

COVID-19 PANDEMIC: PROPERTY LOSS PREVENTION

Mining and Mineral Processing

At FM Global we are committed to providing our clients with the best property loss prevention advice to keep your facilities resilient and safe, particularly during these challenging times. Industry is adapting rapidly to the new demands caused by these challenges. These can have an impact on property risks and resulting business interruption. For the mining industry we are seeing:

- Mining companies are being required by civil action or are willingly shutting down entire operations.
- Mines are often remote, leaving only minimal staff—if any—on hand beyond security.
- Maintenance may be done during a shutdown, taking advantage of equipment being idle. In the mining industry the combination of dry, rubber-lined and plastic equipment and the common use of hot work for repairs might combine into a large fire event.
- Hydrometallurgical solvent extraction (SX) plants with large quantities of ignitable liquids present a severe fire hazard if not idled correctly.
- Tailings disposal facilities (TDFs) may have a potential failure exposure even when not being filled.

PROPERTY LOSS PREVENTION ADVICE

To assist you in your efforts to mitigate the potential impact of these risks in this industry sector, the following loss prevention advice will help keep your properties resilient and safe.

- Tailings disposal facilities**
 - Ensure there is a standard operating procedure that includes temporary idling of the tailings facility
 - Verify that there are skilled geotechnical staff on site to monitor the condition of a tailings facility during the outage
 - Maintain and monitor embankment movement and hydrogeological instrumentation
 - Ensure required audits are completed and up to date
- Solvent extraction plants**
 - If an SX plant is to be completely shut down, enact a management of change (MOC) protocol for this change from normal processing status
 - Ensure that ignition sources are controlled, especially formation of static electrical discharge when transferring solvents through plastic pipes
 - When tanks and piping systems are to be drained of solvents, assure that this activity is done safely, and that the temporary solvent storage area is a safe distance from the main plant and has adequate fire protection
 - Ensure fire protection for the SX plant is maintained in service even if solvents are removed



- **Maintenance activities**
 - If there are plans to conduct maintenance during the shutdown, ensure rubber-lined equipment is identified and, if possible, kept full of process water.
 - Avoid use of hot work over or near rubber-lined or plastic equipment such as screen decks. Ensure that a rigorous hot work permit system is in effect.
 - Where provided, make sure that all fire protection is in service.

USEFUL RESOURCES

These FM Global resources can provide you with additional information:

- FM Global Data Sheet 7-12, *Mining and Mineral Processing*, was recently revised and has significant loss prevention advice on risks
- FM Global Data Sheet 7-43, *Process Safety* has advice using principles of process safety including management of change for high-hazard chemical processes such as solvent extraction

For more information and methods for addressing loss prevention concerns at your facility, refer to the free resources on FM Global's website at [fmglobal.com](https://www.fmglobal.com). FM Global and AFM clients can contact their account engineer.



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