

## Great Western Painting

### Gaseous Chlorine Awareness

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Per the Centers for Disease Control and Prevention, CDC, chlorine is one of the most commonly manufactured chemicals in the United States. The most important use of chlorine is as a bleach in the manufacture of paper and cloth, but it is also used to make pesticides (insect killers), rubber, and solvents.

Examples of possible locations where our employees may be exposed to chlorine during job functions may include, but are not limited to:

1. Water treatment facilities
2. Chlorine injection facilities
3. Water pre-treatment areas

Chlorine gas can be **pressurized and cooled to change it into a liquid** so that it can be shipped and stored. When liquid chlorine is released, it quickly turns into a gas that stays close to the ground and spreads rapidly.

Chlorine is a greenish-yellow gas under normal conditions. It has a distinct pungent, irritating odor, which is like the odor of bleach. The strong smell may provide an adequate warning to people that they have been exposed.

#### **Exposure to chlorine**

Employee risk for exposure depends on how close they are to the place where the chlorine was released.

1. If chlorine gas is released into the air, the employee may be exposed through skin contact or eye contact. The employee may also be exposed by breathing air that contains chlorine.
2. If chlorine liquid is released into water, the employee may be exposed by touching or drinking water that contains chlorine.
3. If chlorine liquid comes into contact with food, the employee may be exposed by eating the contaminated food.
4. Chlorine gas is heavier than air, so it would settle in low-lying areas.

#### **Short Term (Acute) Health Effects**

Exposure to chlorine can cause throat irritation, vomiting, frostbite burns, tooth enamel corrosion and nausea. Exposure to high concentrations of chlorine can be fatal. As a point of interest, chlorine was used during World War I as a choking (pulmonary) agent.

## **Long Term Health Effects**

Long-term complications from chlorine exposure are not found in those who survive a sudden exposure unless they suffer complications such as pneumonia during therapy. Chronic bronchitis may develop in those who develop pneumonia during therapy.

## **Site Specific Contingency/Emergency Plans**

The Safety Director or other competent person will inform our employees of the known potential fire, explosion or toxic release hazards related to their job and the process and the applicable provisions of the emergency action plan. Employees must be informed where chlorine is used in the host facility and aware of additional plant safety rules

Per paragraph (h)(2), 29 CFR 1910.119, the facility for which we are working will provide our employees the known potential fire, explosion, or toxic release hazards related to our work and the process and explain the applicable provisions of their contingency plans and provisions such as escape routes, procedures to account for employees, means of reporting emergencies, and alarm system.