

PRESS RELEASE

Fully Automated Water Quality Monitoring System for a Copper Mine in Arizona Incorporates Online Instrument to Simultaneously Measure Copper/Selenium

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[Lowell Institute for Mineral Resources](#) in conjunction with Sub Rosa Monitoring LLC has developed a fully automated and self-calibrating water quality monitoring system to measure surface and subsurface fluid flow and ground water quality for a copper mine in Arizona. The monitoring project, which is fully underway, monitors ground and surface water quality at the mine site. After evaluating a variety of trace metals analytical approaches for integration into the broader water quality monitoring system, the University of Arizona selected [the SafeGuard™ Duo](#) online/offline analyzer from [Aqua Metrology Systems \(AMS\)](#) due to its automation and precision.

The online/offline SafeGuard Duo trace metals analyzer uses a voltammetric detector to enable selective and accurate determination of selenium down to low ppb levels in the presence of higher levels of copper ions. When determining the ion specific portion for the water quality system, the University of Arizona needed a technique that met the automation and concentration level requirements needed for compliance while also fitting into a fully integrated system. “The automation and precision of the SafeGuard Duo system, while simultaneously measuring selenium and copper from contaminated groundwater sources, was unmatched in our study of commercially available trace metals analytical systems,” said Gail Heath, Research Professor at University of Arizona and Chief Operating Officer of Sub Rosa Monitoring. “The SafeGuard Duo system was the only machine that seamlessly fit into our larger, automated, self-calibrating, web-based and fully integrated water quality monitoring system.”

The fully automated water quality monitoring system at the AZ Copper Mine Site was placed online in July 2015. The monitoring system collects water from multiple locations and undertakes analysis every other day; enabling the University of Arizona and the Mine to optimize the monitoring process and develop trend analysis. The system delivers timely information in a cost effective manner.

“Since the acquisition of leading-edge assets from TraceDetect Inc., by AMS in December 2014, numerous advancements have been made applying the electroanalytical method of voltammetry into unattended automated trace metal analysis for online instruments,” said Rex Sisteck, Western Regional Business Development Manager at Aqua Metrology Systems. “The water quality monitoring system developed by the University of Arizona will undoubtedly help shape the future of sampling practices at mining sites. We are pleased to have our SafeGuard Duo system recognized and selected for use as part of this project.”

To access the latest information about Aqua Metrology Systems visit [our Industry News Room](#).

About AMS

[Aqua Metrology Systems Ltd. \(AMS\)](#) is the leader of online and offline analytical instrumentation for the detection of water contaminants, specifically disinfection by-products and trace metals, across municipal and industrial sectors. We believe high frequency data is essential for effective design, project validation, and process control. As a result, our technical solutions are designed to provide reliable and repeatable information on water quality contaminants through continuous, real-time monitoring. The real-time environmental data we provide helps drive smart decisions.

About University of Arizona- The Mining and Geological Engineering Department

The [Lowell IMR](#) is the largest interdisciplinary research center devoted to mineral resources in the US and one of the largest and most diverse in the world. The Lowell IMR conducts research, education, and outreach in sustainable resource development. The IMR has had nearly 500 participants in research projects across 27 different disciplines and 10 colleges since inception in 2009.

About Sub Rosa Monitoring LLC.

[Sub Rosa Monitoring LLC](#), specializes in detecting, monitoring, and modeling the spatial and temporal evolution of fluid quality and migration in the subsurface. Sub Rosa has technology solutions for companies with subsurface fluid flow monitoring needs across many industries including the mining, oil and gas, pipeline and nuclear industries. We provide real-time automated monitoring services for numerous specific applications including mine and tailing pond management, oil and gas injection monitoring, waste storage monitoring and pipeline leak detection.

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