

Sizewell B

Subject: Actions from 12 January 2022 SSG meeting

No. 4657 Damage to the Taishan Nuclear Plant and the damage to the rods, and how this would impact Sizewell B. To forward reports or circulate to members when received?

We still do not have detailed information from China regarding the root cause of their fuel failures. However, it should be noted that the fuel design used at Sizewell B is different to that used in Taishan and has had a long history of reliable performance in the reactor.

No. 4661 Rational for required increase in Carbon 14 to be circulated to Members.

Sizewell B wrote to the SSG in July 2020 advising them of the carbon 14 change. (see letter attached).

The permit change was granted in September 2021 and the Environment Agency issued a Decision Document that explains the change. Please refer to the Environment Agency web page about the Permit variation request that links to the document: <https://consult.environment-agency.gov.uk/nuclear/consultation-on-the-variation-of-permit-xb3538dh-t/>

No. 4662 Fuel rod with the pinhole, was this manufactured in France or the UK?

The affected Dry Fuel Canister contained a mixture of fuel from different manufacturers. For clarification the two fuel types we have historically used were from the UK and Germany respectively. We are unable to determine which fuel type suffered the pin-hole leak at the current time as they are safely sealed within the Dry Fuel Canister.

No. 4670 Question that was put through to you by John McNamara around in service inspections (ISI) was quite complicated and had many sub questions, are you able to go through that in your own time and provide a response? I have requested a copy of the ISI regarding the control rod mechanism issue, are you able to provide that?

- **Could you arrange for EdF to send us a SZB for a copy of its ISI in regards to the CRDM housing penetration welds on SZB.**
- **Has the ISI revealed the deficiencies in the old reactor vessel head which was exchanged? When was the exchange made and why it was necessary?**
- **After the RV head exchange, SZB should have instituted a suitable ISI routine for the penetration welds. The limited time on the operators' film badges under the raised head could, with exchange of personnel, extend the downtime in a fuel change, so it is crucial to confirm that an adequate testing regime is in place. Can EdF confirm that such a testing regime was instituted?**

International best practice informs the inspection work of the Sizewell B Reactor Pressure Vessel Head (RPVH). Work includes:

- Eddy Current surface examination of the tube bore which extends beyond the inner surface of the RPVH and well beyond the weld area towards the outer surface ensuring full coverage of the area of concern.
- Ultrasonic examination is also undertaken at the same time. The frequency of these examinations is in accordance with industry practice of every ten years.
- In addition to the volumetric and surface examinations, the entire outer surface of the RPVH is visually examined by remote means every refuelling outage to confirm absence of any leakage.

The Sizewell B RPVH was replaced in advance of its safe operational life expectancy in refuelling outage eight (RO8) in 2006. This follows operational learning experience relating to Primary Water Stress Corrosion Cracking (PWSCC) associated with Alloy 600 materials. The replacement RPVH utilises Alloy 690 for the Control Rod Drive Mechanisms (CRDM's) tubes

and Alloy 52/152 weld materials which is of similar nature to the 690 tubing. Both are proven to be highly resistant to PWSCC.

The RPVH CRDM tubes and welds were fully and satisfactorily examined during the RO15 refuelling outage in the period November 2017 to January 2018. Sizewell B continually monitors industry operating experience and responds appropriately with the Regulator ONR fully informed.

Information regarding the ISI forms part of the ONR's Sizewell B return to service report following refuelling outage 15.

No. 4671 REPIR revision and community consultation?

All matters relating to public consultation on the off-site plan are dealt with by Suffolk County Council as part of their local emergency plan responsibilities.

No. 4672 Reducing the lighting and speed limit on Lover's Lane

We can confirm that to date, no additional (temporary or permanent) lighting has been introduced to the site as a result of the SZB relocated facilities project. Any future proposed lighting (temporary or permanent) will be implemented in accordance with the proposals and conditions approved by the existing planning permission.

Sizewell B is not responsible for setting the speed limit on local roads, we understand that Leiston Town Council have contacted the Suffolk Highways Department to request a reduction in speed limit but Lover's Lane does not meet the criteria to warrant a revision in speed limit.

No. 4673 Fish impingement - Chris Wilson to provide report to Secretariat and SZB & EA to comment?

Sizewell B has not had sight of the report at this current time.