

Power Station

Remote monitoring solution for power station generating room

At a glance...

Organisation

Scottish & Southern

Location

Marchwood, Southampton

Industry sector

Critical Infrastructure

Applications

Equipment monitoring, Health & Safety



The Project

The potentially hazardous environment of the generating room of the power station required a remote monitoring capability to provide early detection of any sign of problems with turbines or furnaces located in areas where people are forbidden to work.

The Challenge

The start up sequence for the power station's turbines to reach their operating speed takes approximately 20 minutes and the process is required to be monitored and copied onto DVD on each occasion and then independently analysed. In addition, specific sequences in the electricity generating process need to be analysed in detail on a regular basis.

The Solution

Early warning of potentially catastrophic events is achieved by detecting smoke or steam leaks in the furnaces and pipes. This detection is critical to the health & safety regulations for the facility. Simulated tests utilised cigarette smoke at various distances from cameras confirmed that the Wavestore video management solution captures these images very clearly.

The Wavestore recording unit captures multiple channels of high quality video images at 50 pictures per second. Though only four channels have been deployed, a total of 16 live recording channels are available if required. The recorders

can maintain continuous full quality recording which is not interrupted when users search the archive for specific events or copy video clips onto DVD.

External sensors can be integrated into the Wavestore unit. Passive Infrared Detectors (PIR) or Particle Detectors connected to the Wavestore's alarm interface module can trigger a signal which can activate a pre-assigned action, such as the sounding of an alarm, lighting of beacons or even dialling out a signal over the telephone network. Pre-alarm video recording of up to 60 seconds ensures that any activity leading up to the triggered event, can be recorded and viewed at a later stage.

IR-sensitive cameras can detect a sudden build up of heat and actuate a defined alarm sequence, whilst masks can be applied to the camera views to ensure that false triggering is minimised.

Success

Following the success of this project, Wavestore recording solutions have also been installed into nuclear power stations to provide a visual monitoring and recording record of the positioning and control of the fuel rods in the reactor.