Mining Operations and Safety

IVC Video Systems are used in mining applications ranging from small quarries to one of the largest copper mines in the world. In quarries, IVC cameras record trucks leaving the weigh stations to assure that loads are being correctly recorded. When billing questions occur, a snapshot or video at the weighing station can be used to verify the truck, driver, and load weight.

In open-pit mining operations there is a range of uses. A large, open pit copper mine in the Southwest United States is using a number of IVC cameras that were simply connected to their existing IP network, running several miles across the mine.

The original requirement was to monitor a dam at one end of the mine. A stream once flowed through the area where the mine was developed, and a dam was built upstream of the mine. Water is held in a reservoir and pumped to the streambed on the opposite end of the mine. Cameras were installed to monitor both ends of this operation.

Cameras were then installed to monitor another area to insure that flooding into adjacent natural waterways carried none of the chemicals used in mining operations. This was done to comply with environmental regulations.

The cameras are proving useful for monitoring general operations of the mine for efficiency and safety. The high zoom, high-resolution images, and the immediate access to stored video and PTZ control from anywhere on the network provides an excellent overview of the facility, improves

operations and, on at least one occasion, enabled early detection and rapid response to a fire in a substation that was in the camera system's view.

The mine found it invaluable that IVC provided a single source for the cameras, enclosures, and video management software. In most cases, standard weatherproof camera enclosures are not adequate for harsh and dusty environments so IVC provided rugged enclosures that are pressurized with nitrogen or rated to at least NEMA4X.
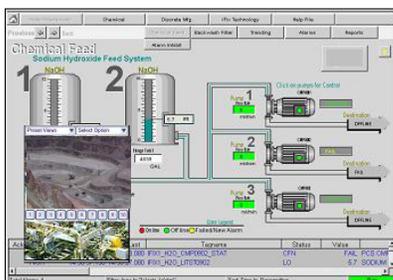
IVC's experience in these industrial applications and its ability to customize enclosures as required is an important asset in these difficult environments.

The IVC cameras are integrated into Intellution's process control software using IVC's ActiveX interface to provide visual verification of process data displayed on the operator's HMI.