

# Compliance with Regulation – Utilizing Emerson Wireless to Monitor PRV status at BP Whiting



## Customer

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- BP
  - Whiting refinery
  - Processes 410,000 bpd
  - Estimated to be the 3rd or 4th largest refinery in the US
  - Largest inland refinery in the world

## Challenge

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- BP needed a real-time, electronic method to monitor process unit flare line relief valves within their hydro processing units on site
- Government reportable if H<sub>2</sub>S exceeds 162ppm over 3 hours, 500lb (227kg)+ SO<sub>2</sub>/event
- Clean Air Act:
  - Fines could be over \$37,000/incident
  - Site is required to report ALL events

## Solution

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- 708 wireless acoustic transmitter
- 1420 Wireless Gateway installed in 4UF remote instrumentation enclosure with direct access to legacy DCS and Pi
- Pipe-clamp installation and 10 year power module life allowed for easy install and no routine maintenance procedure for unit maintenance team

## Results

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- Manpower hours reduction
- Fast response (immediately knew which RV was lifted)
- Reportable fines avoided
- Total estimated cost savings for a single prevented event is around \$2,500-\$50,000 (manpower cost, potential fine, process downtime) - BP Senior Environmental Advisor