

Storing 28,000 pounds of chlorine at one site can be dangerous. A Risk Management Program was instituted to protect the surrounding environment from an accidental release of this hazardous material. ▶



City Develops Risk Management Plan

In 1998, the Holyoke Water Works completed a \$21.3 million water system improvement program that brought this Massachusetts city into compliance with federal drinking water requirements. The new treatment plant, with a capacity of 14.8 million gallons per day, used chlorine for disinfection. The Clean Air Act's Risk Management Program (RMP) regulated chlorine use in excess of 2,500 pounds. On-site storage at Holyoke was 28,000 pounds.

There was no question that Holyoke Water Works had to prepare an RMP. For help, the facility turned to the same firm that engineered the treatment plant: Tighe & Bond.

The objective of the RMP was to protect the environment from an accidental release of hazardous materials. "Our job is to troubleshoot before trouble happens," Tighe & Bond Industrial Hygienist Mike Matilainen said.

An offsite consequence analysis determined the effect of a total release of the chlorine. Through computer modeling, Tighe & Bond illustrated this worst case scenario. The information is invaluable to local authorities because it identifies the affected area and where evacuation would be necessary in the event of a release. The firm also modeled alternative release scenarios that might be more likely to occur as a result of leaky valves or broken pipes.

Coordinating procedures with local emergency response teams made them aware of potential hazards and informed Holyoke Water Works management and personnel of the response and support they could expect in an emergency. Tighe & Bond scheduled and conducted meetings to share information with the public as well as the FBI. (The FBI was notified because of possible terrorist interest in hazardous materials.)

The RMP also required process hazard analysis and developing specific training for individual processes before allowing employees to work on them. Detailed instructions had to be written for routine operations as well as for emergency operations and maintenance.

Tighe & Bond handled it all, developing health and safety programs, writing procedures manuals and training employees. Extensive documentation was prepared in less than three months.

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