**IMPORTANT INFORMATION FOR IWS SUBCONTRACTORS AND EMPLOYEES**

# SAFETY ALERT

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## Multiple Dangerous Chemical Spills

**Date of Event:** 2/8/2024 through 2/10/2024
**Location:** Lometa
**Craft(s) Involved:** Chemical Services Subcontractor

**Description of Incident:**

- The subcontractor responsible for constructing and installing the chemical distribution system at the Lometa site supplied and installed improper pipe fittings and an incorrect threaded connector gasket within the Hydrochloric Acid (HCL) system. These errors resulted in multiple hazardous spills.
- Additionally, the subcontractor provided a defective torque wrench for the threaded chemical pipe fittings, leading to further leaks of multiple chemicals. The consequences included melting of HCL pipe connectors and under-tightened fittings, resulting in leaks in various chemical systems. This situation necessitated an emergency response and clean-up team to manage the hazardous spill.

**Contributing Factors:**

- HCL (Hydrochloric Acid) Skid:
  - Six improper (Teflon/Nylon) fittings supplied by JCS.
- Citric Acid:
  - Leaks due to improper tightening of threaded hookup connectors.
  - Supplied tightening tool insufficient, requiring additional torque with a crescent wrench to stop leaking.
- NAOCL (Sodium Hypochlorite/Chlorine) Skid:
  - Three chlorine hose connectors installed by JCS with Teflon/Nylon barbed connectors and hose clamps.
  - Threaded connections on hose barbs installed with what is assumed to be Teflon tape, resulting in leaks.
- NAOH (Sodium Hydroxide):
  - Small pinhole leak in a glued joint installed by IWS.
  - Crystal residue found at the point of connection, unrelated to primary spill event.

**Root Cause:** Failure to use the materials as required by the Submittal.

**Corrective Actions:**

- Stop the leak, contain the chemicals, decontaminate the system and the spill area and flush the lines.
- Repair the system with the appropriate materials and tools as intended by the submittal.
- Prepared and distributed a Chemical Safety Toolbox Talk for all employees to review.
- Develop a subcontractor qualification management system for all subcontractors.
- IWS to develop a Quality Management System (QMS)
- Supplier (JCS) required to develop a QA/QC system to prevent similar mistakes in the future.

**Summary:** The incident involved improper installation and use of materials by the chemical services subcontractor, leading to hazardous spills and leaks in multiple chemical systems. Corrective actions have been taken to repair the system, enhance safety training, and implement measures to prevent similar incidents in the future.