

OSART Good Practices
TECHNICAL SUPPORT
Periodic safety review

Sizewell B, UK

Mission Date; 5-22 Oct., 2015

The station's Periodic Safety Review (PSR2) process is comprehensive and rigorous.

In the scope of its second Periodic Safety Review (PSR2) the station benchmarked its documented safety case against high level principles and requirements that are representative of international modern safety standards. The safety standards selected for the comparison comprise of three top tier IAEA safety standards identified as representing international best practice and consensus (Safety Fundamentals No. SF-1; Specific Safety Requirements No. SSR-2/1; Specific Safety Requirements No. SSR-2/2). In addition, the WENRA Reference Levels and the WENRA Statement on Safety Objectives for New Nuclear Power Plants were explicitly considered. Furthermore, review of lower level modern industry codes and standards was undertaken in each relevant technical discipline.

In order to ensure that the station's PSR2 has been conducted in line with world best practice, alignment with the IAEA Safety Factors presented in Specific Safety Guide No. SSG-25 was demonstrated using a tried and tested safety case methodology of Claims, Arguments and Evidence. A route map of the PSR2 alignment with the IAEA Safety Factors is documented in the PSR2 Head Document 'Adequacy of the Nuclear Safety Case Statement' which also presents a discussion of how the PSR2 process is aligned with the general objectives of the IAEA Global Assessment outlined in SSG-25. PSR3 will consider two additional Safety Factors covering the areas of radiological protection and decommissioning.

This thorough process for review of station performance against modern standards has resulted in a very comprehensive and well documented PSR supporting station continuous operation for next 10 years.