> PSM/RMP Compliance

The Process Safety Management (PSM) standard, regulated by the Occupational Health and Safety Administration (OSHA) at 40 CFR 1910.119, is a performance standard that regulates the storage and/or processing of toxic, reactive, flammable or explosive substances. It requires affected facilities to develop and implement a PSM program with the purpose of preventing or minimizing the consequences of catastrophic chemical releases.

The Risk Management Program (RMP) developed under Section 112(r) of the 1990 Clean Air Act Amendments and promulgated under 40 CFR 68, regulates the storage and/or processing of toxic and flammable substances. It requires affected facilities to develop and submit risk management plans that include a hazard assessment (off-site consequence analysis), prevention program (similar to the PSM program), and emergency response program. The RMP is based on a three-tiered approach designed to link the required analysis and planning with the degree of risk associated with the facility.

To effectively address PSM/RMP requirements, the first step is to determine whether the facility uses any of the listed chemicals in quantities that exceed the program applicability thresholds. If so, the next step is to evaluate options to modify processes in order to opt out of the applicable program or, in the case of RMP, step down to a less rigorous level of requirements. Once program applicability is determined, the affected facility must develop the PSM/RMP applicable components - Hazard Assessment, Prevention Program, Emergency Response, and the Risk Management Plan.

Trinity Consultants' reputation for excellence in providing a broad range of environmental management services for clients nationwide, across many industries, extends to PSM and RMP assistance. With each project, our goal is to exceed expectations so that our clients turn confidently to Trinity when faced with additional chemical safety challenges. Across a broad cross-section of industries, Trinity has extensive PSM and RMP knowledge gained through direct experience at many facilities. Senior consultants with extensive industry experience managing PSM/RMP programs are on hand to provide expertise and oversight.

Trinity's PSM/RMP support includes the following:

- Tracking applicable regulatory developments
- Determining PSM/RMP applicability
- Assisting with preparation and implementation of Prevention Program elements
- Conducting program audits including required triennial regulatory compliance audits
- Facilitating Process Hazard Analyses (PHAs) for existing and new operations
- Conducting off-site consequence analysis (OCA) modeling
- Preparing the Risk Management Plan, updates and submittals
- Training personnel on PSM/RMP elements and program execution
- Assisting clients during agency inspections and meetings
- National training courses: Introduction to OSHA Regulations and Understanding RMP and PSM Requirements

Selected PSM and RMP Project Experience

Agriculture Processing

- Trinity assisted an agricultural processing facility in developing an RMP for an ammonia refrigeration system. The RMP was based upon existing PSM program materials. Trinity partnered with the facility's PHA team to perform a PHA and to update the mechanical integrity program and other elements required for the PSM program. In addition to the PSM

elements, Trinity performed an off-site consequence analysis and prepared the risk management plan submittal to comply with EPA's RMP requirements.

- Working with the site PHA team, Trinity prepared and led a revalidation PHA for an ethanol manufacturing process located in Nebraska.

Chemical Manufacturing

- Trinity prepared Process Safety Information and then led and scribed a two day PHA at a chemical manufacturing plant in Missouri following a half-day site visit to review the proposed installation site.

- Working with a team of facility personnel representing engineering, operations, maintenance, and management at a chemical manufacturing plant located in Kansas, Trinity prepared and facilitated PHA revalidations for an ammonia synthesis process and associated chlorine and utility systems. Trinity also prepared and facilitated completion of a hazard and operability (HAZOP) design PHA for the boiler system installed at the site.

- For a client's U.S. sites, Trinity worked with the site PHA team and facilitated completion of HAZOP PHAs for multiple resin production sites and a HAZOP design review of a boiler installation.

General Manufacturing

- For multiple consumer goods manufacturing sites, Trinity prepared and led PSM/RMP compliance audits, modification PHAs, and revalidation PHAs for propane, propylene, and cyclopentane handling systems.

Power

- For multiple generating stations located in the Midwest, Trinity performed PHA revalidations and PSM/RMP Compliance Audits. Trinity updated the worst case and alternate case RMP release scenario models for a potential ammonia release and provided an updated modeling report. Trinity also prepared information for the eRMP submittal based on the updated modeling report.

- Trinity developed all program elements for PSM / RMP program Level 3 implementations for ammonia handling systems at generating stations in Kansas.

Pulp and Paper

- At a pulp and paper facility in Georgia, Trinity evaluated and developed a PSM and RMP program for a butane process. Based on Trinity's analysis, the butane process was subject to Program 3 of the RMP requirements. Trinity worked with facility personnel in identifying available information on training programs, emergency actions plans, and maintenance systems such that a single unified plan was developed and could be maintained by the facility to address both rules.

For assistance with PSM/RMP applicability determination and compliance requirements, contact your local Trinity office at (800) 229-6655.

HEADQUARTERS > 12770 Merit Drive | Suite 900 | Dallas, TX 75251 | (800) 229-6655 | **trinityconsultants.com**