

PROJECT DETAILS

LOCATION

Central America

DATE

First phase installed in 2018 with subsequent expansions in 2019

INSTRUMENTATION

Geokon Piezometers, Measurand ShapeArrays

PROJECT TYPE

Tailings Storage Facility

MODERNIZING THE CORE MONITORING STRATEGY OF A TAILINGS DAM



OBJECTIVE

Our client wanted to improve information sharing across their geographically dispersed teams who were responsible for the management of a TSF construction program located in a remote part of Central America.

PROBLEM

Limited power and communication infrastructure resulted in substantial parts of the facility not being fitted with the existing legacy automatic data acquisition system that was already in place at certain locations. This meant that engineers had to rely on infrequent manual readings in combination with a series of Comma Separated Value (CSV) files that were being generated by the legacy system. With limited technical “system integrator” expertise on site, uptime of the legacy system was severely compromised resulting in fractured and incomplete datasets.

SOLUTION

Deployment of the sensemetrics connectivity solution, consisting of autonomously powered, cellular enabled Threads with intelligent device-driven ethernet failover, provides continuity of operation during intermittent connectivity outages experienced by the communication networks on site. The self healing intelligent mesh network, securely streams real-time data from piezometers and Measurand ShapeArrays and has established reliable connectivity across the entire facility.

sensemetrics’ automatic demand-based provisioning of Cloud computing resources greatly reduces the cost of expansion and resource burden of the original installation, as well as the multiple subsequent expansions being fully managed by the onsite team. Information is quickly and securely shared, increasing data visibility across the organization and with remote external stakeholders empowered by error-free, high fidelity data sets obtained without any human intervention. These data sets are available on any browser to Mine Staff, Corporate Teams, Engineer of Records, and External Consultants.

The sensemetrics' API-driven architecture offers greater flexibility than what the legacy system was able to offer by empowering the connected mining ecosystem at this site through real-time data connection to internal Microsoft PowerBI instances.

MODERNIZING THE CORE MONITORING STRATEGY

Modernizing the core monitoring strategy at this site was a key consideration, and while our client respected their technology heritage in terms of their legacy investments, they were not beholden to it. This position created an opportune time to migrate to a modern, simplified, standardized digital monitoring core, adopting best practices and moving data to a Cloud-based platform. This decision significantly reduces the overall cost of ownership and improves the sustainability of their TSF monitoring strategy.

