

COMPLETED PROJECTS

SITE:	Tianqi Lithium Plant
LOCATION:	KWINANA WA
SCOPE OF WORK:	Fire Protection
COMPLETION DATE:	January 2019
CONTRACT VALUE:	\$500K

Georgiou

The Tianqi Lithium Plant is located in the Kwinana Industrial area approximately 40km from Perth. Upon completion, the plant will have the capacity to produce 48,000 tonnes of battery-grade lithium per annum making it the world's largest producer.



SCOPE DETAILS

Within our scope, we were tasked with the design and installation of:

- A fully compliant automatic sprinkler system in accordance with AS2118.1 (1999)
- IG541 gaseous extinguishing system in accordance with ISO 14520.1 (2009)
- Fire detection and alarm system in accordance with AS1670.1
- Building occupant warning system in accordance with AS1670.4

The fire sprinkler system installed is a conventional wet pipe system, with classification of Ordinary Hazard 1 to the lunch room located at ground level of the control room. There is also a fire sprinkler control valve assembly installed and connected inground to the existing fire hydrant system at the plant.

IG541 gaseous extinguishing system were selected and installed to protect data storage and electrical hazards that are enclosed within the server rooms at both the control and administration buildings.



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There are Taktis fire detection systems installed throughout the warehouse, laboratory, control, security, training and admin building. The system comprises a main fire indicator panel, sub-fire indicator panels, VESDA, smoke and thermal detectors all linked together via fibre optic networking.

Occupant warning systems throughout the same buildings comprise of warning system panels and site wide speakers.



CHALLENGES & SOLUTIONS

Throughout the project we were faced with various challenges:

- Firstly, this was the first site in Western Australia to have Taktis Fire Panels networked as they were. Firesafe being the first company to take on such a project, sought detailed OEM training and worked collaboratively with both the OEM and client throughout the project, to ensure delivery of an operational and reliable system.
- Secondly, as the project was spread across 6 individual buildings, it was essential to the project success, that all networking and system design be coordinated to ensure correct operation upon commissioning. Firesafe had two in-house specialised design engineers working on the system design throughout the project which ensured all design documentation was aligned, which resulted in a fault free start up once all systems were energised.