Benchmarking Chlorine Safety Practices in the Water Industry

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Less than six percent of the total chlorine production in the U.S. is used for disinfecting drinking water and wastewater. However, this segment of the industry is responsible for the operation and maintenance of more than seventy-five percent of the sites exceeding the Risk Management Program (RMP) threshold level of 2,500 pounds for chlorine gas. This group also represents approximately twenty-one percent of the total RMP facilities that are currently listed by the Environmental Protection Agency (EPA).

This paper reports on the development of benchmarks to characterize “best-in-class” operation and management practices for chlorine safety within the water and wastewater industry. A set of “straw man” chlorine safety benchmarks was developed by the author, from a review of more than one hundred water industry RMP narratives and a survey of thirty water and wastewater utilities. Using a Delphi expert panel review procedure the set of “straw man” benchmarks is now being modified and prioritized to identify operational and management practices that should be emphasized within the water industry to reduce community risks associated with chlorine use at more than 5,000 sites in the U.S.