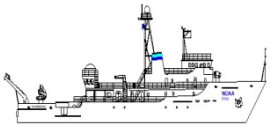

MOC Bulletin 2012-08

October 23, 2012

Man Overboard Lesson Learned

When incidents occur, the most important thing is to ensure the safety of everyone involved. Once the crew and ship are safe, finding the cause of the incident can prevent reoccurrence. The attached Lesson Learned provides a reminder that we perform tasks everyday that can become life-threatening if not done properly. I appreciate the professional engagement of the ship's crew in the investigation of this incident to generate valuable lessons learned and corrective actions that can now be used across the fleet.

While lessons learned typically result from an incident, proactive safety is an integral part of increasing the safety posture of the fleet. One such effort that was initiated in September of this year is the fleetwide review of small boat launch and recovery operations being coordinated by the OMAO Small Boat Safety Program and MOC. This incident and others leading up to it across the fleet solidifies the importance of this undertaking.

Obviously many things did go right during this MOB event: the coxswain was wearing a PFD, liferings were accessible and utilized, visual contact was maintained, and most importantly the MOB was recovered with only minor injuries.

However, we can't rely on luck to prevent serious injury and need to use these incidents to focus on prevention. Part of being prepared also includes emergency response; this is why we perform drills. Drills should be realistic while managing associated risks; emergencies don't always occur when it is convenient and it may be your most experienced person who needs assistance.

This incident provides opportunity to improve: procedures, training, supervision and communication.

Corrective Actions to be taken by all Commands include:

1. Complete review of small boat launch and recovery procedures, as previously directed, to develop Standard Operating Procedure(s) (SOP), Ship Specific Instructions (SSI), and minimum standard equipment.
2. Ensure training is provided to personnel; ships shall document authorized persons for small boat operations, in accordance with the NOAA Small Boat Standards and Procedures Manual and the OMAO Supplement, including coxswain and crewmember requirements.
3. Ensure risk management is understood and continually practiced by all hands; emphasize to ALL HANDS, including visiting scientist and guest, that safety is a critical part of everyone's job.
4. Communicate; it is everyone's responsibility to mention irregularities and look out for each other.

Proper oversight/supervision in daily activities is instrumental; take a couple of minutes to ask how we're going to do the job at hand, what risks we anticipate facing in doing the specific job, and how we're going to manage them.

Nothing we do is worth a disabling or fatal injury. Please be careful out there and think things through before you take an action. Safety always takes priority over mission accomplishment.

/s/ Rear Admiral David A. Score, NOAA

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RDML David A. Score, NOAA
OMAO, Deputy Director for Operations

Cancellation Date: October 23, 2013
Responsible Position: Chief, Fleet Standardization Office

Lesson Learned

October 2012

"Man Overboard"

The following is an edited version for distribution of a recent incident aboard a NOAA ship.

I. Summary of events

Having completed the day's operations, the small boat pulled alongside the ship and all of the crew disembarked except for the coxswain and one scientific boat crewmember who stayed aboard for recovery. After the OOD provided hoisting clearance, the coxswain motioned to the crane operator to lower the hook and boom for the hoist. The coxswain attached the crane's hook to the bridle and hoisting commenced. As the small boat was being lifted the ship experienced a moderate roll and the boat swung outward, then inward contacting the ship with a jolt. The boat swung on a second evolution and returned to the hull with a jolt. As it rebounded this second time, the coxswain fell backwards between the ship and the outward swinging boat, landing headfirst in the water (Figure 2). ❖

Background

The boats were returning to the ship at the end of the day. Per ship's SOP, the ship's engines were at all-stop, the bow thruster was energized but not engaged, the wind was on the starboard side providing a lee for the boat on port side. As the small boat came alongside, the inboard bow line was passed and connected followed by the inboard stern line. The coxswain, standing on the inboard side of the boat, connected the hook to the single point bridle and hoisting commenced. The boat crewmember was sitting in the forward outboard position while the coxswain remained on the inboard side. After falling overboard, the coxswain submerged for several seconds before resurfacing. Conscious and now without his hard hat, he floated along the hull, but did not go under it. A crew member on the ship tossed a life ring, which the coxswain held as he floated beyond the ship's stern, and drifted across to the starboard stern. A second life ring was tossed into the water as several crew and scientists began pointing at the MOB.

The bridge did not receive immediate notification from the back deck of the Man Overboard (MOB), but having witnessed it they were responding. The CO reported to the bridge shortly before MOB sounded, ensured the ship's propellers were stopped, and oversaw the recovery.

The small boat hoist continued to ensure the suspended boat did not come down on the MOB during a ship roll. The crane operator hoisted the small boat to the main deck cut out and the remaining crewmember disembarked and another coxswain and small boat crewmember embarked. The small boat was lowered to the water and released, picking up the MOB off the starboard stern after being in the water for about two minutes. Fortunately the MOB suffered only scraped knuckles and was back to work after a brief medical checkout. ❖

Immediate Cause

The coxswain lost balance and fell out of the boat after the boat bounced against the ship during the hoist.

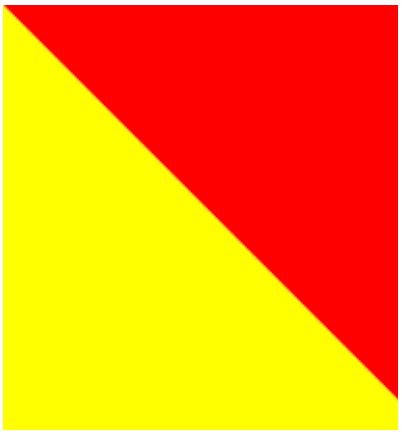

Figure 1 – Oscar flag indicates MOB.

Figure 2 – From cctv, MOB falling between small boat and ship.

Figure 3 – MOB recovery during a drill.

Contributing Causes

A combination of factors created the series of events leading up to the MOB.

1. The coxswain was on the inboard side of the boat, in violation of the ship's SOP.
2. One of the scientists on deck realized the coxswain was in the incorrect position but did not say anything as the coxswain was a senior crew-member and the scientist thought he must know what he is doing.
3. The crane operator had a good view of the boat and hoisted it with the coxswain in the incorrect position.
4. The watch change was occurring during the incident and the deck safety officer (normally oversees deck operations) was on the bridge and not properly positioned on the aft deck.
5. The ship's heading was drifting to port putting the weather 30^{o} forward of the starboard beam. The ship's roll would most likely have been mitigated had the bow thruster been used to point the bow more into the seas.
6. The crane operator had OOD permission to hoist but ship's movement (roll) caught him unaware. The A-CB, more experienced in the crane's operation and in directing the crew, was serving as coxswain. While the crane operator is a qualified shipboard crane operator and has ~5 yrs experience operating the crane, the vast majority of experience has been while the ship was alongside. A more experienced crane operator might have mitigated the boat's swing by bringing the boom closer to the ship's hull or hogging the boat against the ship's hull. Consensus is that the roll was notable but not excessive and within the threshold of the operation.
7. In accordance with the ship's pre-incident procedures, the crane operator was responsible for directing the deck crew while operating the crane. Due to the position of the crane operator (two decks above and forward) it is very difficult for the crane operator to adequately communicate with the deck force on the rear aft deck.
8. Line handlers were not controlling the boat and working to dampen the swing. Bow and stern lines were not used to hold the boat against the hull or check the boat's outward arc.
9. Although Dead in the Water (DIW) launch and retrieval of boats is in accordance with the ship's SOPs; the ship would most likely have rolled less had it been making way.
10. The ship has limited documentation for boat launch/retrieval procedures for the crew to reference.

Root Causes

1. **Failure of SOP/safe working practices**: The ship had no SSIs for OMAO Procedure 1102-11 (Small Boat Launching and Recovery) or OMAO Procedure 1501-04 (Man Overboard). This becomes even more critical with senior crewmembers having been off the ship for a long period and the ship working with a deck force consisting of three regular crew and three augmenters. The coxswain did not adhere to safe working practice, remaining on the inboard side.
2. **Improper Supervision**: The person in charge was unable to provide sufficient oversight; the deck safety officer was out of position, line handlers under the direction of the crane operator were not controlling the boat, and the Acting Chief Boatswain was serving as coxswain.
3. **Lack of Training/Experience**: The most experienced crane operator was not operating the crane or directing crew. A training system was not in place to ensure that all employees associated with the operation received adequate training and proficiency to conduct the operation. Without written procedures, training becomes more critical to ensure the operation is well communicated.
4. **Lack of Communication**: Junior employees or visiting scientists may feel unsure about questioning a person of senior experience; they may assume the senior employee has knowledge and experience beyond their ability to question and not speak up to stop unsafe acts/conditions. Personnel at all levels are reminded that the manner in which they respond to comments from all sources can open or close lines of communication that could someday, save their lives. Everyone should encourage those around them to speak up when safety is concerned. Safety is everyone's first priority.

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The best ideas for improving safety come from the fleet.

Got an idea to help prevent injuries?

Please send any suggestions and we will share it with the fleet. MOC.Fleet.Accidents@noaa.gov