GLOBAL SAFETY ALERT

SUPPLIER FATALLY INJURED

INCIDENT DETAILS

A technician, working for a third-party supplier had made some adjustments in the control logic of a PLC (Programmable Logic Controller) on the power rectifier of a hydrogen injection unit. The unit was in a large storage container and adjustments were taking place while it was being commissioned for a test period prior to its hand-over to the cement plant. Two minutes after the unit was turned off and without feeding hydrogen into the kiln, as the technician opened the container door to investigate a noise inside, an explosion occurred and a pressure wave hit the technician, causing him to be projected more than 15 metres.

KEY FINDINGS

- After the turn-off command was executed, hydrogen generation continued, causing overpressure in the system and a subsequent explosion of gas.
- The Stop sequence was executed locally closing the feeding pipe to the kiln, however the power rectifier did not respond accordingly, leaving the system in operation and generating hydrogen, possibly due to a PLC control failure.
- Some electronic communication problems with the PLC program were known, because some changes on the logic of the device had been made remotely on the day of the incident from the supplier's head office. It's believed the remote interaction between the head office and the field technician on site may not have been fully effective.
- CEMEX employees did not have access and did not manage in any way, the hydrogen injection unit. The access and management of the unit was restricted to personnel of the third-party supplier.

MANAGERS – KEY POINTS TO CHECK

- All vendors and contractors are properly assessed, and you only engage with those that are on the approved list. The vendor involved in this incident is no longer working with CEMEX. The details have been communicated to the cement operations network and Procurement.
- A Safety Risk Assessment shall always be provided with confirmation of safety controls, and site visits must verify that safety procedures are effective and that emergency measures are in place.
- Extreme caution is adopted, and rigorous controls put in place when carrying out tests with new equipment or new processes, also taking into consideration the need for effective communication between all personnel involved.
- Test certificates for machinery and equipment are always obtained and safe isolation practices are established to keep people safe

ALL PERSONNEL – ACTION TO TAKE

- Plan your activity carefully. Always Stop and Think before doing any task - **Take 5!**
- Be sure that you and your colleagues are never in the Line of Fire in case something goes wrong. If someone is at risk, please **Step In - Take 5 Together!**
- Be sure there is a clear Safe Operating Procedure for the task, and that you are properly trained. If you have any doubt, speak to your supervisor.

Look after yourself and each other

Safe Systems

Tools and Equipment