Office of Inspector General
Audit Report

Monitoring of Seagoing and Coastal Buoy Tender Construction

U.S. Coast Guard

Report Number: R5-CG-7-002
Date Issued: January 24, 1997

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JA-1

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Assistant Inspector General for Auditing

Chief of Staff
U.S. Coast Guard

I am providing this report for your information and use. We concluded U.S. Coast Guard oversight of the construction of seagoing and coastal buoy tenders by Marinette Marine Corporation was well managed and highly effective in ensuring materials and work performance complied with contract requirements, and appropriate remedies were instituted when contractual requirements were not being met. A synopsis of the report follows this memorandum.

This report does not include recommendations. Therefore, no action is required under Department of Transportation Order 8000.1C. I appreciate the cooperation and assistance your staff extended to the audit team. For questions or additional information, please call me on (202) 366-1992 or Ronald Hoogenboom, Chicago Regional Manager, on (312) 353-0104.

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Attachment

U.S. Department of Transportation

Office of Inspector General

Monitoring of Seagoing and Coastal Buoy Tender Construction

U. S. Coast Guard

Report Number: R5-CG-7-002 ***January 24, 1997***

SYNOPSIS

Objective

The objective of this audit was to evaluate the effectiveness of U.S. Coast Guard's oversight of the construction by Marinette Marine Corporation (MMC) of seagoing and coastal buoy tenders.

Conclusion

Coast Guard oversight of the construction of seagoing and coastal buoy tenders by MMC was well managed and highly effective in ensuring materials and work performance complied with contract requirements, and appropriate remedies were instituted when contractual requirements were not being met.

Monetary Impact

This report does not have a monetary impact.

Recommendation

We did not make any recommendations.

Management Position

Since we did not make recommendations, management is not required to respond to the report under Department of Transportation Order 8000.1C.

Office of Inspector General Comments

Office of Inspector General comments are not provided since management's position was not obtained.

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I. INTRODUCTION

Background

To facilitate essential marine traffic, the U.S. Coast Guard places and maintains buoys and other navigational aids with specially configured vessels called buoy tenders. The Coast Guard has 37 buoy tenders which annually service over 50,000 navigational aids. These buoy tenders also assist in search and rescue, law enforcement, marine environmental protection, and oil-skimming missions.

The present seagoing buoy tender fleet of 26 vessels, and the coastal buoy tender fleet of 11 vessels, are approaching the end of their useful service lives, and the Coast Guard is replacing them with a more modern and efficient fleet of tenders.

In 1993, the Coast Guard awarded a $41 million firm-fixed-price performance specification contract, with economic price adjustments, to Marinette Marine Corporation (MMC) to design and construct a new seagoing tender. Including adjustments for inflation, contract bonuses, and contract modifications, for changes mostly initiated by the Coast Guard, the contract cost for the design and delivery of the first vessel is about $47 million. In addition to design, construction, and delivery of the first vessel, the contract requires certain spare parts, training, and a technical data package. The contract also includes options for four additional vessels and related spare parts. If all 5 tenders are built, the contract is estimated to cost $175 million. This new "Juniper" class of seagoing tenders is 225 feet long, equipped for long off-shore voyages, has a lift capacity of 20 tons, an ice-strengthened hull for winter tending, and a recovery system for oil spill containment and collection. The initial vessel, referred to as the CGC Juniper, was actually the first on-scene command vessel at the impact location of TWA Flight 800 on July 17, 1996. The vessel and its crew, on its maiden oceanic voyage, performed its mission beyond expectations.

In 1993, the Coast Guard also awarded a $22 million fixed-price-with-incentive performance specification contract to MMC to design and construct a new coastal tender. The estimated cost at the time of our audit was $35 million. The contract provides for a lead tender, options for 13 additional tenders (three have been awarded), spare parts, training, and a technical data package. If all 14 tenders are built, the contract is estimated to cost $291 million. This new "Keeper" class of coastal buoy tenders is

175 feet long, highly maneuverable in rivers, bays, and harbors, and has a lift capacity of 10 tons.

The Coast Guard operates its Project Resident Office (PRO) at MMC with 52 on-site personnel administering the contract, monitoring tender design and construction, and overseeing contractor quality control testing. The PRO reports directly to the Project Manager, Office of Acquisition, at Coast Guard Headquarters.

Objective, Scope, and Methodology

The objective of this audit was to evaluate the effectiveness of Coast Guard oversight of the construction by MMC of seagoing and coastal buoy tenders.

We reviewed Coast Guard policies and operating procedures concerning quality control oversight, contract specifications, test report files, data on recorded discrepancies, and the most current internal control risk assessment. We discussed construction testing procedures and controls, as well as follow-up methods for contract noncompliance, with Coast Guard program officials. We observed six tenders under construction, the testing of equipment, and the Coast Guard oversight of these on-going activities.

We evaluated a selection of hardware items, and their associated acceptance testing, that were incorporated into the tenders' construction, as well as the tenders' technical manuals needed for operation. The contracts' Circular of Requirements (COR) sets forth the material specifications, and outlines the testing procedures needed to ensure the tenders attain the required level of operational performance. We reviewed 6 of 135 COR items for the seagoing tenders, and 5 of 126 COR items for the coastal tenders.

We evaluated the Coast Guard organizational structure and quality assurance process relied upon to provide independent design, construction, and testing oversight. The PRO assigned particular oversight tasks to individual inspectors by area of expertise. We verified that these individuals monitored construction of the vessels' hulls and testing of the vessels' systems and equipment.

We performed the audit between February 26 and August 1, 1996, at the Coast Guard Headquarters, and the PRO in Marinette, Wisconsin. We conducted our audit work in accordance with Government Auditing Standards prescribed by the United States Comptroller General.

Management Controls

We evaluated Coast Guard management controls pertaining to our audit objective. The Coast Guard control objective is to obtain tenders that comply with the contracts' technical and performance requirements. The PRO employs the following control techniques to monitor materials and work performance:

- observes the manufacturers' in-plant testing of material and equipment,
- observes/verifies MMC's construction and quality control testing,
- reviews operational test reports and analyses, and
- observes dockside and sea trials before final acceptance.

In addition, both the seagoing and coastal buoy tender contracts provide a formal construction testing matrix. MMC performs the scheduled tests, and the PRO oversees these tests. The PRO also maintains a database to track open items such as noncompliance issues, incomplete work, test/trial discrepancies, and outstanding deliverables. At preliminary vessel acceptance, the PRO's Contracting Officer uses information in the database as a basis for withholding payments until compliance is achieved.

Prior Audit Coverage

The Office of Inspector General has not previously audited the Coast Guard's oversight of buoy tender construction at MMC.

II. RESULTS OF AUDIT

Coast Guard oversight of the construction of seagoing and coastal buoy tenders by MMC was well managed and highly effective in ensuring materials and work performance complied with contract requirements, and appropriate remedies were instituted when contractual requirements were not being met. The following paragraphs discuss our testing of the PRO's oversight procedures and controls.

Material Compliance

We reviewed six COR items on the seagoing tenders and five COR items on the coastal tenders and found the selected items either fully met the contract specifications, or the PRO had identified and tracked exceptions, taking appropriate actions to ensure eventual compliance. We concluded Coast

Guard oversight procedures and controls effectively ensured materials complied with contract specifications.

Work Performance

We evaluated the Coast Guard organizational structure and quality assurance process relied upon to provide independent design, construction, and testing oversight. We determined the PRO monitored all tests identifying and tracking open exceptions, such as noncompliance issues, incomplete work, test discrepancies, and outstanding deliverables. We concluded Coast Guard oversight procedures and controls effectively ensured work performance complied with contract specifications.

Remedies

We evaluated the PRO's payment withholdings and interpretation letter procedures and found the PRO judiciously withheld payments for noncompliant construction and identified potential operational concerns which needed clarification through formal interpretation letters. We concluded Coast Guard instituted appropriate remedies when contractual requirements were not being met. Furthermore, we concluded that as a result of the PRO oversight, the contractor met contractual obligations in a timely and effective manner.

Exhibit

MAJOR CONTRIBUTORS TO THIS REPORT

The following individuals provided a major contribution to this report.

Ray Hillstrom	Project Manager
George Hardin	Auditor-in-Charge
Paul Streit	Auditor
Ray Gastrow	Auditor