



HAYWARDS SC3 & SC4 CARBON DIOXIDE (CO₂) FIRE SUPPRESSION ACTIVATION - HUMAN ERROR INCIDENT (HEI)

EVENT

Haywards Synchronous Condensers SC3 & SC4 have a common CO₂ fire suppression system which is activated by the Electrical Protection system in the event of certain faults.

The CO₂ system was isolated at the commencement of the project. These isolations were to prevent a trip being sent to the fire system. During the pre-commissioning testing of the new SC4 protection system the Transfield Services Technician failed to ensure all electrical isolations of the CO₂ system were correct for the testing to be undertaken.

The technician did not have all the information (tools) required to complete the task correctly or safely. The drawing which was being used referred to another document that was not available.

The technician then completed a visual inspection of the circuit and decided to remove the relay. The wiring was connected to a normally closed circuit with an external 24V supply. This removal of the relay resulted in the fire protection panel sending a signal to the CO₂ system to activate, fortunately the system had been isolated preventing a gas dump into the condenser and the CO₂ gas did not flood into the building.

Learnings

If you don't have the correct information or tools to complete the task:

STOP – Step back and take five

INVESTIGATE – Find the correct information or tools, consider third party systems, if you can't find the information...ask someone.

RESET – Find the safest point to start the task again

LEARN – Put a system in place, revisit the design and educate others



HAY SC3 & SC4 CO₂ Fire Suppression System

ALWAYS USE OR HAVE THE CORRECT TOOLS FOR THE JOB

IMMEDIATE ACTIONS

- CO₂ bottles purged and urgently refilled
- CO₂ system isolation design is to be reviewed
- Labels have been added to the SC3 & SC4 stating that the CO₂ fire suppression system shall be isolated at the Fire Protection Panel
- HEI report instigated



Interest Photo: TSL threading the SC4 46,000kg Rotor after refurbishment

safe^T
WORK
SAFE

For more information
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