

Case Study:

Compliance Consulting

Massachusetts Fire Regulation 527.CMR.33: Hazardous Material Process or Processing

Situation

A biotechnology/medical device manufacturer specializing in trauma dressings and control of bleeding wounds reached out to Triumvirate Environmental to conduct a technical evaluation of its Tewksbury, MA facility. The company sought compliance consultation on a recently passed Massachusetts fire safety regulation –Hazardous Material Process or Processing (527.CMR.33). This Department of Fire Services regulation mandates that all Massachusetts facilities conducting any type of hazardous material activity must categorize all associated processing vessels within their institution, and must fulfill certain requirements dependent upon the applicable hazard category of each vessel.



Action

Triumvirate’s technical services team conducted an on-site review of the company’s hazardous materials inventory and processing operations, using an established assessment procedure to determine the applicability of 527.CMR.33 to the facility.



Triumvirate methodically examined each process, vessel size, and hazardous materials involved with each; a spreadsheet housed this information, detailing the health and physical hazard levels of each process. For lower risk-level processes – category 1 and 2 vessels – Triumvirate reviewed the company’s existing OSHA Hazard Communication Plan, Emergency Response Plan, and compliance with the “laboratory standard.” Our technical services team conducted a Hazard Evaluation for each category 3 vessel, and a Limited Process Safety assessment for each category 4 vessel. The EPA’s Chemical Accident Prevention and OSHA’s Process Safety Management protocols were utilized to conduct both. Triumvirate determined that no vessels within the facility qualified as category 5.

Result

Triumvirate surveyed the equipment, instrumentation, piping, pumps, and pressure relief valves, precautions, process flow diagrams, Standard Operating Procedures, Safety Data Sheets, and P&ID drawings to conduct the Hazard Evaluation and Limited Process Safety Assessments. Chemicals and mixtures, processes taking place within each vessel (i.e. heating, mixing, settling, etc.), and other factors potentially causing a change in chemical composition and hazard level were all reviewed. In some instances, the health hazard rating was lowered due to the final normality or concentration of the original chemicals in the process vessel. Triumvirate’s technical services team also took into consideration the potential effects on equipment, tanks, processes and worker areas adjacent to those processes and vessels with a higher hazard rating, in the event of an equipment malfunction. The end result was a complete technical report that will provide the local and state fire services with a thorough analysis of all potential hazards.



Sandra J. Perry
Director of Environmental, Health, & Safety (EHS) Services
617-686-7713
SPerry@triumvirate.com

www.triumvirate.com | 1-888-TEI-WOWS

