

**Case Study: Phoenix Contact Wireless Radio System**

**Application: Leachate Level Measurement at Sanitary Landfill  
Pulping Process Company**



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**Problem** Pulping process company spending needless man-hours checking a leachate level in a sanitary landfill 14 miles away from the plant, resulting in high maintenance costs and potential unknown overflow situations.

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**Current Business Result** Landfill tank collects water that has “leached” through the refuse and onto the bottom liner of the landfill. This water cannot be released into the environment, and must be treated as a wastewater treatment facility. Water truck made routine visits to the landfill to collect leachate water and bring it back to the WWT facility for cleaning.

Because rainfall in the area is inconsistent, the periodic pump had to be inspected more often than necessary just to ensure that the leachate tank didn’t overflow. These trips led to wasted man-hours, wasted diesel fuel, and more often than not, partial load pump-outs.

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**Solution** Lesman installed a level probe into the leachate tank, and connected it to a Phoenix Contact wireless radio for transmission back to the main plant. The data is received at the plant, 14 miles away, and displayed on a main operator screen. At this 24/7 plant, an operator monitors the data, and schedules a truck for pickup only when the tank is full enough to justify the trip.

Phoenix Contact was the right fit for the application since their radios allow signal transmission up to 25 miles away. The 900MHz frequency hopping spread spectrum technology guaranteed that the level information didn’t interfere with – or get interference from – onsite hand radios and other radio transmission devices.

Further, Phoenix Contact’s wide variety of antennae, lightning surge suppression devices, and mounting configurations, allowed for installation in this rugged outdoor application.

Multiple inefficient trips to the landfill were reduced to the best efficiency possible, by implementing remote level monitoring with wireless radios for data transfer. Man-hours, fuel costs, and the inefficiency of partial-load pickups has been drastically decreased.

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**Customer Comment** **With the wireless system, we don’t have to waste time anymore, and we know what’s happening at the landfill tank all the time. No more partial loads: We’re not “running to the store for milk after we drink two cups, just to make sure we don’t run out!” Plus, our fuel and man-hour costs have come down... all with an investment of a couple of thousand dollars.**