

A visit to Combwich Laboratory, 6 December 2018

Attendees: Mike Caswell (SSG chair), Mervyn Brown (SSG vice chair), Dave Stokes (Communications Officer), Des Uminski (Technical & Safety Support Manager), Hannah Dyer (Environmental Safety Engineer), Paul Quantock (Technician Team Leader).

A tour of the EDF Energy NGL off-site laboratory at Combwich was undertaken on the 6th December at 14:00 hours.

The staffing at the Combwich Laboratory includes 4-6 environmental safety laboratory technicians who are managed by a team leader plus at least two environmental safety engineers. The technicians perform sample collection from the main power station as well as off-site locations which span as far as Weston Super Mare, Minehead and Glastonbury. These are all returned to the laboratory for analysis. The engineers oversee nuclear plant operations and discharges from the power station and the environmental monitoring programme of the surrounding locality. The engineers are also responsible for ensuring that compliance with the environmental permit is achieved and collate reports and data for the Environment Agency according to the permit requirements.

The building is separated into a number of laboratories depending on the type of sample to be analysed.

The environmental monitoring programme involves low and background levels of radiation monitoring on samples such as milk, grass, seaweed, fish, shrimp, sediment, soil and groundwater. The preparation rooms have facilities for weighing, drying, grinding, and preserving of the samples prior to analysis and a low level counting room with three gamma spectrometers and a gross beta counter. Off-site monitoring of radioactive dose is performed by dosimeters at set locations and by mobile instruments when collecting other samples. Particulate in the atmosphere is collected by tacky shades (sticky material wrapped around what would be best described as the framework of a lampshade).

The samples from the station are brought to Combwich for a full suite of analysis in the "active" laboratory where stringent controls are placed on personal protective equipment and access. Distillations and other chemical preparations are performed in the laboratory before analysis is completed on two further gamma spectrometers and liquid scintillation counters.

There had been a number of recent investments made into the equipment and services at the laboratory. The gamma spectrometers have all been upgraded to digital signal processing which has improved the accuracy of the instruments and an obsolescent gross beta counter had been replaced the previous week. Earlier in the year, there was a significant IT network upgrade to match the network at the main site along with the laboratory information management system (LIMS) which was upgraded and is now corporately managed.

Although the laboratory is not that well publicised to the wider community, it is a key part of the station's operation and will continue to be following decommissioning due to the continuing requirement of the environmental monitoring programme and the assessment of site discharges.

