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

FINDINGS OF CONCERN

Sector Corpus Christi

November 29, 2021
Corpus Christi, TX

Findings of Concern 008-21

SAFETY MANAGEMENT PRACTICES

Purpose. The U.S. Coast Guard issues findings of concern to disseminate information related to unsafe conditions that were identified as causal factors in a casualty and could contribute to future incidents. Findings of concern are intended to educate the public, state, or local agencies about the conditions discovered so they may address the findings with an appropriate voluntary action or highlight existing applicable company policies or state/local regulations.

The Incident. During the beginning of a tandem transfer between two tank barges and a facility, the tankerman of the outside barge identified that a pressure gauge appeared to be inoperable after attempting to prime the cargo transfer pump. Being uncertain of its operability, the tankerman checked the discharge pressure on the inside barge, which indicated the pump had failed to be primed adequately. As a result, the tankerman reduced the RPM's on the engine and disengaged the pump. The inside barge tankerman noticed the outside barge tankerman was having trouble and offered to assist. Together, they bled cargo by removing the deep well bleeder plug into a bucket and then reengaging the pump to continue to transfer cargo. The pressure gauge on the inside barge confirmed the pump was functioning, but the outside barge's pressure gauge was inoperable. The outside barge tankerman then went to check tank levels and noticed there was product on the deck of the barge and in the water. The product had back-flowed from the successful pumping of the inside barge. Since there was no product being pushed discharged from the outside barge, the influx of new product from the inside barge caused the subsequent release.

Contributing Factors and Analysis. The investigation identified the following contributing factors to the incident:

(1) The outside barge tankerman was unfamiliar with the configuration of the priming pump installed. The inside barge had a newer configuration he was more familiar with, but he did not realize the different procedures until informed by the tankerman on the inside barge.

(2) Both tankermen failed as required to "STOP WORK" when it was noticed that any piece of vital equipment was inoperable. The gauge actually was malfunctioning due to an inoperable baffle, and if they had stopped the transfer operations when they noticed the equipment malfunctioning, the discharge could have been prevented. However, the malfunctioning gauge was not the cause of the discharge.

(3) The investigation revealed that the tankerman did not deem the gauge a critical piece of equipment to the transfer, and he did not feel based on his experience that it was an appropriate time to enact the stop work obligation (SWO).

(4) It was confirmed that both the barge operating company and the shore tankermen company have SWO policies. As part of its policy, the shore tankermen company policy states that situations may be shared as safety bulletins, lessons learned and/or procedural updates. The operating company states that formal recognition of selected examples of "STOP WORK" interventions shall be made in the fleet safety bulletin and during regularly scheduled safety meetings, both on board company vessels and at shore based meetings. Although both companies did have a general bulletin they post on the vessels, they do not have examples posted. Additionally, there is no documentation that specific stop work incidents are discussed in safety meetings.

(5) It was noted that there is not a system in place at either company for employees to acknowledge these policies and procedures to ensure all employees receive this training.

Recommendations. The Coast Guard investigators recommend that companies consider the following measures to mitigate the risks associated with the above identified contributing factors:

- Ensure crewmembers and tankermen are familiar with all configurations of vital equipment involved with the transfer of oil or hazardous substances.

- Emphasize the importance of the stop work obligation (SWO) by implementing existing policies and discussing specific examples, including outlining what pieces of equipment are considered vital to the transfer and encouraging employees to be on the lookout for hazardous conditions.

- Require all employees to acknowledge company policies, procedures, and training to ensure each person has received the vital information they need to perform successful operations.

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 Sector Corpus Christi Investigations Division by phone at (361) 939-5140 or by email at CorpusChristiIO@uscg.mil.