

TO:Director, Occupational Health Surveillance Program,
Massachusetts Department of Public Health,

FROM:Massachusetts Fatality Assessment and Control
Evaluation (MA FACE) Program Field Investigator

SUBJECT:Night Watchman Drowns From Fall Into
Massachusetts River - MA-93-002-01

DATE:April 12, 1994

SUMMARY

In the early morning hours of January 25, 1993, a 50 year old, male night watchman was found dead in a Massachusetts river. As part of nightly security checks, the victim was to ensure that tug boat generators remained fully operational. It is speculated that as he ascended or descended a ladder from the pier to a barge, the ladder dislodged sending him and the ladder into the frigid river. Reporting to work at his appointed time, the tug boat captain found the victim floating face up in the river and immediately summoned EMS and municipal rescue personnel. EMS transported the victim to the regional hospital where he was pronounced dead. In order to prevent similar future occurrences, the Massachusetts FACE Program recommends that employers:

- provide safe means of accessing docked marine craft;
- develop, implement, and enforce a comprehensive safety program that includes, but is not limited to, jobsite surveys, written safety procedures for all jobs with potential hazards, and training workers in dockside safety and fall hazard recognition;
- ensure use of personal flotation devices (PFD) when working near or above water.

INTRODUCTION

On January 26, 1993, the MA FACE Investigator learned through a regional newspaper that a 50 year old, male night watchman had drowned in a Massachusetts river the previous day. An investigation was immediately initiated. On January 27, 1993, the MA FACE Investigator travelled to the incident scene and interviewed employer and project owner representatives. Incident site photographs, multiple Massachusetts State Police statements and documents, preliminary medical examiner findings, the EMS record, and employee personnel records were obtained during the course of the investigation.

The employer was a water transportation/oil/shipdocking and barging company in business for over 132 years. It employed approximately 140 persons. The victim was the sole security guard. The company had a designated safety officer who devoted less than 20% of his time to safety. There were some written company safety rules and procedures in place at the time of the incident, none of which applied to the security guard tasks.

The victim was employed as a security guard for approximately 9 months at the time of the incident. His training was primarily on the job, with some supplemental training from a video tape and safety manual.

INVESTIGATION

On January 25, 1993, a 50 year old, male, night watchman for an ocean-going, marine towing and transportation company was making his nightly security checks. The company was transporting construction vehicles from a mainland staging area to an off-shore island construction site. The victim's responsibilities during his security checks included ensuring that the company-owned tug boat generators remained operational. The victim had to access a pier side barge to perform this task. This barge, when pushed by a tug boat, transported the construction vehicles between sites.

While the victim performed this task five or six times during his weekly twenty-nine hour weekend shift, his method for accessing the barge depended on the location of the ocean tide. When the tide was " in, " safe access to and from the barge was provided via a nicely fabricated and portable twelve foot aluminum gangplank (ramp) with handrails. When the ocean tide was " out, " however, the barge and tugboat were situated considerably lower in the river, and because the gangplank was neither long enough, nor equipped with stairs, it could not be safely used. To access the barge during a high tide, the victim situated an unsecured wooden ladder which extended from the barge to the pier.

At the approximate time of the incident the tide was out, and the barge was between 18 and 22 feet below the concrete pier. Although no one witnessed the fall, it is likely that as the victim was ascending or descending the ladder, the changing ocean tide, or some other cause, dislodged the ladder and sent him and the ladder into the frigid river below.

Reporting to work at their appointed pre-dawn time, the tugboat captain and a project employee noticed that the ladder which permitted access and egress from the pier/barge was missing. When they panned the river between the pier and the barge with a flashlight, they observed the victim and the ladder floating in the water. Draped across the victim's face was a rope which was tied to the pier. EMS, police and fire department personnel were immediately summoned. The municipal fire fighters removed the victim from the river and EMS personnel administered advanced life support. The victim was transported to the regional hospital where he was pronounced dead.

CAUSE OF DEATH

The medical examiner concluded that the cause of death was drowning.

RECOMMENDATIONS/DISCUSSION

Recommendation #1:Employers should provide safe means of accessing docked marine craft.

Discussion: When the ocean tide was high, it was possible to safely access the barge from the pier. During the low tide, however, use of an unsecured ladder to access the barge created a serious fall hazard. OSHA 1926.605 requires employers to provide employees with safe access to barges or towboats through use of either a well maintained and properly secured ramp, or a safe walkway. A well maintained and properly secured marine or "jacob's ladder" may also be used to provide safe access. OSHA 1926.450 provides additional guidelines for the proper use of ladders, and it specifies that portable ladders shall be properly tied, blocked or secured to prevent their displacement. Had safer access been available, such as a more suitable gangplank or a properly secured ladder, this incident may have been prevented.

Recommendation #2:Employers should develop, implement, and enforce a comprehensive safety program that includes, but is not limited to, jobsite surveys, written safety procedures for all jobs with potential hazards, and training workers in dockside safety and fall hazard recognition.

Discussion: Routine jobsite surveys are an essential component of effective safety programs. In this case, had a designated and trained safety officer conducted jobsite surveys, the routine task of accessing the barge at low tide, from an unsecured ladder, may have been identified as a hazardous task. Furthermore, while the employer had some written safety rules, and provided on the job training, these safety efforts did not address the hazards encountered by the security guard during his routine duties. Safety programs should include detailed safety procedures (specific for all tasks and job categories) needed to prevent worker exposure to hazards. For these procedures to be effective, employers should provide employees with adequate training to ensure that they can recognize potential hazardous exposures and take the appropriate steps to protect themselves. In this case, dockside safety training and fall hazard protection may have prevented this incident from occurring.

Recommendation #3:Employers should ensure use of personal flotation devices (PFD).

Discussion: Given the frigid temperature of the water in January, it is questionable whether a personal flotation device (as outlined in OSHA Standard 29 CFR 1926.605) would have been able to save the victim's life. A PFD may have prevented him from drowning, yet he may have still died from hypothermia. Had the incident occurred in a warmer month, however, a PFD may have prevented the death. Personal flotation devices should be worn when working on marine craft or near water.

LIST OF REFERENCES

1.Office of the Federal Register: Code of Federal Regulations, Labor 29, July 01, 1991, Parts: 1926.450, 1926.605