

C&I Overlay System

Background

Following final shutdown and de-fuelling of Hinkley Point 'A', the site entered the 'Preparation for Care and Maintenance' Phase. Experience at other Magnox sites, (Berkeley, Trawsfynydd and Hunterston A) had shown that plant monitoring and communication needs during this phase of decommissioning would be best met by installing a new and separate C&I 'overlay' system. This new system would take over the whole future C&I role and would be easily identified and well documented. This would allow the old, widespread and extensively modified existing C&I systems to be completely isolated and removed.

Scope

The project scope included the full range of project lifecycle services from initial site survey, through optioneering, design, build, installation and commissioning and covered the following:

- Communication systems, including: Public Address (hard wired), telephones (hard wired), paging and radio systems.
- Plant monitoring systems, including: Fire alarms, reactor vessel temperature, reactor vessel air moisture, safety related alarms, critical alarms, plant status i.e. environmental monitoring and event recording.
- C&I equipment, including: Interface equipment, sensors, alarm annunciators, discreet logic system to meet site specific requirements and control panel, enclosure and supporting equipment.
- Replacing old systems with new, demanding strict requirements, e.g. Reliability (no first line maintenance), clearly identifiable systems, future proof systems (obsolescence study), flexibility (minimise bespoke/special hardware), cost efficiency and ease of maintenance (no long-term site support)

Outcomes

The outcome of the project was that AMS were able to safely remove the old systems and equipment and successfully integrate fully tested new systems into plant.

Project deliverables included:

- Optioneering survey and report
- Functional Design package to meet Magnox requirement specification (URS)
- Manufacture of systems to meet varying applications and environments

Once installed the new systems were tested and commissioned with the client and personnel trained in their use.

The AMS solution also benefited the client with:

- Provision for additional equipment interface changes against Magnox forward plan
- Improved communication infrastructure to meet decommissioning strategy



Key Skills Utilised

AMS were able to utilise SQEP resource with site access and site knowledge to survey the existing systems ahead of the engineering team using their experience and understanding of the client's processes and procedures to design and build the solution.