



Case Study



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Surface Waste Remediation Project

Non-Standard 850-HL System

Surface waste located at an ore mine contained elevated concentrations of zinc, which may have presented a human health risk upon skin contact and ingestion and could leach into surface and ground water. In order to reduce health risks and water contamination from surface wastes, the property owner initiated surface waste remediation in the fall of 1998.

ZMI/Portec was assigned the task of designing a site-specific water treatment plant in 1999. The non-standard 850 HL system was placed on-site in the Spring of 2000 and operated by Adrian Brown

Consultants of Denver, Colorado. This system utilizes one variable speed pump, as opposed to two constant-speed pumps which are standard in an 850 HL System. Using one variable speed pump was advantageous to this application due to the fact that it utilizes a quick batch system which means that the system can only pump at certain speeds due to the restraint of the incoming water supply from an on-site well.

What Adrian Brown is doing with this HL system is revolutionary. Typically, the old gold mines are cleaned up by treating the water as it leaves the mines. This system is injecting a lime slurry into the mine shaft, treating the water before it leaves the mine. They are experimenting with this new procedure to see if it improves the efficiency of the water clean-up.

Another non-standard element of this installation is the control system. It has a remote phone system to alert operators if any alarm condition occurs in the silo. The phone system will contact three people at remote locations to inform them of the situation.

This unique application makes the system able to run itself without operators on-site unless a problem occurs.

NON-STANDARD COMPONENTS

- **One Variable Speed Pump**
- **Controls With Remote Phone System**