Atlantic Division, Naval Facilities Engineering Command
ACCIDENT ABSTRACT

ACCIDENT TYPE: Uncontrolled water release
INJURY: Minor injuries
TYPE OF WORK: Installation of steel beam
EQUIPMENT INVOLVED: Genie Lift
SAFETY EQUIPMENT: Long pants, shirt, safety glasses, and hardhat

DESCRIPTION OF THE ACCIDENT:

An Ironworker was placing an "I" beam (~20' and 500lbs) in the interior of an existing facility on previously installed columns using a Genie SLC-24 Superlift. The beam was set on the Genie's forks, but was not secured to the Genie. The contractor had workers on either side of the beam to hold it in place and guide it. During the process of guiding it into place, the beam slipped off the front edge of the forks and landed on a 3" pressurized sprinkler line. The line sheared and water (@ 160 psi) shot into the workspace. One of the workers guiding the beam from a ladder suffered minor shoulder injuries after the rushing water pushed him across the room with a current estimate of ~2 days of lost work day time anticipated. It is estimated that prior to the water being secured at the main by the fire department and at the risers, that approximately 4,000 gals+ was expelled into the facility. This resulted in a 4-inch flood in the building causing damage to building components, a stop to facility operations, project delay, and extensive clean up.

DIRECT CAUSE:
◆Beam was not secured to the lift.

CONTRIBUTING CAUSES:
◆The contractor had verbally requested a water outage for the fire suppression system that was denied.

◆The contractor Preparatory Inspection intended the work to be performed under outage conditions.

◆The Activity Hazard Analysis (AHA) was not amended or reviewed when the outage was denied to accurately reflect the hazards or additional controls necessary to eliminate or reduce the hazards to acceptable levels due to the pressurized water line.

LESSONS LEARNED:
There are two primary lessons we want to learn from this mishap:

1) Any load must be secured. The method must be included in the AHA. It is important that the contractor be made accountable for providing a comprehensive AHA before the work may start. In this case the AHA did not include information on how the beam was to be secured, any hot work, fire extinguishing equipment, PPE, flammable materials in the area, welding equipment inspection checks, etc.

2) When a contractor requests an outage it should be submitted in writing. If for any reason the outage request is denied it should be elevated to the appropriate level of ROICC management for additional evaluation or discussion with the facility or utility owner and contractor. This may include performing work at a different time. If the outage is still denied special added safety controls and or permission should be amended for an acceptable AHA submission. Ask yourself what are we doing if in the rare case an outage gets denied? And are we holding our contractors accountable for quality AHAs?