



Illinois-American Water Company

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Granite City Facility

Company Information

Illinois-American Water Company is a subsidiary of American Water Works Inc., the nations largest privately owned water company. American Water Works Inc., serves over 7 million customers in 22 states. Illinois-American Water Company employs over 250 employees that live in the Metro East and Greater St. Louis area.

Illinois-American Water Company has a service history of nearly 100 years. The Granite City Facility has been in operation for over 85 years and is located at 2000 West 24th St. Granite City, IL. 62040. The facility treats Mississippi river water and was upgraded two years ago to include a new chemical storage and feed building. The chemical feed processes are automated to provide consistent product quality. The facility produces approximately 11 million gallons of water daily, and is sited on 22 acres.

Risk Management Planning

The Environmental Protection Agency (EPA) Risk Management Plan (RMP) Rule created a regulation called Risk Management Program as required by an amendment to the Clean Air Act. The RMP rule requires facilities with certain quantities of chemicals and other regulated substances on a specific EPA list to disclose certain information. Those facilities must make publicly available their emergency response programs, which include plans to prevent and minimize the effect of incidents; five-year accident histories for the listed chemicals; and "worst-case" and "alternative case" scenarios related to potential releases. This information will be written in a risk management plan. The scenarios take into account potential quantities released, weather, wind direction, and wind speed. The worst case scenarios assume complete failure of all safety controls and systems and no emergency response. It is important to note that these scenarios are highly unlikely. The deadline for submitting risk management plans to the EPA is June 21, 1999. The Granite City Facility has only one of the 140 chemicals identified by the EPA above the threshold quantity.

The Illinois-American Water Company, Granite City Facility has compiled its accident release history for the RMP listed chemical for the last five years. According to the RMP rule, the accident release history must include all accidental releases from covered processes that resulted in death, evacuations, shelter-in-place, or environmental damage. Accidental release, as defined by the EPA, means an unanticipated emission of a regulated chemical into the environment from a stationary source. The five-year accident history, as defined by the RMP, for the Illinois-American Water Company, Granite City Facility is as follows:

<u>YEAR</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>
Number of RMP Releases	0	0	0	0	0

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Example RMP Accidental Release Scenarios for the Illinois-American Water Company, Granite City Facility

The RMP rule defines a worst case incident as the hypothetical release of the entire container of an RMP-listed material within 10 minutes. It assumes weather conditions that would maximize its impact, complete failure of all safety controls and systems, and no emergency response. Because these worst case scenarios are extremely unlikely, the RMP rule also provides for the development of an alternative release scenario. These alternative release scenarios depict a more credible release of an RMP listed chemical and consider safety systems that are in place.

Chemical Accident Prevention Program Example

The Illinois-American Water Company Process Safety Management/Risk Management program contains the following elements:

training	pre-startup safety review	compliance audit
employee participation	mechanical integrity	management systems
process safety information	hot work permit procedures	hazard assessment
process hazard analysis	management of change	accident history
operating procedures	incident investigation (local and system wide	risk management plan
emergency planning and response		

Chlorine - Greenish yellow gas with a pungent irritating odor. Chlorine is liquified under pressure, but is used as a gas at ambient temperature. Illinois-American Water Company uses chlorine for water disinfection.

Worst Case Scenario - Catastrophic failure due to corrosion, impact or construction defects. 2000 lb release in 10 minutes. Distance to endpoint is 0.9 miles

Alternative Case Scenario - Tubing failure, bad connection, or valve failure resulting in the release of gas through the 5/16 inch valve body opening. 317lbs released in 60 minutes. Distance to endpoint is 0.1 miles

Proper design, operation, and maintenance of the chlorine feed system should significantly decrease the likelihood of an accidental release of chlorine.

In the event of a release of chlorine, Illinois-American Water Company, Granite Facility has developed an emergency response plan. The details of the plan were worked out with the Granite City Fire Department and include:

- chemical consequence assessment
- procedures for informing the public and local authorities of any releases
- site response procedures to protect workers and minimize the offsite consequences
- organization, responsibilities, and training of responsible persons
- internal alarms
- evacuation and emergency response training drills
- emergency valve closures and equipment shutdown
- pressure relief valves
- containment of releases
- fire protection equipment operation
- protective gear; and
- spill cleanup

(1) RMP Distance of Concern: The distance a toxic vapor cloud, fire, or explosion from an accidental release will travel before dissipating to the point that serious injuries from short-term exposures will no longer occur. Data developed by EPA or computer models were used to simulate conditions and arrive at the distance.

The sharing of this information is intended to improve community understanding of local industries and promote an informed dialogue on their chemical accident prevention practices. It is not a prediction of the probability that any scenarios discussed will ever occur. The information is based upon the Risk Management Plan being prepared for Illinois-American Water Company, Granite City Facility. Descriptions in the final Risk Management Plan submitted in June, 1999 may differ from these descriptions due to revisions.

Revised: 5/12/99