UNITED STATES COAST GUARD
U.S. Department of Homeland Security

FINDINGS OF CONCERN

Office of Investigations and Casualty

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Wilmington, North Carolina

Findings of Concern 012-19

COMMERCIAL ASSIST TOWING OPERATION RISK MANAGEMENT

Purpose. The U.S. Coast Guard issues Findings of Concern (FoC) to disseminate information related to unsafe conditions identified as causal factors in a casualty and could contribute to future incidents. FoCs are intended to educate the public, state, or local agencies about the conditions discovered, so those affected may address the findings with an appropriate voluntary action or highlight existing applicable company policies or state/local regulations within their areas of influence. These FoCs complement the U.S. Coast Guard Marine Safety Alert 2-18, "Operational Risk Management and Planning is Essential to Safe Towing and Salvage Operations."

The Incident. On the evening of January 17, 2018, the 21-ft. Towboat US state-numbered commercial assist towing vessel NC2305BR (TOWBOAT US) departed Moss Landing Marina, NC with the 44-ft state numbered recreational vessel NC8373DY in tow. One master operated the TOWBOAT US and one deckhand was placed aboard the NC8373DY in tow. The planned voyage was to conduct a non-essential dock-to-dock estimated 40-mile towing operation from Moss Landing Marina in Washington, NC to Belhaven Shipyard, NC via the Pamlico River and Pungo River. Prior to departure, the National Weather Service (NWS) issued a Gale Warning Alert and Coastal Winter Storm Warning with advisories of significant impact to the marine environment including winds at 20 to 30 knots gusting up to 40 knots and rough seas of two to four feet. In addition, the Governor of North Carolina issued a State of Emergency due to anticipated hazardous weather conditions from the approaching winter storm. During the voyage, the TOWBOAT US owner was located in Jupiter, FL. While monitoring weather conditions remotely, the owner grew concerned for the master's safety as the weather became increasingly hazardous with heavy snowfall, strong winds and rough seas. The owner advised the master to seek safe refuge, but the master rejected the owner's requests and expressed confidence in completing the voyage. Six hours into the voyage, the vessels exited the lee of the Pamlico River and entered the Pungo River on a northerly course. Strong northerly winds and rough seas slowed the vessel's speed from six knots to two knots.

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In the early morning hours of January 18, 2019, the starboard aft mooring line aboard the TOWBOAT US fell overboard, dragged behind the vessel, submerged in the water, and fouled the single engine propeller. The TOWBOAT US lost propulsion and drifted dead in the water while still attached to the NC8373DY in tow. Subsequently, sea waves crested the TOWBOAT US and progressively flooded the open deck. The vessel became unstable and capsized on its portside. The master entered the water without a Personal Flotation Device (PFD) and grasped to the cabin superstructure. The deckhand immediately moved to the flying bridge aboard the NC8373DY in tow and radioed the Coast Guard. However, the deckhand did not attempt to provide the master with available lifesaving equipment carried onboard. Within minutes of entering the water, the master let go of the TOWBOAT US cabin, drifted away, submerged and drowned.

Contributing Factors and Analysis. The investigation identified numerous causative factors directly related to inadequate operational risk management by the owner and master, as well as, lack of operational procedures and training for commercial assist towing. These factors included:

- Company Operations Guideline

  The TOWBOAT US owner was a member of the Conference of Professional Operators for Response Towing (C-PORT) and possessed a signed licensing agreement to use the C-PORT Marine Assistance Company Operations Guideline. The operations guideline served as the company's Towing Safety Management Training and Operations Manual. C-PORT delivered the guideline to the owner as a template, with the expectation that the owner would customize and implement the contents for company specific towing operations. Coast Guard Investigators found that the owner kept the operations guideline in its generic template format and failed to develop any part of the provided policies, procedures, and training as recommended by C-PORT. In addition, the owner did not require the company's masters and deckhands to be familiar with the contents of the guideline as it applied to the performance of their duties.

- Emergency procedures and training

The owner failed to develop Emergency Response Procedures and Training for commercial assist towing operations as recommended by C-PORT. Specific to the casualty, the owner did not develop procedures and training for responding to loss of propulsion and man overboard emergencies.

The master failed to adhere to the company's mandatory life jacket wearing policy and at some time during the voyage, removed his Mustang Type V Commercial Inflatable PFD. It was possible the master removed his PFD while attempting to un-foul the starboard mooring line from the engine propeller for fear the device would inadvertently inflate. The lack of company emergency procedures and training to respond to a loss of propulsion emergency may have contributed to the master's decision to remove his PFD.

After the vessel capsized and the master entered the water, the deckhand did not make an effort to provide the master with available lifesaving equipment carried aboard the NC8373DY. Upon recovery, the NC8373DY had 12 Adult Type I PFD's onboard, as well as, one life ring. The deckhand was not aware of the lifesaving equipment carried onboard and did not attempt to locate it during the emergency. Had the owner developed safety procedures and training for responding to a man overboard emergency, the deckhand may have attempted to provide available lifesaving equipment to the master, increasing chances of survival.

- Pre-voyage vessel safety checklists

The owner and master failed to implement the company Captain's Checklist, which allows the master to report forecasted weather, sea conditions, and check the vessel's equipment prior to each voyage. The master failed to secure the starboard aft mooring line after departure and the line fell overboard, wrapped around the engine propeller and caused the vessel to lose propulsion. Had the owner and master implemented the Captain's Checklist, they may have reconsidered the need to get underway in hazardous weather conditions and the master may have properly secured the starboard mooring line.

- Hazardous weather warnings

The owner maintained inadequate oversight of the master and mismanaged risk factors associated with hazardous weather conditions. The owner allowed the master to embark on a non-essential nighttime dock-to-dock towing operation during a NWS Gale Warning and declared State of Emergency for a winter storm to affect the entire state of North Carolina. The NWS projected winds from the North at 20 to 30 knots, gusting to 40 knots and waves of to four feet.

The master failed to heed hazardous weather alerts and failed to manage risk factors during deteriorating weather conditions. Despite warnings issued prior to getting underway and deteriorating weather conditions during the voyage, the master chose not

to terminate the voyage and seek safe refuge. The master also decided to use an inadequate vessel to conduct the towing operation in the prevailing hazardous weather conditions and the owner failed to have supervision of this critical decision.

- Risk Management Training

  The Company Operations Guidelines recommended all masters and crewmembers attend C-PORT's risk management curriculum. Furthermore, the guideline outlined the critical importance of risk management to safeguard towing vessel operations. As a member of C-PORT, the owner attended the organization's recommended risk management curriculum, but failed to ensure the company's masters and deckhands attended. Had the owner followed C-PORT's training recommendations, the owner, master and deckhand may have cooperated more effectively to reevaluate the need to get underway in forecasted hazardous weather, reconsidered safe refuge and contingency planning measures, and implemented cooperative risk management and decision–making tools potentially preventing the incident.

The Coast Guard believes that these issues combined with the master's decision to conduct the towing operation during a forecasted winter storm and gale force wind warning, contributed to the vessel's capsize and loss of life.

Findings of Concern. Coast Guard investigators strongly recommend the following voluntary actions to commercial assist towing owners, operators, franchisors, and associations representing the marine assist towing industry in order to reduce the likelihood of recurrence:

- As an association representing the commercial assist towing industry, C-PORT should conduct audits to ensure members who possess agreements to use the Marine Assistance Company Operations Guideline as the company's Towing Safety Management Training and Operations Manual are in compliance. The Coast Guard discovered that the recommended operational procedures and training requirements contained within the C-PORT operations guideline may have potentially prevented the casualty, had it been implemented as prescribed. It was alarming to discover the TOWBOAT US owner's deliberate disregard for the use of C-PORT's operations guideline, despite possessing an agreement to implement the guideline for towing operations. This finding may be common throughout the marine assist towing industry.

- The C-PORT Company Operations Guideline recommended all masters and crewmembers attend risk management curriculum. Furthermore, the guideline outlined the critical importance of risk management to safeguard towing vessel operations. All owners, masters, and crewmembers within the commercial assist towing industry are encouraged to attend formalized risk management training, which should include principles regarding decision–making tools to prevent marine casualties.

- Owners and masters should heed inclement weather warnings, obtain and monitor marine weather forecasts for their area of operations, and evaluate the need to get underway. Owners and masters should continuously consider safe refuge areas and develop contingency plans along the intended route should hazardous weather unexpectedly affect towing operations. Owners should maintain adequate oversight of their vessels during commercial assist towing operations, develop criteria for determining the appropriate platform for prevailing conditions, and delay or terminate towing and salvage operations as necessary to prevent placing masters and crews at risk.

- Owners and masters should implement pre-voyage checklists to allow the master to record and report forecasted weather, sea conditions, and vessel equipment condition prior to each voyage.

- Owners and masters should develop emergency response procedures and training for critical vessel system failures and man overboard emergencies. In doing so, they should consider the appropriate PFD for responding to emergencies and guarantee crew familiarization with available lifesaving equipment carried onboard both the assist towing vessel and vessel in tow.

Closing. These findings of concern are provided for informational purpose only and do not relieve any domestic or international safety, operational, or material requirements. For any questions or comments please contact Office of Investigations and Analysis by phone at (202) 372-1029 or by email at HQS-PF-fldr-CG-INV@uscg.mil.