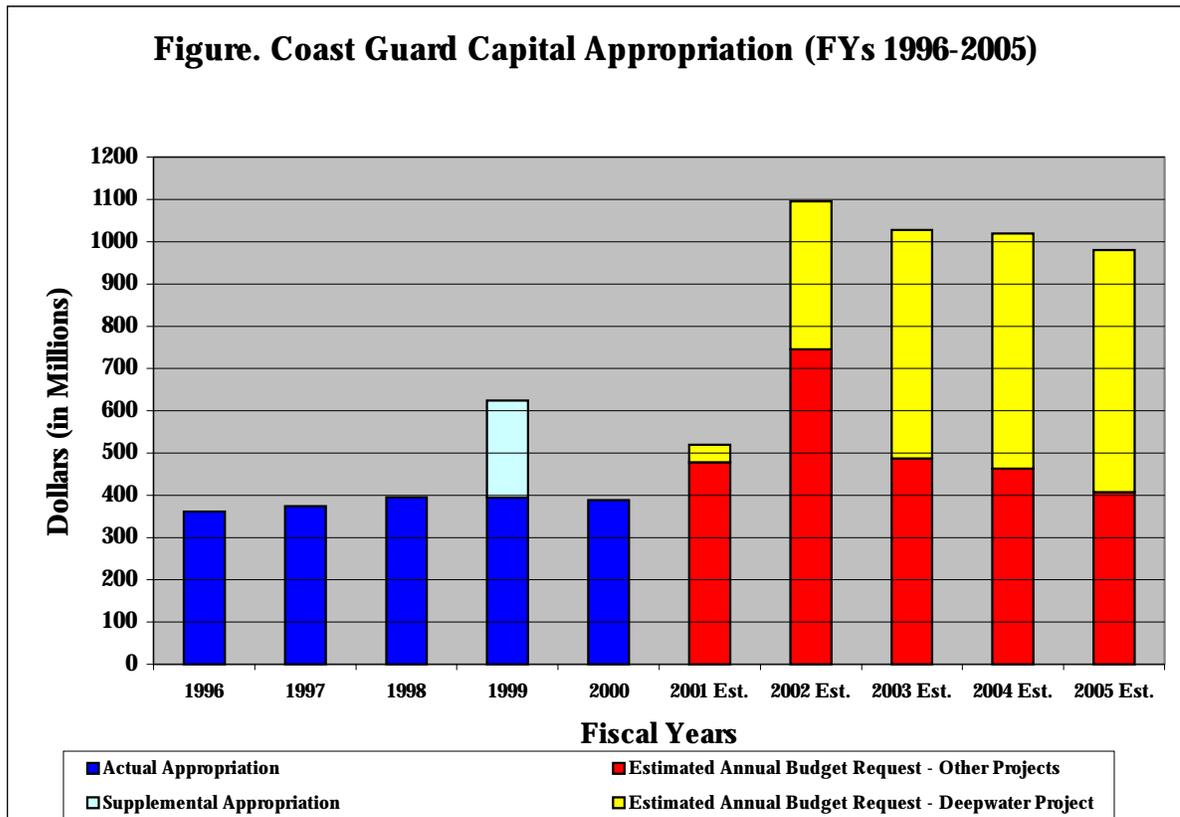
On March 1, 2000, at a hearing of the Subcommittee on Transportation and Related Agencies, Committee on Appropriations, U.S. House of Representatives, we provided testimony on the Coast Guard's Deepwater Capability Replacement Project. A copy of our statement is attached. Our conclusions and recommendations are summarized in this cover memorandum.

We concluded that the Deepwater Project planning process is sound. In the past, the Coast Guard acquired individual systems without a focus on interoperability. Now, to its credit, the Coast Guard is planning for the replacement of its Deepwater assets as a coordinated system rather than as a series of distinct procurements. Three industry teams are developing competing proposals for replacing or modernizing existing deepwater assets that include 206 aircraft, 93 vessels, and related communications and navigation systems. This approach is expected to enhance interoperability and reduce personnel and operating costs.

The Coast Guard strengthened its implementation of the planning process in response to its own assessments and recommendations by the Office of Management and Budget (OMB) and the General Accounting Office (GAO). However, the Coast Guard is still responding to recommendations by OMB and GAO, and significant gaps need to be filled. These gaps include:

- Completing internal engineering evaluations and providing for an independent assessment of current condition and remaining useful life for the 110-foot cutters.
- Updating the condition assessment for existing sensor, communications, and navigation systems to reflect planned improvements.
- Correcting inaccuracies in data already provided to the industry teams on the cost of operating existing Deepwater assets.
- Using the report by the Interagency Task Force on Roles and Missions to revise the Project justification.

It is important that the planning process achieve its objective of identifying an integrated system that can reduce personnel and operating costs because the Deepwater Project will be costly. The Coast Guard currently estimates that it will request \$350 million in Fiscal Year 2002 and \$500 million annually for 19 years to acquire or modernize Deepwater assets. As shown in the Figure, this will result in a significant sustained increase in the Coast Guard's capital budget.



Source for 2001-2005 Estimated Data: Coast Guard Five Year Capital Investment Plan.

The Coast Guard also faces a challenge in proceeding with a budget request of \$350 million for Fiscal Year 2002 before the planning process is completed. The planning process, which will result in an acquisition strategy for determining which assets should be replaced or modernized and when that should occur, will not be completed until July 2001. The President's budget for Fiscal Year 2002 will be submitted to the Congress in February 2001 and has to be approved by the Department of Transportation and OMB before then. The Coast Guard will have to prepare its justification for the Fiscal Year 2002 request 8 months or more before the planning process is complete.

The Coast Guard's Deepwater assets will reach the end of their useful lives over the next 30 years. So the question is not whether they have to be replaced or modernized, but how and when. An important subsidiary issue is how priorities will be established within annual fiscal limitations. The Coast Guard will have to reconcile how it can proceed with a budget request in advance of completing its comprehensive planning process. Three options it can consider are to:

- Defer the anticipated \$350 million Fiscal Year 2002 Deepwater budget request until the results of the planning process are known.
- Expedite the planning process to identify the most critical Deepwater needs and justify the Fiscal Year 2002 budget request on that basis.
- Use information available from the industry teams to develop a current cost and schedule estimate for the Project that identifies anticipated acquisitions and justify the Fiscal Year 2002 budget request on that basis.

Also, the Coast Guard does not currently have a civilian presence on the Project management team. Although the Coast Guard's 1997 assessment identified the lack of civilian staff on the Project management team as a high risk factor, no civilian positions were added. In view of the planned 20-year life of the Project, the Coast Guard needs to strengthen the structure of its Project management staff to address the lack of continuity that could be caused by the Coast Guard's mandatory rotation policy for military personnel.

We recommend that the Coast Guard:

1. Complete its outstanding commitments to develop better data on existing Deepwater assets by:
 - Completing internal engineering evaluations and providing for an independent assessment of current condition and remaining useful life for the 110-foot cutters;

- Updating the condition assessment for existing sensor, communications, and navigation systems to reflect planned improvements;
 - Correcting errors and omissions in the maintenance backlog and operating expense data and providing this information to the industry teams; and
 - Using the report by the Interagency Task Force on Roles and Missions to revise the Mission Needs Statement and capability requirements included in the Project justification.
2. Develop a strategy for justifying the planned \$350 million Project budget request for Fiscal Year 2002, which considers options including:
- Deferring the proposed budget request until the results of the planning process are known;
 - Expediting the planning process to identify the most critical Deepwater needs as a basis for requesting procurement funds for Fiscal Year 2002; or
 - Using the industry teams' concept plans to develop a current cost estimate for the Project as the basis for requesting procurement funds in Fiscal Year 2002.
3. Reduce its risk with respect to leadership continuity by providing for civilian staffing at the senior management level of the Deepwater Project team and extending duty tours for senior military personnel.

In accordance with Department of Transportation Order 8000.1C, we would appreciate receiving your written comments within 30 days. If you concur with our findings and recommendations, please indicate for each recommendation the specific action taken or planned and target dates for completion. If you do not concur, please provide your rationale. Furthermore, you may provide alternate courses of action that you believe would resolve the issues presented in this report.

We appreciate the courtesies and cooperation extended by your staff. If you have any questions or need further information, please call me at (202) 366-1992 or Tom Howard, Deputy Assistant Inspector for Maritime and Departmental Programs, at (202) 366-5630.

Attachment

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Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to discuss the Coast Guard's appropriation request for Fiscal Year 2001. Our statement today focuses on the Deepwater Capability Replacement Project. The Project represents the largest capital improvement effort ever undertaken by the Coast Guard. It has been estimated that the Project may take 20 years to complete and require an additional \$500 million per year in funding. We completed a review of the project at the request of the Commandant.

The Project is intended to replace or modernize all assets used in Deepwater missions, which generally occur more than 50 miles offshore. These missions include search and rescue, drug interdiction, alien migrant interdiction, and fisheries law enforcement.

The Coast Guard began planning for the replacement of its existing Deepwater assets in 1996 because these assets are approaching the end of their projected service lives. The Deepwater assets include 206 aircraft, 93 vessels, and related sensor, communications, and navigation systems. This represents 99 percent of the Coast Guard's aircraft and 100 percent of vessels 110 feet and longer, excluding buoy tenders and icebreakers.

The Coast Guard is planning for the replacement of its Deepwater capability as an integrated system rather than a series of distinct procurements. For example, rather than specifying that it wants a medium endurance cutter or long-range helicopter, Coast Guard is asking industry teams to propose vessels and aircraft that can work together to meet mission needs.

The Coast Guard expects to spend \$117 million to develop a plan for replacing or modernizing existing assets. To date, the Congress has supported the planning phase of the Project by appropriating \$75 million. For Fiscal Year 2001, the Coast Guard is requesting an additional \$42.3 million to complete the planning process and develop an acquisition strategy.

Our testimony today addresses three issues:

- First, the Deepwater planning process is comprehensive, sound, and innovative. The process is using competition to identify assets that will best meet mission requirements, enhance interoperability, and minimize costs. When completed, this planning process should provide Coast Guard a good base for establishing needs and developing an acquisition strategy.
- Second, the Coast Guard strengthened its implementation of the planning process in response to its own assessments and recommendations by the Office

of Management and Budget (OMB) and the General Accounting Office (GAO). However, the planning process will not be completed until July 2001. The Coast Guard is still responding to recommendations by OMB and GAO and major gaps need to be filled. For example, the Coast Guard needs to complete condition assessments and update its Project justification.

- Third, the Coast Guard plans to request \$350 million in the Fiscal Year 2002 budget to begin the Deepwater acquisition. This will be in addition to the normal acquisition request that has averaged about \$400 million for the last 5 fiscal years. However, the President's budget for Fiscal Year 2002 will be submitted to the Congress in February 2001 while the Coast Guard's planning process is ongoing. The planning process will not be completed until July 2001.

Coast Guard will have to reconcile how it can proceed with a budget request in advance of completing the planning process. An important subsidiary issue is how priorities will be established within annual fiscal limitations. If the Coast Guard does not want to defer the anticipated \$350 million Fiscal Year 2002 Deepwater budget request until the results of the planning process are known, it will need to decide how to justify that budget. The issue is not whether Deepwater assets need to be replaced or modernized over the next 30 years, but how it will be done, what assets need to be acquired, what it will cost, and when funding will be needed.

The Deepwater Planning Process Is Sound

The Congress has been supportive of the Project, appropriating \$75 million for the planning phase. The Coast Guard is using this funding to have three industry teams develop proposals for assets that will provide the capability to carry out its Deepwater missions. The industry teams will propose which assets should be replaced or modernized and when that should occur. The Coast Guard is also contracting for an independent assessment of its needs and will use the results to evaluate the industry teams' proposals. This process will provide the Coast Guard a good base for establishing its needs and developing an acquisition strategy.

In the past, Coast Guard acquired individual systems without a focus on interoperability. Now, to its credit, the Coast Guard is planning for the replacement of its Deepwater assets as a coordinated system rather than as a series of distinct procurements. For example, rather than specifying that it wants a medium endurance cutter or long-range helicopter, Coast Guard is asking industry teams to propose vessels and aircraft that can work together to meet mission needs. This comprehensive approach is intended to enhance interoperability.

Coast Guard also hopes that it will be able to reduce operating and personnel costs through the use of technology and common maintenance requirements.

Implementation of the Planning Process Has Been Improved, But Major Gaps Need to Be Filled

In 1998, the GAO expressed concern about the Project's justification, and the accuracy and reliability of data provided to the industry teams. Over the past year, the Coast Guard made progress in developing better data and providing the data to the teams. For example, the Coast Guard assessed the remaining useful life for all of its aircraft and larger vessels. The new data show that the assets will not begin to reach the end of their useful lives as early as the Coast Guard originally estimated. Specifically, existing aircraft will last 11 or more years longer and larger vessels an additional 5 to 10 years. This should have an impact on budget requirements in the early years of acquisition.

Accurate and reliable data on the condition and cost of operating existing assets are critical for industry teams. The teams will use these data to identify relative priorities and develop their proposals for replacing or modernizing assets. It is important, therefore, that the Coast Guard complete its outstanding commitments to develop better data. These are:

- Completing current condition and remaining useful life assessments for the 110-foot cutters. These cutters represent 53 percent of the Deepwater vessels and are currently valued at \$185 million. The Coast Guard plans to complete its engineering evaluations, but does not plan to provide for an independent assessment of condition and remaining useful life as was done with all the other classes of Deepwater vessels. This is important because these vessels are used extensively in law enforcement missions. These vessels were acquired at a cost of \$276 million, but the cost of replacing this capability will be significantly more.
- Updating the condition assessment for existing sensor, communications, and navigation systems to reflect planned improvements. These systems include things such as radar detection equipment, signal transmitters and receivers, and computer systems. Although the Coast Guard provided condition assessments to the industry teams at the start of the planning process, it did not include the impact of already planned improvements that will reduce capability shortfalls.
- Correcting inaccuracies in data already provided to the industry teams on the cost of operating existing Deepwater assets. The operating cost data provided to the industry teams in February 1999 contained significant omissions and errors. For example, the data understated the cutter maintenance backlog by

\$400 million and excluded \$427 million of overhead expenditures for vessels and aircraft from the operating costs.

- Using the report by the Interagency Task Force on Roles and Missions to revise the Project justification. Coast Guard withdrew the original justification because OMB requested additional information on why the Project was needed. The justification is currently being revised based on the Task Force report that was released in February 2000.

Anticipated Fiscal Year 2002 Budget Request Will Present a Challenge

The Deepwater Project envisions a long-term commitment of funds to acquire and/or improve a wide variety of assets over a 20-year period. Based on the original cost estimate for the Project of \$9.8 billion, the Coast Guard expects to request \$350 million in Fiscal Year 2002 and \$500 million annually for the next 19 years. While the Project employs a sound process to identify needs and alternatives, *it is too early to determine with any degree of precision what the Project will cost or how long it will take to complete.*

Although the Coast Guard received preliminary information on concepts from each of the industry teams in December 1999, their proposals for an integrated system are not due until April 2001. The Coast Guard will decide what assets it will replace or modernize, and when that will occur, after evaluating the systems proposed by the teams. This decision, scheduled in July 2001, will form an acquisition strategy.

According to the Commandant, the acquisition strategy could be based on an integrated system proposed by one of the industry teams, a combination of those proposals, or some other alternative developed by the Coast Guard. The Commandant has emphasized that he is not required to select one of the industry teams' proposals intact, and will consider all possibilities before deciding on an acquisition strategy.

The Coast Guard plans to request \$350 million in Fiscal Year 2002 to begin procuring or modernizing Deepwater assets. However, the planning process for the Project will not be completed in time to support the budget request. The President's budget for Fiscal Year 2002 will be submitted to the Congress in February 2001 and has to be approved by DOT and OMB prior to this time. The Coast Guard is not scheduled to decide what and when it will procure or modernize until July 2001.

The Coast Guard's Deepwater assets will reach the end of their useful lives over the next 30 years. So the question is not whether they have to be replaced or

modernized, but how and when. However, the Coast Guard will have to reconcile how it can proceed with a budget request in advance of completing its comprehensive planning process. Three options it can consider are to:

- Defer the anticipated \$350 million Fiscal Year 2002 Deepwater budget request until the results of the planning process are known.
- Expedite the planning process to identify the most critical Deepwater needs and justify the Fiscal Year 2002 budget request on that basis.
- Use information available from the industry teams to develop a current cost and schedule estimate for the Project that identifies anticipated acquisitions and justify the Fiscal Year 2002 budget request on that basis.

WHAT IS THE DEEPWATER PROJECT?

The Deepwater Capability Replacement Project (Project) is the largest capital program ever proposed by the Coast Guard. The Project is estimated to take 20 years to complete and cost between \$9.8 and \$15 billion. Its purpose is to identify vessels, aircraft, and related sensor, communications, and navigation systems that work together to accomplish mission objectives. The Coast Guard will consider procuring new assets and modernizing existing assets.

Deepwater operations involve missions that occur 50 miles or more offshore. The primary Deepwater missions include search and rescue, drug interdiction, alien migrant interdiction, and fisheries law enforcement. These four missions account for about 93 percent of the total operating hours for Deepwater vessels and aircraft. Deepwater ships comprise 100 percent of the Coast Guard's vessels

110 feet and longer, excluding icebreakers and buoy tenders. Similarly, Deepwater aircraft comprise 99 percent of the Coast Guard's aircraft fleet, currently consisting of 30 C-130 cargo aircraft, 41 Falcon jets, and 135 helicopters.

The Coast Guard is using an innovative approach to plan for the replacement of its Deepwater assets. In the past, the Coast Guard acquired individual systems without a focus on interoperability. Now, to its credit, the Coast Guard is planning for the replacement of its Deepwater assets as a coordinated system rather than a series of distinct procurements. For example, rather than specifying that it wants a medium endurance cutter or long-range helicopter, the Coast Guard is asking industry teams to propose vessels, aircraft, and sensor, communications, and navigation systems, that can work together to meet mission needs. This comprehensive approach should enhance interoperability. The Coast Guard also hopes that it will be able to reduce operating and personnel costs through the use of technology and common maintenance requirements.

The Coast Guard has contracted with three industry teams to develop proposals on which assets can best provide the capabilities needed to perform its Deepwater missions. The Coast Guard will also conduct its own assessment of needs for use in evaluating the industry teams' proposals. This should provide the Coast Guard a variety of options for developing an acquisition strategy.

According to the current Project schedule, the industry teams will complete their proposals in April 2001. The Coast Guard will decide what assets it will replace or modernize, and when that will occur, after evaluating the systems proposed by the teams. This decision, scheduled in July 2001, will form an acquisition strategy.

Through Fiscal Year 2000, a total of \$75.1 million has been appropriated for Project planning and preliminary design. The President's Budget for Fiscal Year 2001 includes a \$42.3 million request to complete planning and prepare a strategy for acquiring or modernizing Deepwater assets. If appropriated, this will bring total funding for the planning phase of the Project to \$117.4 million.

The Coast Guard currently plans to request \$350 million in Fiscal Year 2002 and \$500 million annually over the next 19 years to implement its acquisition strategy. This plan is based on Coast Guard's initial estimate that the Project would cost \$9.8 billion and take 20 years to complete.

IMPLEMENTATION OF THE PLANNING PROCESS HAS BEEN IMPROVED, BUT SIGNIFICANT GAPS NEED TO BE FILLED

In October 1998, the General Accounting Office (GAO) reported that the Coast Guard did not have sufficient, complete, and accurate service life and cost data for its Deepwater assets to justify proceeding with the Project. The Office of Management and Budget (OMB) and internal Coast Guard assessments also raised questions regarding the Project's justification. In response to these concerns, the Coast Guard planned a number of actions intended to improve the planning process including:

- Contracting for assessments to determine the condition and expected service life of all existing Deepwater vessels, aircraft, and sensor, communications, and navigation systems.
- Compiling data on the cost to operate existing Deepwater assets.
- Revising the Project justification after an independent review of its roles and missions.

Accurate and reliable data on existing assets are critical for industry teams to correctly identify relative priorities and develop proposals for replacing or modernizing assets. Furthermore, the Coast Guard will use the information as

criteria for assessing the industry teams' proposals and for developing an acquisition strategy.

To date, the Coast Guard completed condition assessments for all of its aircraft and three of the four classes of vessels. The Coast Guard also contracted with a consultant to compile data on the cost of operating current Deepwater assets. The completed condition assessments and the operating cost data were provided to the industry teams for use in developing their proposals.

The results of the completed condition assessments should be useful to the industry teams because they show that the Coast Guard's Deepwater aircraft and larger vessels will not begin to reach the end of their useful lives as soon as originally estimated. For example, based on improvements already planned or underway, the Coast Guard's fleet of aircraft will not begin to reach the end of their useful lives for an additional 11 or more years. The cutter assessments completed to date show that they will not begin to reach the end of their useful lives for an additional 5 or more years.

Given these results, it is important that the Coast Guard complete its outstanding commitments to develop better data and provide the results to the industry teams in time for use in developing their proposals. These outstanding commitments are as follows:

- Completing current condition and remaining useful life assessments. The Coast Guard has not completed its assessments of the condition and remaining useful life of the 110-foot patrol boats, which comprise 53 percent of the Deepwater vessel fleet. Although the Coast Guard completed its engineering evaluations, a study on the structural integrity of vessel hulls is not scheduled for completion until the end of March 2000. Also, the Coast Guard has not scheduled an independent verification of its condition assessments as was done with the other three classes of vessels. This is important because condition assessments of the Coast Guard's other three classes of vessels have resulted in increased useful life projections.
- Updating the condition assessment for existing sensor, communications, and navigation systems. These systems include equipment such as radar sensors, signal transmitters and receivers, and computer systems. Although the Coast Guard provided information on the condition of existing systems to the industry teams at the start of the planning process, it did not include the impact of already planned improvements. These improvements are important because they will reduce capability shortfalls. For example, over \$25 million in sensor and communications capital improvement projects are ongoing. The Coast Guard plans to complete its update in July 2000 and provide the results to the industry teams.

- Correcting inaccuracies in operating cost data. The Coast Guard contracted with a consultant to compile the costs for operating existing Deepwater assets and provided the resulting data to the industry teams in February 1999. However, we identified significant omissions and errors in the data. For example, the consultant understated the cutter maintenance backlog by \$400 million and excluded \$427 million of overhead expenditures for vessels and aircraft from the operating costs. Using these data, the industry teams' proposals could understate the cost of operating existing assets. The Coast Guard told us it would correct these errors and omissions in its next update of the data, scheduled for March 2000.
- Using the report by the Interagency Task Force on Roles and Missions to revise the Project justification. The Coast Guard withdrew its formal Project justification at the direction of OMB. In March 1999, the President appointed an Interagency Task Force to provide advice and recommendations on the appropriate roles and missions for the Coast Guard through the year 2020. The Task Force's final report was released in February 2000. The Task Force determined that the Nation would continue to need the Coast Guard to perform all of its multiple missions. The Task Force also strongly endorsed the need for the Coast Guard's Deepwater Project. The Coast Guard is currently revising its Project justification, and plans to complete it in April 2000.

PLANNING PROCESS WILL NOT BE COMPLETED

IN TIME TO PREPARE THE FISCAL YEAR 2002 BUDGET

The Coast Guard received preliminary information on concepts from each of the industry teams in December 1999, but their proposals for an integrated system are not due until April 2001. The Coast Guard will decide what assets it will replace or modernize, and when that will occur, after evaluating the systems proposed by the teams. This decision, scheduled in July 2001, will form an acquisition strategy. While the Project employs an excellent process to identify needs and alternatives, it is too early to determine with any degree of precision what the Project will cost or how long it will take to complete.

According to the Commandant, the strategy could be based on an integrated system proposed by one of the industry teams, a combination of those proposals, or some other alternative developed by the Coast Guard. The Commandant has emphasized that he is not required to select one of the industry teams' proposals intact, and will consider all possibilities before deciding on a procurement plan.

The Coast Guard's Project planning process will not be completed in time to support its proposed Fiscal Year 2002 budget request of \$350 million. The President's Budget will be submitted to Congress in February 2001; however, the

industry teams' proposals and the Coast Guard's Deepwater acquisition strategy are not scheduled for completion until April and July 2001, respectively.

Comparison of Project Milestones and Fiscal Year 2002 Budget Milestones

Project Schedule	Industry Teams Developing Proposals						CG Evaluation of Designs	
	12/1999	07/2000	09/2000	02/2001	03/2001	04/2001	07/2001	
Budget Schedule	CG Budget Submission to Department	CG Budget Submission to OMB	President's Budget Submission to Congress	Appropriation Hearings				

The Coast Guard's Deepwater assets will reach the end of their useful lives over the next 30 years. So the question is not whether they have to be replaced or modernized but how and when. However, the planning process for the Project will not be completed in time to support the Fiscal Year 2002 budget request. Coast Guard will have to reconcile how it can proceed with a budget request in advance of completing the planning process. An important subsidiary issue is how priorities will be established within annual fiscal limitations. Three options are to:

- Defer the anticipated \$350 million Fiscal Year 2002 Deepwater budget request until the results of the planning process are known.
- Expedite the planning process to identify the most critical Deepwater needs and justify the Fiscal Year 2002 budget request on that basis.
- Use information available from the industry teams to develop a current cost and schedule estimate for the Project that identifies anticipated acquisitions and justify the Fiscal Year 2002 budget request on that basis.

This concludes our statement. We are prepared to answer questions.