

# Office of Marine and Aviation Operations

# SAFETY NEWS

*From the Safety and Environmental Compliance Division*

SEVENTH EDITION

MAY 2012

June is National Safety Month. We ask that everyone put forth effort, at work and at home, to stay focused on improving personal safety and the safety of those around us. Be mindful of hazardous situations and unsafe conditions that could lead to an accident or incident. Remember, it is usually a chain of events that results in an accident. Don't hesitate to break that chain . . . if you see unsafe conditions or a hazardous situation speak up, or stop work until the hazard can be corrected or reduced. Please note the kudos from Admiral Devany in the Best Practices Section below regarding increased near miss reporting and the positive impact it has on preventing accidents.

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## POLICY SPOTLIGHT

OMAO policy for compliance with OSHA lock-out/tag-out requirements is outlined in Procedure Number 1701-05, LOCKOUT/TAGOUT. The procedure provides the minimum requirements for a lockout/tagout system to reduce the possibility of injury or damage from the unexpected operation, release of energy, or other hazardous situation while conducting repairs, modifications, and maintenance on equipment, machines, and systems. The procedure states, "All machines, equipment, and pressurized systems are to be isolated from their energy source and at a minimum tagged out in addition to locking out (if the equipment can be fitted with a locking device) before any servicing or repair work is performed where the unexpected start up or release of energy could cause injury or death. In addition, lockout/tagout shall be used whenever an employee is required to remove a guard or other safety device, or is required to place any part of his or her body in a danger zone of any machine, equipment, or system." The procedure is very comprehensive and requires that specific actions be taken including training, use of checklists, forms, and records. The requirements outline necessary precautions and control measures to mitigate risk of hazards whose consequences are significant. A copy of the entire procedure is available on the Inside OMAO webpage via the Document Management System at the following link: <http://10.49.29.4/WebDesktop/Binders.aspx>.

## ACCIDENT STATISTICS

The total number of OMAO near miss; minor/first aid; medical treatment; lost time/light duty; and other incidents reported during May 2012 is listed in the table below. Accident rates over the past 15 months are shown the bar graph that follows.

### Near Miss - 2

Near miss - 2

### Minor/First Aid - 2

Contact with - 1 Laceration - 1

### Medical Treatment - 6

Contact with - 2 Laceration - 1 Slip, trip, fall - 2 Exertion - 1

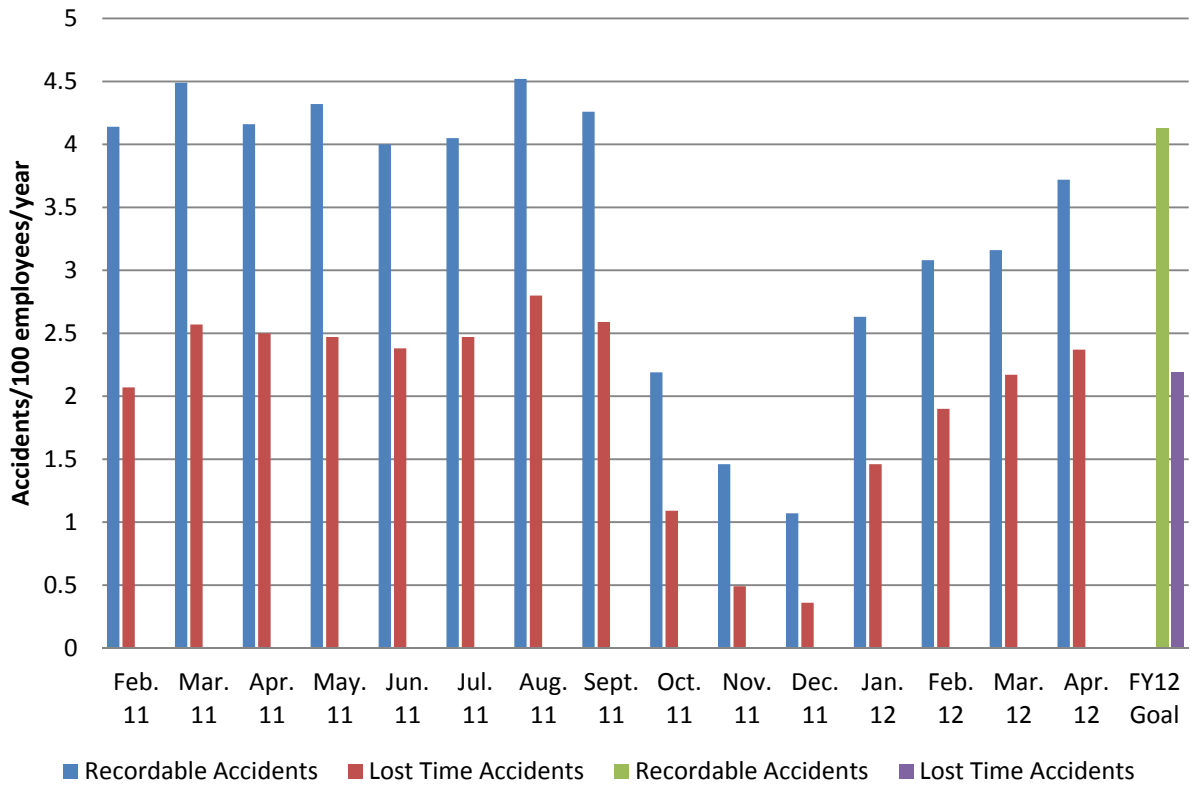
### Lost Time/Restricted Duty - 0

Lost Time - 0 Restricted Duty - 0

### Other - 0

Environmental - 0

## OMAO Accident Rates



### OMAO Annual Accident Rates\*

	FY11 Total	FY12 YTD	FY12 Goal
Recordable Accident Rate	4.26	3.72	4.13
Lost Time Accident Rate	2.59	2.37	2.19

\*Accident rates are calculated based on the total number of recordable and lost time accidents that occur in the workplace compared to the total number of hours worked by all employees at that workplace. The accident rate represents the number of accidents that have occurred per 100 employees for the year.

## RECENT INCIDENTS: CAUSES AND LESSONS LEARNED

This section provides a description of recent incidents that have occurred in OMAO. In many cases, more thorough follow-up investigations have been conducted and more comprehensive lessons learned have been disseminated to targeted audiences within OMAO. The information below is intended to remind us of the importance of staying safe.

**Description:** A member of the Steward's Department aboard a NOAA ship was loading ship's stores with fellow crewmembers and

**Description:** A scientist aboard a NOAA ship tripped and fell on a raised portion of the boat deck at night while transiting to the

was taking a crate of milk down the ladder leading to the reefer flat. The individual lost their footing on the ladder and slipped from the ladder step resulting in a fall that caused a knee injury. Loading operations were stopped, the individual was examined by the shipboard Medical Person-In-Charge, and taken to the local hospital emergency room for additional evaluation and treatment.

**Causal Factors:** Investigation of this incident did not reveal any readily apparent causal factors. The ladder landing and ladder-well were both covered in good tread tape. The individual was wearing proper footwear and proper lifting techniques were being followed.

**Lessons Learned:** Review procedures for loading ship stores. Ensure adequate staffing and make sure any available mechanical means are used when necessary/available to handle heavy, bulky, or awkward loads.

bridge. The fall resulted in a scraped palm and bruised knee requiring first aid.

**Causal Factors:** It is believed that the primary causal factor in this case was a lack of familiarization with the area transited. Transiting the weather decks at night without a flash light was also cited as a contributing factor, although the incident investigation revealed that the area was fairly well lit and the raised portion of the deck had luminescent paint around the edges.

**Lessons Learned:** Emphasize utilization of interior passages for transit at night aboard ships, especially for personnel new to the ship and for members of the scientific party. Review Standing Orders and Ship Specific Instructions, and if practicable, restrict transit via the weather deck at night to only those personnel making required rounds, and require flashlights or head lamps to be used by those transiting the weather deck at night.

**Description:** NEAR MISS - A fire hose was used to wash down the anchor early in the day aboard a NOAA ship. The hose was shut off (at the nozzle, but not at the valve station) and the fire pump was secured. Later in the day, a fire drill was held, and when the fire pump was put on line, the unattended hose that had been used earlier to wash down the anchor became pressurized and water started to leak from the hose at the nozzle. This could have resulted in a "live hose" incident if water were to discharge from the nozzle at a greater force resulting in potential injury to any personnel standing nearby.

**Causal Factors:** Not securing the fire hose correctly.

**Lessons Learned:** This is a very good example of recognizing and reporting a near miss incident. Many mechanical systems have two-valve protection intended primarily to protect personnel and equipment. System operators should learn how to use both valves properly and in the proper sequence. As a result of this near miss, the ship now

**Description:** During small boat deployment, a Junior Officer was in the bow of the boat and pulled the quick release to the forward painter while it was under tension. Upon release, the boat painter snapped back and the end of the painter, weighted with a metal eye, hit the individual in the face. Boat deployment operations continued and the boat was launched. No report of the injury was made from the small boat to the ship until the boat returned to the ship approximately two hours later. The injured individual reported to the medical officer on board and was examined and treated. The incident was complicated due to the remoteness of ship operations and communication issues related to the ship's email system being down at the time of the incident.

**Causal Factors:** Primary cause of the incident was releasing the painter while under tension and lack of situational awareness.

**Lessons Learned:** The ship discussed the danger of releasing lines under tension and

requires the Anchor Detail Person-In-Charge to ensure that the fire hose has been secured at the nozzle and at the valve station prior to asking the bridge to secure the fire pump. There will now be a final check of the fire hose prior to leaving the anchor-detail area, and the ship specific instruction for anchoring will be reviewed to see if this step should be included. In addition, the ship will include a discussion of the incident during their next scheduled safety stand down.

reviewed procedures to reduce line tension prior to releasing the painter during the next shipboard small boat/dive/safety meeting. Plans are in place to do the same during future small boat training and small boat deployment walk-throughs. Alternate means of communication need to be considered and used to ensure timely reporting of accidents and incidents when the ship's VSAT and Inmarsat B (no email) are down. All incidents are to be reported within 24 hours of occurrence, except for serious incidents which must be reported within 8 hours of occurrence. Additionally, employees are to report and seek medical treatment as needed for all injuries at the time of their occurrence.

OMAO Safety and Environmental Compliance Division regularly posts Accident Investigation and Lessons Learned on the following web site:

[http://www.oma.noaa.gov/accident\\_investigations\\_lessons\\_learned/index.html](http://www.oma.noaa.gov/accident_investigations_lessons_learned/index.html)

Recent additions include:

- NOAA Workboat Recovery Incident

## BEST PRACTICES

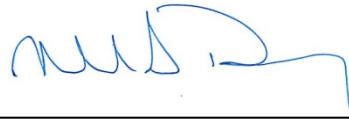
### Message from the Admiral

I would like to take this opportunity to stress the importance of "Near Miss" reporting and to give a well deserved "Bravo Zulu" to NOAA's Fleet of ships for their diligence in reporting recent near misses. Well done!

Near miss reporting is the identifying and preventing of an unsafe condition before it causes an injury, illness, or casualty. Near miss reporting happens when we take advantage of real life's version of training simulation. There are several benefits of establishing a near miss reporting culture. These include enabling our organization to resolve hazards at a substantially lower "opportunity cost" than those associated with actual mishaps. Near miss reporting engages the entire workforce in the problem solving process and fosters greater ownership of safety responsibilities. Near miss reporting also helps to dispel the notion that if there was "no injury" there was "no problem". Finally, near miss reporting helps the workforce associate safety improvements with positive outcomes.

When should you report a near miss? Anytime you observe a set of circumstances or an event that could have resulted in an injury or illness if a person had been present in a location where

they usually are. There are countless other examples of near misses. Most often, when a near miss occurs we were simply lucky. Let's learn from these instances and have a safe and productive work place.



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*Rear Admiral Michael S. Devany*

*Director, Marine and Aviation Operations Centers*

Below is an article written by Kurt Larson from OMAO's Aircraft Operations Center about preventing foreign-object-damage. It is tailored to aviation operations, maintenance, and repair, but can be applied to all operations in which vital systems and equipment are being worked on.

### **Aircraft Operations Center, Foreign Object Damage Prevention Program**

By: Kurt E. Larson

Aviation is, and will always be an operation with inherent risk. The need for continued and evolving safety policies and practices should always be on the forefront of any aviation organization. This should serve as a constant reminder of our quest as aviation professionals to operate, maintain and sustain our aircraft operations in a safe and evolving manner.

By definition, Foreign Object Debris (FOD) is any substance, debris or article that is introduced to an aircraft or aircraft system and may cause damage. In other words if it can degrade, damage or destroy an aircraft, it is FOD.



Typical AOC weekly FOD walk

Some quick causes of FOD:

- Ice and Hard Objects 10%
- Soft Objects 3%
- Wildlife 13%
- Lightning 0.2%
- Unknown 74%

The Aircraft Operations Center Policy 209-2, Foreign Object Damage/Debris (FOD) Prevention Program, establishes policy, responsibilities, and requirements to prevent damage to aircraft, engines, scientific equipment and other aeronautical equipment, and provides for a uniform FOD prevention procedure.

The policy includes proactive methods toward FOD control including weekly FOD walks accomplished in the hangar and flight line areas. Positive control of all tools, miscellaneous parts and consumable material used around or onboard aircraft through inventory and storage in spill proof containers.

Should a lost tool or suspected FOD incident occur on an aircraft, the aircraft is grounded until the item(s) are located, or it is determined that the item(s) are not located in the aircraft, and an associated Lost/Found Tool Report has been filed with Quality Assurance. There are

appropriately marked FOD containers readily accessible in maintenance and shop areas for use as a temporary repository for items like miscellaneous parts and consumable materials while working on aircraft or equipment.

All aircraft are subject to a through pre and post maintenance inspection of tool containers, ducts, plenums, crevices, engine cavities and work areas. All areas like engine intake/exhaust, pitot probes or scientific instrumentation that is FOD susceptible have covers installed while the aircraft is static.

The policy further mandates that all personnel directly in contact with AOC aircraft (including contractors), comply with the FOD prevention program.

The best ideas for improving safety come from the field. Do you have an idea to help prevent injuries? Please send it to the SECD Chief (omao.secd@noaa.gov) and we will plan to share it throughout OMAO.

## NEWS AND NOTES

**Ship of the Quarter Safety Award** – Scoring for this quarter ends June 30, 2012. Ships are reminded to submit safety accomplishments to [SafeShip.moc@noaa.gov](mailto:SafeShip.moc@noaa.gov). A complete description of the award program is in the procedures document 1701-23, Proactive Safety Improvement Award – Ship of the Quarter, available via the OMAO Document Management System on the inside OMAO website, <http://10.49.29.4/WebDesktop/Binders.aspx>. An overview of the program was provided in the February edition of OMAO Safety News and can be found via the following link:

[http://www.omao.noaa.gov/accident\\_investigations\\_lessons\\_learned/index.html](http://www.omao.noaa.gov/accident_investigations_lessons_learned/index.html).

**Accident Reporting** – Employees are reminded that all incidents are to be reported within 24 hours of occurrence. Serious incidents, that is, those resulting in a fatality or hospitalization of three or more employees, and those resulting in property damage in excess of one million dollars, and those that pose an imminent threat to public safety and the environment, are required to be reported within 8 hours of occurrence.

**Occupant Emergency Plans** – OSHA requires all facility occupant emergency plans (OEP) to be reviewed annually and updated as necessary. The Department of Commerce ensures this is done by requiring an annual self-assessment of OEPs at all NOAA occupied facilities. This year's assessments are due no later than 29 June 2012. OMAO facility points of contact are reminded to please submit assessment results to Bill Cunningham per his email sent on 26 April 2012. Please contact Bill if there are any questions or if more information is needed.

**Hurricane Awareness** – Hurricane season officially began June 1 and runs through the end of November. The following link provides very good information on hurricane preparedness from the NOAA National Weather Service: <http://www.nhc.noaa.gov/prepare/ready.php>

**Slips, Trips, and Falls** – Slips, trips, and falls continue to be among the leading causes of injuries aboard NOAA ships. Commands are reminded that the shipboard DVD safety library contains a video on preventing slips, trips, and falls which should be provided to crewmembers

annually.

**Back Issues** – Do you recall reading something of interest that was safety or environmental-related that you would like to revisit? It may have been in a previous issue of OMAO Safety News? All back issues of OMAO Safety News are available via the following link:

[http://www.oma.noaa.gov/accident\\_investigations\\_lessons\\_learned/index.html](http://www.oma.noaa.gov/accident_investigations_lessons_learned/index.html)

## TERM OF THE MONTH

**Reporting vs. Recordkeeping** – Reporting and recordkeeping are often synonymous with safety and environmental accidents and incidents. The terms are often related, but the meaning of each is not necessarily the same and both should be considered carefully especially from a policy and regulatory perspective. Reporting is typically a form of notification that is required at the time of the incident or shortly thereafter. Recordkeeping is typically intended to satisfy future audit requirements and is often accomplished as a follow-up to the incident. In some cases, keeping copies of a reporting form satisfies the recordkeeping requirement, but not always. Actually, in some cases copies of reports are not required to be kept, although it is usually a good practice to do so. For recordkeeping, often a separate additional action is necessary, for example, entering information into a log book or the like. When reviewing safety and environmental accident and incident paperwork requirements, consider what is being asked for, why is it needed, and when is it needed. By doing so, reporting and recordkeeping requirements are more likely to be properly addressed.

## COMMON INTERESTS

Below is timely information from the American Red Cross about summer heat wave safety.

### **Heat Wave Safety**

In recent years, excessive heat has caused more deaths than all other weather events, including floods. A heat wave is a prolonged period of excessive heat, often combined with excessive humidity. Generally temperatures are 10 degrees or more above the average high temperature for the region during summer months, last for a long period of time and occur with high humidity as well.

#### **Know the Difference**

Excessive Heat Watch—Conditions are favorable for an excessive heat event to meet or exceed local Excessive Heat Warning criteria in the next 24 to 72 hours.

Excessive Heat Warning—Heat Index values are forecast to meet or exceed locally defined warning criteria for at least 2 days (daytime highs=105-110° Fahrenheit).

Heat Advisory—Heat Index values are forecast to meet locally defined advisory criteria for 1 to 2 days (daytime highs=100-105° Fahrenheit).

#### **How can I prepare?**

- Listen to local weather forecasts and stay aware of upcoming temperature changes.
- The heat index is the temperature the body feels when the effects of heat and humidity are combined. Exposure to direct sunlight can increase the heat index by as much as 15° F.
- Discuss heat safety precautions with members of your household. Have a plan for wherever you spend time—home, work and school—and prepare for the possibility of power outages.



- Check the contents of your emergency preparedness kit in case a power outage occurs.
- Know those in your neighborhood who are elderly, young, sick or overweight. They are more likely to become victims of excessive heat and may need help.
- If you do not have air conditioning, choose places you could go to for relief from the heat during the warmest part of the day (schools, libraries, theaters, malls).
- Be aware that people living in urban areas may be at greater risk from the effects of a prolonged heat wave than are people living in rural areas.
- Get trained in first aid to learn how to treat heat-related emergencies.
- Ensure that your animals' needs for water and shade are met.

#### **What should I do during a heat wave?**

- Listen to a NOAA Weather Radio for critical updates from the National Weather Service (NWS).
- Never leave children or pets alone in enclosed vehicles.
- Stay hydrated by drinking plenty of fluids—even if you do not feel thirsty. Avoid drinks with caffeine or alcohol.
- Eat small meals and eat more often.
- Avoid extreme temperature changes.
- Wear loose-fitting, lightweight, light-colored clothing. Avoid dark colors because they absorb the sun's rays.
- Slow down, stay indoors and avoid strenuous exercise during the hottest part of the day.
- Postpone outdoor games and activities.
- Use a buddy system when working in excessive heat.
- Take frequent breaks if you must work outdoors.
- Check on family, friends and neighbors who do not have air conditioning, who spend much of their time alone or who are more likely to be affected by the heat.
- Check on your animals frequently to ensure that they are not suffering from the heat.

#### **Recognize and care for heat-related emergencies**

Heat cramps are muscular pains and spasms that usually occur in the legs or abdomen caused by exposure to high heat and humidity and loss of fluids and electrolytes. Heat cramps are often an early sign that the body is having trouble with the heat.

Heat exhaustion typically involves the loss of body fluids through heavy sweating during strenuous exercise or physical labor in high heat and humidity.

- Signs of heat exhaustion include cool, moist, pale or flushed skin; heavy sweating; headache; nausea; dizziness; weakness; and exhaustion.
- Move the person to a cooler place. Remove or loosen tight clothing and apply cool, wet clothes or towels to the skin. Fan the person. If the person is conscious, give small amounts of cool water to drink. Make sure the person drinks slowly. Watch for changes in condition.
- If the person refuses water, vomits or begins to lose consciousness, call 9-1-1 or the local emergency number.

Heat stroke (also known as sunstroke) is a life-threatening condition in which a person's temperature control system stops working and the body is unable to cool itself.

- Signs of heat stroke include hot, red skin which may be dry or moist; changes in consciousness; vomiting; and high body temperature.
- Heat stroke is life-threatening. Call 9-1-1 or the local emergency number immediately.
- Move the person to a cooler place. Quickly cool the person's body by giving care as you would for heat exhaustion. If needed, continue rapid cooling by applying ice or cold packs wrapped in a cloth to the wrists, ankles, groin, neck and armpits.

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*Safety . . . our mission depends on it*