Illinois-American Water Company
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East St. Louis 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 85 years. The East St. Louis Facility has been in operation for over 106 years. It is located at 800 North Front St. East St. Louis, IL. 62201. The facility is sited on 20 acres, produces approximately 35 million gallons of water daily, and has a plant population of 30 employees.

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 East St. Louis Facility has only three of the 140 chemicals identified by the EPA above the threshold quantity.

The Illinois-American Water Company, East St. Louis 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, East St. Louis Facility is as follows:

YEAR	1994	1995	1996	1997	1998
Number of RMP Release	0	0	0	0	0

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Example RMP Accidental Release Scenarios for the Illinois-American Water Company, East St. Louis 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 PreventionProgram 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		

Ammonia - a liquefied compressed gas, colorless, with a sharp odor. It is lighter than air, has the strong odor of household ammonia, and it is corrosive. Illinois-American Water Company uses ammonia to produce a disinfection residual when combined with chlorine.

Worst Case Scenario - Catastrophic failure due to corrosion, impact or construction defects. 4,275lb release in 10 minutes. Distance to endpoint is 0.3 miles.

Alternative Case Scenario - Liquid leak from a line failure or hole developed in a tank. 70lbs per min for 60 minutes. Distance to endpoint is 0.1 miles. Proper design, operation, and maintenance of the anhydrous ammonia feed system should significantly decrease the likelihood of an accidental release of ammonia.

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. 317 lbs 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.

Sulfur Dioxide - a liquified compressed gas, colorless, with a pungent odor. Illinois-American Water Company uses sulfur dioxide for dechlorination purposes.

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. 317 lbs released in 60 minutes. Distance to endpoint is 0.1 miles. Proper design, operation, and maintenance of the sulfur dioxide feed system should significantly decrease the likelihood of an accidental release of sulfur dioxide.

In the event of a release of chlorine, ammonia, or sulfur dioxide, Illinois-American Water Company, East St. Louis Facility has developed an emergency response plan. The details of the plan were worked out with the City of East St. Louis 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, East St. Louis Facility. Descriptions in the final Risk Management Plan submitted in June, 1999 may differ from these descriptions due to revisions. Revised: 5/12/99

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