



## CLIENT

Australian Nuclear Science and Technology Organisation (ANSTO)

## LOCATIONS

Lucas Heights (Sydney), Australia

## CAPABILITIES:

- Automation Engineering, Functional Safety Engineering
- Detailed design – hardware and software
- Factory Acceptance Testing, Site Acceptance Testing & Commissioning
- Electrical panel design and build
- Compliance to international safety standards

## TECHNOLOGIES:

- Citect SCADA 7.5
- Allen Bradley GuardLogix (certified to SIL3)
- Allen Bradley Point Guard
- Rockwell ThinManager
- VMWare
- Windows 7 Operating Systems

## PROJECT SUMMARY

Synertec was engaged by Australian Nuclear Science and Technology Organisation (ANSTO) to design the Safety Instrument and Control System for the Safety Instrumented System (SIS) and the IT system (ITS) at the new SyMo waste processing facility in Lucas Heights.

## THE CHALLENGE

Australian Nuclear Science and Technology Organisation (ANSTO) required an SIS and ITS for the new facility which would integrate not only with all of the other systems in building, but in particular, the nuclear hot cell which was being designed and developed by ANSTO inhouse. They need the solution to be compatible with functional safety standards.

## SYNERTEC'S SOLUTION

Synertec worked closely with ANSTO to develop a solution that would meet the needs of the site from a safety and system integration perspective.

Synertec's experienced automation and electrical teams provided the safety requirement specification along with full hardware and software design. The design package included the full electrical & instrumentation design – including a full suite of drawings (panel/cabinet layouts, cable schedule, loop drawings and termination diagrams), as well as a SCADA control system for the SIS and ITS built on a virtual platform.

Throughout the Project, Synertec were responsible for the full functional safety lifecycle for the SIS – including SIL workshops & assignment, SIF calculations & safety validation & verification.

Scope highlights:

- develop the safety requirement specification
- full hardware and software design and supply (SIS and ITS)
- electrical & instrumentation design
- system validation