

COVID-19 PANDEMIC: PROPERTY LOSS PREVENTION

Semiconductor Industry

At FM Global we remain 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 and for the semiconductor industry.

Broadly speaking, authorities have designated this a key/essential industry, as such it has continued to operate at near normal levels since the start of the COVID-19 pandemic. In general, the industry has robust business contingency plans to deal with most eventualities. However, as this has been a highly unusual event, there are potential impacts that could still affect the running of facilities such as:

Plant Staffing and Operation

This industry relies very heavily on a highly skilled, specialist-trained, multinational workforce, to safely operate these complex facilities. The spread of COVID-19 has impacted many people, employees, contractors and their families. Continued safe operations could be jeopardized due to these potential staff and contractor shortages.

Operations

Although operations may not be directly impacted by the pandemic, there are likely to be changes that need to be made to how the plant operates, due to a reduced workforce, or in direct response to contingency plans, for example. Maintenance activities may need to be scaled back due to lack of personnel, or simple housekeeping rounds reduced or stopped, all of which could increase the risks to site operations.

Supply Chain

The semiconductor industry uses many specialist materials, tools and parts, usually delivered in bulk, or on a just-in-time basis from around the globe. People are key to the operation of this supply chain. Suppliers and contractors are having to manipulate supplies and implement contingency plans to ensure continued supply. In doing so, additional risks and hazards can be introduced, by increasing the size of deliveries, and changing and consolidating warehousing and storage.

PROPERTY LOSS PREVENTION ADVICE

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

Plant Staffing and Operation

Operator pandemic response practices may include:

- Social distancing practices and working from home policies
- Prohibiting access to the facilities and specifically the Fab and control rooms to nonessential personnel (including management and executives)
- Daily virtual meetings and communications to convey potential changes to operations and pandemic response (including executives)
- Activating emergency response organizations and succession plans (including technicians and specialists)
- Additional worker screening measures, such as temperature and health checks, and testing, including contracted personnel, especially when entering gowning areas and Fab

Review of processes and procedures to ensure:

- Criteria for when to shut down operations or systems due to below-minimum staffing levels, etc.



- Frequency and scope of inspection rounds, especially for safety systems
- Emergency Operating Procedures and operator authority to act/shutdown processes
- Operators' alertness to respond to adverse alarms and indicators without delay
- Business continuity plans, including a process for 24/7 availability of managers with decision-making authority to allow maintenance personnel on site for things like unscheduled crucial repairs
- Sufficient trained personnel to fulfil all critical positions in emergency response teams for chemical spills, fire, etc.
- Heightened cyber resilience awareness

Operations

Consideration should be given to the following:

- If larger quantities of specialist materials, including ignitable liquids, are being kept on site due to activation of contingency plans, are plans in place to store these hazardous materials in suitable locations?
- Are spares/consumables inventories being maintained for critical equipment and tools (note that lead times could be higher due to delayed deliveries from several affected countries)?
- Continue regular watch rounds and housekeeping rounds, to ensure continued high levels of housekeeping in Fab, Sub Fab, electrical rooms, central utilities buildings, control rooms, data centers
- If more than normal levels of consumables are being held on site, are these being stored in suitable locations (i.e., not in the Fab, Sub Fab, electrical rooms, plant rooms)?
- Are preventive maintenance programs being maintained on critical equipment? If not, how is maintenance being prioritized. Can non-invasive techniques such as IR scanning and vibration monitoring be increased in frequency until regular maintenance programs can be restarted?

- Ensure N+1 is being maintained on critical equipment, as this could be impacted due to breakdowns and/or lack of maintenance provision
- Ensure sufficient knowledgeable and trained staff are on site to deal with sprinkler/liquid leakage incidents should either occur in the Fab.
- Continue to manage sprinkler system impairments effectively
- Ensure Management of Change procedures are maintained and followed, irrespective of staffing levels or immediacy
- Where large construction projects are continuing during the pandemic, ensure critical procedures are been followed such as hot work, and other permit to work procedures

Supply Chain

Consider the following when related to supply chain:

- Monitor supply chains to ensure specialist materials will be maintained during the pandemic
- Do you know if your suppliers continue to maintain their fire-safety rules in remote JIT warehouses to avoid an incident that could affect your supply chain
- Is the supply chain consolidating specialist materials into a smaller number of locations?
- Do you have adequate contingency plans in place for critical supplies?

USEFUL RESOURCES

These FM Global resources can provide you with additional information:

- [Pandemic Cyber Loss Prevention Checklist – Information Security](#)
- [Pandemic Property Loss Prevention Checklist](#)

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. FM Global clients can contact their account engineer.

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