The CODE

The Newsletter of
the International Cyanide
Management Institute
www.cyanidecode.org

4th Quarter 2018 Edition

What's Inside

Welcome to the 4th Quarter 2018 edition of *The Code*.

Working Group Studies Critical Controls Management

Critical controls management (CCM) has its origins in the oil and gas industry following a string of disasters beginning in the 1970s and running through to 2005. These incidents over time led that industry to develop a range of approaches, including CCM, to prevent or minimize major events that may lead to significant environmental impacts or even fatalities.

In recent years, some major gold producers have been exploring how CCM can be applied to their operations. This led to discussions about how the concept might be used in cyanide management across the industry. This also led ICMI's Industry Advisory Group (IAG) to form a working group in April to examine how CCM could be applied to prevent worker fatalities in cyanide-related operations.

After a round of organizational teleconferences, the working group met on June 26 and 27 for a workshop at Newmont Mining Corporation's Denver office. The participating companies included: AGR, Barrick Gold, Chemours, Detour Gold, Goldcorp and Newmont.

At the Denver workshop, the working group selected a limited suite of operational cyanide features, using a bowtie diagram method to identify cyanide process safety risks for those features, and then selected a subset of these features for which potential controls were identified. The identified controls included alarms, interlocks and pressure regulating systems. It was acknowledged that the process for identification of risks and selection of controls had not been tested at the operational level to determine whether individual operations would see value in the process, or whether individual operations going through the same process would come up with a similar or very different set of engineered controls.

In August, two mining operations -- Newmont's Yanacocha Mine and Barrick's Golden Sunlight Mine -- were selected for piloting the controls identified at the workshop. Each operation ran the controls for about one month. The initial piloting indicated that the identified controls and associated checklists can be used to improve management and as an effective inspection or audit tool, but that further piloting and study is needed.

The working group now is meeting quarterly. As it considers the applicability of CCM, it would like to widen the group of participants to include a wider range of companies. It will be especially important to have the viewpoints of smaller operations.

Envisioned outcomes from this work are the possible production of materials for broader industry use and information sharing on the use of critical controls to strengthen operations' process controls for cyanide. Materials might include safety shares, inspection checklists, a short video, or PowerPoint presentations that could be placed on ICMI's website in the training section. The goal is to reach a wider audience.

As with any changes to the Cyanide Code program, any modification of program documentation would require a public consultation process to allow stakeholder input and the approval of ICMI's Board of Directors.

The working group is currently comprised of representatives from the mining companies Agnico Eagle, Barrick Gold Corp, Detour Gold, Goldcorp, Kinross Gold Corp, Newcrest Mining, Newmont Mining Corporation, and cyanide producers AGR, Chemours, Cyanco, and CyPlus. Companies wishing to participate in this project should contact Paul Bateman, pbateman@cyanidecode.org.

Reminder on Requirement for Use of Colorant in High Strength Cyanide to Take Effect July 2019

In December 2017, ICMI's Board of Directors approved a change to the Cyanide Code program requiring mining operations to use colorant dyes in high-strength cyanide. This approval was the culmination of an extensive stakeholder consultation process.

Language specifying the new requirements was subsequently included in ICMI's *Mining Operations Verification Protocol* (February 2018) and *Auditor Guidance for the Use of the Mining Operation's Verification Protocol* (*Auditor Guidance;* February 2018). The *Auditor Guidance* requires the dye to be included in high-strength cyanide solutions prior to delivery at the mining operation, and that the dye be added to solid cyanide prior to or at the time of mixing. High-strength cyanide solutions are defined as those with a minimum cyanide concentration of 15%.

Although the requirement takes effect July 1, 2019, for audits conducted prior to that date the *Auditor Guidance* asks that auditors note whether the operation has initiated addition of colorant to high-strength cyanide. ICMI is pleased to report widespread early adoption of the practice. The majority of mining operations audited since July 1, 2018, have already initiated the practice of adding dye to high-strength cyanide solutions during the mixing process, and several cyanide producers have added dye to packaged cyanide before delivery at the mining operation.

For further information regarding this requirement, please contact ICMI at info@cyanidecode.org.

ICMI to develop Auditor Guidance for Use of the Cyanide Production Verification Protocol

ICMI's auditor guidance documents are used by auditors to assess compliance with the Cyanide Code. They are also used by operations to prepare for certification and to ensure continuous compliance. During initial development of the Cyanide Code program, ICMI did not develop an auditor guidance for use of ICMI's *Cyanide Production Verification Protocol*, so there has not been complete guidance to auditors and operations responsible for evaluating Cyanide Code compliance.

To fill this gap, ICMI has begun developing an *Auditor Guidance for use of the Cyanide Production Verification Protocol*, similar to ICMI's auditor guidance for the mining operations and cyanide transportation verification protocols.

Although ICMI's *Cyanide Production Verification Protocol* is used for evaluation of facilities manufacturing cyanide, it is also used to evaluate cyanide storage warehouses, where cyanide remains in sealed boxes, drums, or ISO tanks, and is not removed from one primary container to another. Use of the *Cyanide Production Verification Protocol* for cyanide storage warehouses has resulted in uncertainty as to how some production verification protocol criteria designed for cyanide manufacturing facilities should apply to cyanide warehouse facilities. To assist in assessing and auditing cyanide warehouse facilities, ICMI will develop a separate verification protocol and associated guidance specific to these facilities.

ICMI welcomes comments during development of the *Auditor Guidance for Use of the Cyanide Production Verification Protocol.* A draft is expected to be completed by July, 2019, and stakeholders will be invited to review and submit comments on the draft document.

ICMI Teamed with ANiQ for Training Seminar in Mexico

Recently, ICMI teamed with ANiQ, the National Chemical Industry Association in Mexico, to hold a training seminar in Celaya, Guanajuato, Mexico. The seminar focused on transport of cyanide, the safe handling of cyanide, and emergency response to cyanide releases and exposures. ICMI Vice President Eric Schwamberger, Ph.D., led the training.