



## Bottling Plant Integration Study

**Background:** When a North American bottling plant was tasked with upgrading their fire alarm system, the CWSI Wireless Fire Alarm System became the solution. The plant, a circa 1920s style bottling plant that creates iconic glass containers for the food, beer, wine, spirits and non-alcoholic beverage industries spans over 2.5 million square feet of covered manufacturing and storage on 20+ acres.

**Issue at Hand:** Alarm cabling throughout the building had been compromised by age and many earthquakes which caused false alarms and continuous nuisance ground faults. In addition, the existing system was an antiquated zoned system that did not provide reliable information. Lastly, there was no occupant notification throughout the facility. Prompted by the insurance underwriter, the plant was tasked with upgrading the fire alarm system to include addressable monitoring of all risers, as well as, the addition of occupant notification. The cost to upgrade the system via conventional hardwired means was estimated at well over two million dollars, with an installation time of approximately one year.

**Solution:** Due to the versatility, cost effectiveness and ease of installation, the CWSI Wireless Solution was chosen for the task. 58 risers throughout the facility were monitored as well as adding occupant notification using the distributed repeater network as the primary source of power to the notification appliances. Two manual pull stations located at remote guard shack locations would provide for manual activation of the notification appliances throughout the facility - without running a single wire! Installation time was a few months with a very small industrial crew. Well over a million dollars was saved in comparison to the installation of an industrial level conduit and cabling system for a wired installation. The CWSI system was seamlessly installed, eliminating downtime and fire watch expense.

## Polymer Plant Integration Study

**Background:** Covering 168 acres, a polymers plant that supplies synthetic rubber, thermoplastic elastomers and impact modifiers to rubber, plastics, adhesives, and asphalt to markets around the world was faced with the immediate scope of protection requiring monitoring of deluge systems, wet and dry systems, fire pumps, storage areas for hazardous materials, end products storage and all process areas and plant evacuation signaling. Future expansion would include the addition of smoke detectors in electrical and MCC rooms.

**Challenge:** The environment was harsh and corrosive, design and installation considerations had to be accounted for in intrinsically safe areas, and the ability of dual system operation, having both the new system commissioned simultaneously with the abandonment of the old system.

**Solution:** The CWSI Wireless solution was proposed to the plant citing many benefits:

- Eliminating the necessity of wiring and conduit throughout the facility

- Unobtrusive installation resulting in no down time to plant operations
- Scalable expansion without having to run wires
- Extreme cost savings
- Install the wireless system in a fraction of the time

**Installation:** The intrinsically safe challenge was overcome by remoting transmitters from the classified areas. Conventional explosion proof devices were installed, wired to fire transmitters and remoted out of the areas. To overcome the corrosive environment, transmitters and repeaters were installed in environmental enclosures. The other major advantage that the CWSI product offered was the ability to install the new system while maintaining operations of the old system concurrently. Inoperative system operation was not permitted during the installation and crossover. The nucleus of the system, the repeater network, was installed first along with the front end equipment consisting of the control panel and CWSite Graphics network software. The ancillary PC based system, CWSite, provided pin point display of all events and operator instructions, as well as automated notification for plant evacuation; creating a total automation detection and evacuation system

It was estimated that a conventional system installation would have taken approximately six months. The CWSI System required four weeks to install and the cost savings were considerable.