

RM Technologies Ammonia System Safety & Compliance Checklist

A Preliminary Guide for Plant Managers and EHS Officers

This checklist covers the critical "red flag" areas that OSHA and EPA inspectors look for during **PSM (Process Safety Management)** and **RMP (Risk Management Plan)** audits.

1. Physical System Integrity (Mechanical Integrity)

- **Piping Insulation:** Is there any evidence of "CUI" (Corrosion Under Insulation)? Check for bulges or moisture on anhydrous ammonia lines.
- **Relief Valve Dates:** Are all hydrostatic relief valves and primary pressure relief valves (PRVs) within their 5-year replacement cycle?
- **Pipe Labeling:** Are all lines clearly labeled with "Ammonia," the physical state (Liquid/Vapor), and flow direction arrows?
- **Support & Vibrations:** Are high-pressure lines properly supported to prevent fatigue failure at weld joints?

2. Instrumentation & Emergency Controls

- **Leak Detection:** Are ammonia sensors calibrated within the last 6 months, and are they positioned near likely leak points (pumps, valves, compressors)?
- **Emergency Shutdown (ESD):** Is the ESD button clearly marked, accessible, and located *outside* the immediate hazard zone?
- **Visual/Audible Alarms:** Are the strobes and horns functional and capable of being seen/heard over ambient plant noise?

3. Documentation & Regulatory Compliance

- **P&ID Accuracy:** Do your Piping & Instrumentation Diagrams (P&IDs) reflect the *current* state of the facility, including any recent "Maintenance-at-Kind" or system changes?
- **Process Hazard Analysis (PHA):** Has a formal PHA been conducted or re-validated within the last 5 years?
- **Standard Operating Procedures (SOPs):** Are written procedures for Startup, Shutdown, and Emergency Operations readily available to operators?

4. Safety Equipment & PPE

- **Eyewash/Safety Showers:** Are they located within 10 seconds of the ammonia equipment and tested weekly for tepid water flow?
- **Wind Socks:** Are wind direction indicators visible from the storage area to guide evacuation?
- **Respirators:** Are SCBAs or ammonia-rated respirators inspected monthly and stored in a clean, accessible location?