Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington DC 20515

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January 26, 2018

SUMMARY OF SUBJECT MATTER

TO: Members, Subcommittee on Coast Guard and Maritime Transportation
FROM: Staff, Subcommittee on Coast Guard and Maritime Transportation
RE: Hearing on "Examination of Reports on the El Faro Marine Casualty and Coast Guard's Electronic Health Records System"

PURPOSE

The Subcommittee on Coast Guard and Maritime Transportation will hold a hearing on Tuesday, January 30, 2018, at 10:00 a.m., in 2167 Rayburn House Office Building to examine the fatal sinking of the U.S.-flagged cargo ship SS EL FARO and the Coast Guard's efforts to implement an Electronic Health Record system. The Subcommittee will hear testimony from the United States Coast Guard (Coast Guard or Service), the National Transportation Safety Board (NTSB), and the U.S. Government Accountability Office (GAO).

BACKGROUND

EL FARO Sinking

On October 1, 2015, during Hurricane Joaquin, the 790-foot U.S.-flagged cargo ship SS EL FARO sank in the Atlantic Ocean about 40 nautical miles northeast of Acklins and Crooked Island, Bahamas. The loss of the U.S.-flagged cargo vessel EL FARO, along with its 33-member crew, ranks as one of the worst maritime disasters in U.S. history, and resulted in the highest death toll from a U.S. commercial vessel sinking in almost 40 years (the last comparable U.S. maritime disaster was the sinking of the U.S. bulk carrier MARINE ELECTRIC off the coast of Virginia in February 1983, in which all but three of the 34 persons aboard lost their lives). Both the Coast Guard and the NTSB have determined that the sinking of the EL FARO was a preventable accident.

At the time of the sinking, EL FARO was on a U.S. domestic voyage with a full load of containers and roll-on roll-off cargo bound from Jacksonville, Florida to San Juan, Puerto Rico. As EL FARO departed port on September 29, 2015, a tropical weather system that had formed east of the Bahamas Islands was rapidly intensifying in strength. The storm system evolved into Hurricane Joaquin and, contrary to weather forecasts and standard Atlantic Basin hurricane

tracking models, travelled southwest. As various weather updates were received onboard EL FARO, the master directed the ship southward of the direct course to San Juan which was the normal route. The master's southern deviation ultimately steered EL FARO almost directly towards the strengthening hurricane.

As EL FARO began to encounter heavy seas and winds associated with the outer bands of Hurricane Joaquin, the vessel sustained a prolonged starboard list and began intermittently taking water into the interior of the ship. Shortly after 5:30 a.m. on the morning of October 1, 2015, flooding was identified in one of the vessel's large cargo holds. At the same time, EL FARO engineers were struggling to maintain propulsion as the list and motion of the vessel increased. After making a turn to shift the vessel's list to port, to close an open scuttle, EL FARO lost propulsion and began drifting with its beam toward the hurricane force winds and seas. At approximately 7:00 a.m., without propulsion and with uncontrolled flooding, the master contacted TOTE's designated person ashore and reported that the ship was experiencing some flooding. He said the crew had controlled the ingress of water but the ship was listing 15 degrees and had lost propulsion. The master also signaled distress using EL FARO's satellite distress communication system. After this point, the Coast Guard and TOTE were unable to reestablish communication with the ship. Shortly thereafter, the master gave the order to abandon ship. The vessel, at the time, was near the eye of Hurricane Joaquin, which had strengthened to a Category 3 storm. Rescue assets began search operations, including a U.S. Air National Guard hurricane tracking aircraft flying over the vessel's last known position, but the search was hampered by hurricane force conditions on scene.

After hurricane conditions subsided, the Coast Guard commenced additional search operations with assistance from commercial assets contracted by the vessel's owner. On October 4, 2015, a damaged lifeboat, two damaged life rafts, and deceased crewmember wearing an immersion suit were found. On October 5, 2015, a debris field and oil slick were found, and the Coast Guard determined that EL FARO was lost and declared the event a major marine casualty. The Coast Guard suspended the unsuccessful search for survivors at sundown on October 8, 2015.

On October 6, 2015, NTSB launched a team to lead the federal investigation in cooperation with the Coast Guard, the American Bureau of Shipping (EL FARO's classification society), and TOTE as parties. The U.S. Navy Salvage and Diving Division of the Naval Sea Systems Command was contracted to locate the sunken ship, assist in the sea floor documentation of the wreckage, and recover the voyage data recorder.

On October 31, 2015, a U.S. Navy vessel located the main wreckage of EL FARO at a depth of over 15,000 feet using side-scan sonar. EL FARO's voyage data recorder was successfully recovered from the debris field on August 15, 2016, and it contained 26-hours of bridge audio recordings as well as other critical navigation data that were used by investigators to help determine the circumstances leading up to this tragic incident.

Coast Guard Investigation

The Coast Guard convened a Marine Board of Investigation (MBI) under the authority of chapter 63 of title 46, United States Code, to examine the sinking of the EL FARO. The MBI held three public hearings in Jacksonville, Florida, in February and May 2016, and February 2017. Seventy-six witnesses testified during 30 days of hearings. The MBI designated the following organizations and person as parties-in-interest in the investigation: TOTE Incorporated, as the parent corporation of the vessel's owner and operator; ABS, as the authorized classification society of EL FARO; Herbert Engineering Corporation, as the naval architecture firm for the owner and operator; and Ms. Teresa Davidson, as next of kin for Captain Michael Davidson, the master of EL FARO. Over the course of the investigation, the MBI also relied on visits to EL FARO's sister vessel, EL YUNQUE, to help understand the internal configuration of the vessels and identify operational and maintenance issues that could have impacted both vessels. The MBI released its report in September 2017.

The MBI determined that the following events led to the sinking of EL FARO:

- EL FARO sailed too close to Hurricane Joaquin due to the master relying on outdated weather data, the master and deck officers not efficiently integrating the use of Bridge Resource Management techniques, and the cumulative effects of anxiety, fatigue, and vessel motion from heavy weather on crewmembers.
- EL FARO experienced an initial starboard list and intermittent flooding which were at least partially attributed to a vessel conversion project undertaken on EL FARO in 2005-2006 that increased the vessel's cargo carrying capacity and load line drafts. That conversion was not designated a "major conversion" by the Coast Guard, resulting in a lower standard of review.
- EL FARO experienced a reduction in propulsion due to an inability to maintain lube oil suction for the main propulsion plant due, at least partially, to the vessel's starboard list.
- The master altered course to put the wind on the vessel's starboard side to induce a port list, which was exacerbated by a previous shift of ballast. The port list resulted in a dynamic shifting of cargo and water, and caused the loss of lube oil suction and the subsequent loss of propulsion.
- The loss of propulsion resulted in the vessel drifting and aligning with the trough of the sea, exposing the beam of the vessel to the full force of the sea and wind. Water continued to flow through ventilation openings and degraded watertight fittings. The vessel's crew did not have the knowledge of the vessel to identify the sources of the flooding, and did not have the equipment or training to properly respond to the flooding.
- The uncontrolled flooding led to the sinking of the vessel and the loss of all 33 persons aboard.

As a result of its investigation, the Marine Board of Investigation made 31 safety and four administrative recommendations to address the causes of the EL FARO sinking. In December 2017, the Commandant of the Coast Guard released his Final Action memo

on the Marine Board's recommendation. The Commandant concurred with 29 of 31 safety recommendations and three of four administrative recommendations. Accordingly, the Coast Guard plans to update regulatory and policy guidance, enhance training for Coast Guard and third-party entities that conduct marine safety activities, and take additional steps to make the U.S.-flagged cargo fleet safer.

NTSB Investigation

The NTSB launched an investigation as soon as the sinking of EL FARO was confirmed. The NTSB identified several major safety issues associated with this accident, including:

- The Captain's actions;
- Currency of weather information;
- Bridge team management;
- Company oversight;
- Damage control plans; and
- Survival craft suitability.

The NTSB determined that the probable cause of the sinking of EL FARO and the subsequent loss of life was the master's insufficient action to avoid Hurricane Joaquin, his failure to use the most current weather information, and his late decision to muster the crew. The NTSB determined that there were also several contributing factors, including:

- Ineffective bridge resource management on board EL FARO, which included the master's failure to adequately consider subordinate officers' suggestions;
- Inadequacy of TOTE's voyage oversight and its vessel safety management system;
- Flooding in a cargo hold from an undetected open watertight scuttle and damaged seawater piping and subsequent downflooding through unsecured ventilation closures to the cargo holds;
- Loss of propulsion due to low lube oil pressure to the main engine resulting from a sustained list;
- The lack of an approved damage control plan that would have assisted the crew in recognizing the severity of the vessel's condition and in responding to the emergency; and
- The lack of appropriate survival craft for the conditions.

As a result of its investigation, the NTSB provided numerous recommendations for responsible entities, summarized as follows:

- Twenty-nine recommendations for the U.S. Coast Guard;
- Two recommendations for the Federal Communications Commission;
- One recommendation for the National Oceanic and Atmospheric Administration;

- Nine recommendations for the International Association of Classification Societies;
- One recommendation for the American Bureau of Shipping;
- One recommendation for Furuno Electric Company, Ltd; and
- Ten recommendations for TOTE Services, Inc.

Electronic Health Records

In September 2010, the Coast Guard awarded a five year, $14 million contract to acquire a commercial off-the-shelf electronic health records (EHR) system to manage data for over 56,000 members, replace outdated systems, and provide interoperability with Department of Defense (DoD) and Department of Veterans Affairs (VA) systems. After awarding the contract, the Coast Guard recognized that other health care-related information technology systems were outdated and also needed modernization. As a result, the Coast Guard expanded the project to become the Integrated Health Information System (IHiS) which included contracts with 25 different vendors with a then-estimated cost of $56 million to implement.

In January 2015, the Coast Guard's Chief Financial Officer (CFO) identified concerns regarding certain funding and contractual issues with the IHiS project. After conducting a thorough administrative investigation, the CFO determined that those issues did not constitute violations of the Anti-Deficiency Act. In July 2015, the Coast Guard Investigative Service initiated a criminal investigation of the IHiS project. That investigation is expected to be completed later this spring.

In October 2015, at the direction of the Vice Commandant of the Coast Guard, ADM Charles Michel, the Coast Guard cancelled the IHiS project, abandoning the effort to develop the new EHR system. After expending more than $66 million and wasting over five years, the Coast Guard finds itself in a worse position than before awarding the first contract in 2010. The Coast Guard is handling all medical information using paper records – records that cannot be shared with DoD or VA.

The Coast Guard is currently following the Non-Major Acquisition Process (NMAP) to implement a new EHR system. The Service has conducted research and determined that the recommended solution would be to use an existing federal agency system. However, despite the need for interoperability with DoD and VA systems, the Coast Guard has not yet made a final determination on the system to be used. Successfully and quickly implementing an EHR system will improve the quality and efficiency of care to the thousands of Coast Guard active duty and reserve members that receive health care.

At the request of the Chairman and Ranking Member of the Subcommittee, GAO conducted an investigation of the Coast Guard's effort to develop a modernized EHR system and account for how the Service could expend over $66 million with nothing to show for it. That investigation found that financial, technical, schedule and personnel risks led to the Coast Guard's decision to cancel the project. For nearly the entire span of the project, the Coast Guard allowed program managers to handle the IHiS project without sufficient oversight by acquisition professionals. At the same time that the project was expanding, the Coast Guard established its

NMAP policies to provide oversight for information technology acquisitions with greater than $10 million in procurement costs and less than $300 million in life cycle costs. Despite the IHiS project meeting those parameters, it was never brought under NMAP oversight. Similarly, although the Coast Guard chartered several oversight bodies for the IHiS project, including an Executive Steering Committee, a User Group, a Change Control Board, and a System Security Committee, GAO concluded in its report that the Coast Guard "could not provide evidence that the boards had ever been active in overseeing the project prior to its cancellation." (GAO-18-59 at page 20)

WITNESS LIST

Panel I

Rear Admiral John Nadeau
Assistant Commandant for Prevention Policy
United States Coast Guard

The Honorable Earl Weener
Board Member
Accompanied By: Mr. Brian Curtis
Director, Office of Marine Safety,
National Transportation Safety Board

Panel II

Rear Admiral Erica Schwartz
Director of Health, Safety and Work-life
United States Coast Guard

Rear Admiral Michael Haycock
Assistant Commandant for Acquisition and Chief Acquisition Officer
United States Coast Guard

Mr. David Powner
Director of Information Technology Management Issues
Government Accountability Office