Disarming a Manufacturing Batch Reactor

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ABSTRACT

In February of 2010, the manufacturing team at Rohm and Haas’ Bayport, Texas, facility discovered that catalyst had inadvertently been omitted from a batch of hydroxyethyl methacrylate. An emergency response team was quickly assembled and helped the plant to safely vent the majority of the unreacted ethylene oxide to a water scrubber. Reactive Chemicals ARC testing helped determine the concentration of residual ethylene oxide at which it was safe to add catalyst and finish the batch under normal conditions. The subsequent root cause investigation revealed several additional opportunities for improving the process.