

## Appendix III-G9-3

**Potential Hazards Information Sheet**

<u>Hazard</u>	<u>Explosive?</u>	<u>Odor?</u>	<u>Lighter or Heavier than Air?</u>	<u>Action</u>
Oxygen Deficiency	No	No	N/A	Asphyxiant
Hydrogen Sulfide (H <sub>2</sub> S)	Yes	Yes	Heavier	Nerve Gas Deadly Poison
Carbon Monoxide	Yes	No	Almost same as	Asphyxiant Deadly Poison
Methane	Yes	No	Lighter	Asphyxiant
Gasoline Vapors	Yes	Yes	Heavier	Asphyxiant
Sodium Hypochlorite	No	Yes	Heavier	Asphyxiant, Corrosive
Hantavirus (mouse droppings)	No	Yes	Heavier	Respiratory Failure

Hydrogen Sulphide

The deadliest gas commonly found in sewers which can be created by decomposition of organic matter. The rotten egg smell is associated with H<sub>2</sub>S gas when concentrations are as low as 1ppm. At higher concentration, the odor may not be detected since the gas affects the sense of smell.

Unconsciousness will result in a few seconds if the concentration level exceeds 700ppm (0.07%). If the victim is not immediately removed to fresh air, death will follow quickly.

Carbon Monoxide

This is a colorless, odorless and deadly gas. Over exposure may result in a worker experiencing ringing in the ears, nausea, headaches and sleepiness.

Methane (Natural Gas CH<sub>4</sub>)

The main danger associated with methane is explosion, due to its flammable nature. It may be released from a leaky gas line but can also be a by-product of

backed up or sluggish sewers. This gas may displace oxygen acting as an asphyxiant

### Gasoline Vapours

Gasoline is sometimes found in both sanitary and storm sewers. It may be the result of leaking underground tanks, illegal disposal of gasoline into the sewer system by the public or by workers trying to clean up a gasoline spill. These vapors can be a fire and explosion hazard.

### Sodium Hypochlorite (Chlorine)

Chlorine gas is neither flammable nor explosive. A drum of Sodium hypochlorite, on the other hand, will explode if a lighted cigarette is accidentally dropped into it, and may burst spontaneously into flames upon contact with oily rags. Rags or paper soaked with sodium hypochlorite at the concentration levels used for water and wastewater treatment may burst spontaneously into flames if left in a warm spot or near a heat source.

Sodium hypochlorite causes severe burns if it touches the eyes or damp skin. If sodium hypochlorite spills, it will not only injure anyone it touches, but will release chlorine. (Its tendency to release chlorine, incidentally, also poses the danger that if left too long in storage, it may not be strong enough for adequate disinfection.) Continued breathing of the vapors can cause chemical pneumonia. Even household bleach can cause injuries to the eyes, exposed skin, and especially if used in combination with other cleansing agents, can release dangerous quantities of chlorine gas.

### Hantavirus

Hantaviruses are transmitted to humans from the dried droppings, urine, or saliva of mice and rats. The disease begins as a flu-like illness characterized by fever, chills, and muscle aches, but it can rapidly progress to a life-threatening condition marked by respiratory failure as the lungs fill with fluid. Working in crawl spaces occupied by mice poses a threat of infection.