

Wastewater treatment facilities are located in every community and region of the country. The process of treating the wastewater results in the use or production of a range of combustible and toxic gases that are a danger to the plant and personnel. In addition, there are many enclosed spaces in a wastewater treatment plant where toxic gases can build up or non-toxic gases can deplete the oxygen making it dangerous to plant personnel.



Portable monitors can only protect the individual wearing the monitor and are not capable of protecting the entire plant or to protect areas where personnel are not present. Fixed gas detection systems are necessary for these areas.

The **Sentry Gas Detection System**, **Analog gas detectors** and **gas alarm monitors** all have their place in this industry depending upon the scope of the potential hazard.

Areas with potential hazardous levels of gases include:

- Pumping station -- Combustible gas, oxygen, hydrogen sulfide
- Influent and barscreen room -- Combustible gas, oxygen
- Barscreen and conveyor room -- Combustible gas
- Barscreen container and grit screen room -- Combustible gas
- Clarifier (with cover) -- Oxygen, hydrogen sulfide
- Primary wet well -- Combustible gas, oxygen, hydrogen sulfide
- Grit chamber and wet well -- Combustible gas, oxygen, hydrogen sulfide
- Sludge distribution chamber -- Combustible gas, oxygen, hydrogen sulfide
- Basement - generator area -- Combustible gas
- Digester - basement -- Combustible gas, hydrogen sulfide
- Digester - first floor -- Combustible gas, hydrogen sulfide
- Filtration room -- Hydrogen sulfide
- Odor removal equipment -- Hydrogen sulfide
- Furnace room -- Combustible gas, carbon monoxide



Many municipalities across the country have discovered that the **Sentry Gas Detection System** is an inexpensive and incredibly simple way to not only monitor these hazardous gases but also bring additional process information into their SCADA. The Sentry Controller provides up to 8 individual inputs, typically the inputs are used for gas sensors, however other devices may also be easily connected to the controller by using any standard 4-20mA output from such devices as an ultrasonic level device, a magnetic flow meter, and pH detectors. The Sentry Controller allows for separate input identification screen labels such as "Hydrogen Sulfide" for gas

detection, "GPM" for flow rate, "Inches" or "Feet" for level, and so on. Real-Time values are also displayed at the controller display. All of these inputs are processed at the controller and provide a single serial output for all data gathered at the controller via Modbus RS-232 output. This Serial output provides easy access to the SCADA system without any special hardware or programming typically required if these individual analog signals were converted to serial outputs.

The **FieldServer Gateway** provides the interface necessary for safety devices, process equipment and facility controls so that these various individual systems and devices can communicate to the distributed control systems found in such plants operating on DH+, Profibus, Modbus, ControlNet or EtherNet/IP.